

Measuring Pathways to Youth Violence and the Possible Effects of a Sport-based Development  
Intervention on Youth in South Africa

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A thesis submitted in fulfilment of the requirements of the Degree of  
Doctor of Philosophy  
In the School of Sociology  
University of Cape Town

By  
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February 2016

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**Declaration**

I the undersigned hereby declare that this thesis is my own original work and that I have not previously submitted it, in entirety or in part, at any university for the purpose of obtaining a degree.

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## Abstract

Drawing inspiration from longitudinal-experimental studies of youth violence and intervention in the global North, this study was designed as an ambitious two-site, large-n (n=700), longitudinal (3 waves over 24 months) quasi-experimental panel study to explore pathways to violent behaviour and violence-potential along with possible effects of a sport-based life skills programme among young men and boys. Fieldwork challenges led to a revision of the panel sampling and programming setbacks forced the closure of the second site. Lessons drawn from field research and youth-violence intervention in the urban South African context thus form an important component of the ‘lived experience’ of this study. These adjustments led to a revised quasi-experimental comparison group design which followed 318<sup>1</sup> male subjects in Khayelitsha, 12-23 years-old, over a 12 month period. A unique violence-potential ‘scorecard’ (comprised of four sub-scales: attitudes towards gang associations, attitudes towards the use of instrumental violence, deviant peer associations, and self-reported fighting) was developed and tested through confirmatory factor analysis and correlation with self-reported violent behaviours and an external assessment (from the primary maternal caregiver). The resulting ‘Violence Propensity Score’ serves as the primary dependent variable in quantitative analyses. Findings indicate that the theorised risk factors of household deprivation and violent home environment influence parental involvement and, alongside harsh/inconsistent parenting, are significantly associated with a higher Violence Propensity Score, and lower school attitude and attachment, in cross-sectional analysis. In Structural Equation Modelling with longitudinal data, a pathway emerged through which an unstable home environment, influenced by deprivation and violence, affects the quality and consistency of parenting perceived by young male subjects. In turn, early deviant associations and attitudes toward violence and gangs are cultivated and these may have a deleterious effect on schooling and, with this, a subject’s orientation toward the future and the present value of investment (of schooling efforts) for delayed gratification. This violence potential and weak school attachment manifests in greater future substance abuse and, in turn, much greater exposure to and acceptance of instrumental violence and criminal associations. Intervention participation in wave 2 did not significantly predict future violence potential, yet rate of participation in wave 3 was cross-sectionally associated with less violence potential. An unanticipated lack of early intervention attendance data and high rates of attrition from the intervention limited the robustness of intervention-related findings. However, area-based police crime data covering the Khayelitsha intervention catchment area showed a potential area effect within an 800m sq. area. Detailed spatial analysis of all crimes in Khayelitsha confirmed the significance of this reduction effect, though it was not unique. Crime incident mapping also revealed implausible concentrations and patterns of crime increase that cast doubt on the veracity and consistency of these data. This study is the first of its kind to quantitatively assess predictors of youth violence and intervention effects in South Africa. It is also the first study internationally to provide confirmatory factor analysis results for a youth violence risk measure for a general population and employ this Violence Propensity Score in longitudinal study. The Violence Propensity Score presented here is designed to be easily implemented and assessed by youth development practitioners (with non-statistical backgrounds), both to target interventions toward higher-risk youth and to easily measure changes in violence-risk over time.

Keywords: Youth Violence Intervention, South Africa, Sport-based development.

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<sup>1</sup> The n=318 sample was reduced to n=311 for regression analysis due to 7 cases with multivariate outliers and to n=276 for structural equation modeling following removal of 35 cases where subjects had completed schooling before wave 2 of the study.

## **Acknowledgements / Statement of interests**

The field research from 2012-2014 was funded by the International Committee of the Red Cross (ICRC), which also partially financially supported the intervention, Amandla Edu-Football, during that 3-year period. I was employed by the ICRC from 2010 until 2015, as a communications specialist for the ICRC Delegation in South Africa and as programme/partnership manager for the 3-year Amandla Edu-Football partnership. The ICRC was interested in better understanding the dynamics that drive high levels of endemic violence in select urban South African communities while investing in and testing the efficacy of a promising intervention. I was granted permission to lead the independent impact research study with a small budget to cover 3<sup>rd</sup> party fieldwork (panel study interviews of up to 700 subjects) and to use these data as the basis for my independent PhD thesis.

While the ICRC exercised no editorial control over this study or any of its findings, I was admittedly in a position where I wanted to produce a rigid, scientific study that would contribute to the extant literature on youth violence intervention through sport and to provide targeted technical and financial supports to the intervention in an effort to strengthen programme theory, implementation efficiency and fidelity, and, ultimately, programme outcomes. Eisner (2009) has rightly questioned the veracity of programme effects generated by programme evaluators who also had stakes in programme design and implementation, suggesting that their biases led to ‘inflated evidence of impact’ that was not necessarily replicable (as Malti, Ribeaud, & Eisner, 2011 found in the Zurich project).

ICRC support for the Amandla project ended in 2014 and, despite strong interest from some factions within the institution for continuation and expansion of violence-reduction through sport programming in select endemic urban violence contexts (based largely on my research and recommendations), a decision was ultimately taken to discontinue this work in South Africa (which also resulted in the termination of my employment). Thus, at the time of this revision in February 2016, I have no institutional ties or incentives. What follows is a process of seeking to understand and impact youth violence in two highly vulnerable communities, while attempting to truthfully account for challenges, shortcomings, and learnings experienced along the way. In this sense, it is hoped that the process and the pragmatic tools, in addition to the potential programme effects, will improve the culture of evidence-based youth development and violence-reduction programming in South Africa.

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## **Chapter 1: Introduction**

Violence in South Africa is a way of life. For Kelo<sup>2</sup>, it has quickly become an avocation. Just a year ago, he was in school, avoiding gangs, rejecting alcohol and drugs, and had plans to study further. Now, at 16, he has dropped out of school, joined a gang, has robbed and stabbed several people in the past year, and no longer cares to think about his future. Within a 12-month period, he discontinued participation in pro-social activities, schooling and extra-curricular sports, and began engaging in semi-organised and violent crime and feeding a developing alcohol and drug habit. Both of Kelo's parents are alive and have provided him with some support and there are no emerging issues of a violent home environment or household deprivation that could help 'explain' his anti-social trajectory. Is Kelo an anomaly, an outlier in the context of a highly violent, ill-policed, over-crowded, largely unemployed, micro-community in one of South Africa's more notorious townships? Or, is Kelo simply adapting to his environment, one where young males, in particular, are confronted on a daily basis by both the threat of extreme violence against them, such as machete attacks by rival neighbourhood gangs, and with the immediate rewards possible through trading in this 'currency of violence': money, alcohol, sex, and local 'respect'? Is there a way to assess Kelo's violence-potential before it is manifest and to intervene, given the massive resource-constraints and development challenges in his community?

This study will take a pragmatic, largely quantitative, approach to try to understand what drives Kelo and others to engage in violence or to desist. It will develop and test a simple tool to assess Kelo's violence-risk in the hope that this can predict the likelihood of future violence engagement. It will also seek to compare participants in a sport-based structured leisure intervention (Amandla Edu-Football) with non-participants to measure if such programming can evidence a change in violent attitudes or behaviours. It will, ultimately, provide a modest response to the call to engage in robust empirical study of youth violence and intervention in South Africa (Ward, van der Merwe, Dawes, 2012), where violence is in great supply and solutions, scarce and untested.

### **1.1 Problem statement**

The thematic issues to which this study are devoted have been captured by Swartz & Scott (2014, p.330) when they ask how young South Africans "who live in adverse contexts develop moral lives; what difference poor schooling, partial-parenting, a history of dehumanising racial subjugation and the normalisation of violence make to their lived morality; and how they retain their humanity in the midst of filthy environments, struggles for survival, the physiological effects of poverty, the absence of recreation and the widespread availability of alcohol and drugs."

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<sup>2</sup> Not his real name

Such interpersonal (and social and structural) violence pervades South African society. This violence has been used to serve political ends as well as to assert a hegemonic order. At its core, violence is a learned behaviour that is sanctioned, reinforced, or simply ignored from early childhood. Theories on the causes of youth violence posit deficits in individual biology, family and school attachment, and the influence of peers (Farrington, 1998), as well as inherent low self-control (Gottfredson & Hirschi, 1990). Theorists of developmental criminology have long debated (and sought to test) whether criminal propensity is inherent and stable for all offenders (Gottfredson & Hirschi, 1990), if there are distinctions between the criminal trajectories of adolescent-limited versus life-course persistent offenders (Moffit, 1993), or if a life course perspective emphasising turning points, human agency, and randomising events (Sampson & Laub, 2005) can demonstrate (comparatively better) predictive efficacy of violent offending and desistance. In South Africa, there is emerging evidence of early crime initiators, a hallmark of the life-course persistent offender grouping, distinct from later-onset, limited-duration offenders (Souverein et al, 2015). Yet, systematic research into the causes and correlates of youth violence in South Africa remains limited in scope, rigor, and effect on the practices of violence reduction and prevention.

Existing research reveals that young South African men from black and coloured communities are the most at-risk of becoming both victims and perpetrators of violence (Bruce et al, 2008; Leoschut & Burton, 2006; Prinsloo et al, 2007; Ratele, 2009). A panoply of factors contributes to this predilection for violence and a host of interventions are aimed at violence reduction. To date, no longitudinal empirical research has been conducted in South Africa to explore the success of sport-based development in addressing youth violence.

## **1.2 Statement of purpose and research questions**

The purpose of the quantitative component of this study was to explore trajectories in violent and anti-social behaviours and attitudes over a 3-year period for a large-n (approx.  $n=700^3$ ) group of subjects, both participants and non-participants (the comparison group) in Amandla Edu-Football programmes. The purpose of the qualitative, grounded theory component of the research was to understand attitudes toward violence and pro-social behaviour from the subjects' perspectives, to 'illustrate the story behind the statistics', and to better understand participant perspectives on the intervention.

To support this inquiry, the following research questions were formulated:

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<sup>3</sup> The final sample used for regression analysis was  $n=311$  and for SEM analysis was  $n=276$ . Reasons for the sample revisions are detailed in chapter 3.

- What risk and protective factors predict or correlate with violence potential? Can these be successfully measured in the Khayelitsha context?
- Can evidence of behavioural or attitudinal change with regard to violence potential be discerned over a 3-year period?
- Is there a measurable change in violent behaviour/violence potential among Amandla participants compared with a reference group with similar environmental characteristics and risk factors?
- Are these "Amandla-effects" transient or sustained?

### **1.3 Rationale and significance**

With the prevalence of youth violence in South Africa and a variety of actors attempting to address the issue from various angles, there is a great need for impact research to test and understand what works and how it works in the South African context. At present, there is simply no empirical research existent in this field. Experts on youth violence in South Africa have called on actors to support such research. While this study will not, on its own, definitively answer the call, it will, hopefully, contribute to a growing body of knowledge on the impact of violence reduction strategies for at-risk urban youth in South Africa. Further, resource and technical constraints have hindered the development, adoption, and standardisation of measurement and evaluation tools for youth development practitioners in South Africa. Most community-based organisations struggle for financial viability and cannot invest in the technical skills required to evaluate their programmes. While many organisations may be engaged in violence prevention and intervention, they are not measuring their efforts nor able to demonstrate their impact. Through the development of the Violence-Propensity Scorecard in this study, a community-level, practitioner-friendly violence risk tool will be put forward to allow for violence risk scoring (in pre-test) and risk-reduction/change scoring (post-test impact evaluation).

### **1.4 Definitions of key terminology used in this study**

It is important at the outset to define, within the frame of this study, several key terms which appear throughout:

violence:

“The threatened or actual use of physical force on another person or group and encompasses acts that may be reactive or proactive, criminal and noncriminal, acts that can occur within the

context of other problem behaviours, and acts that can result in lethal and nonlethal outcomes.”  
(Dahlberg & Potter, 2001, p. 4).

violence-reduction:

Strategies that are designed to reduce/alter violent behaviours that have already been manifest in some form.

violence-prevention:

Strategies intended to target those who have not yet engaged in violent behaviours to reduce the occurrence thereof.

anti-social behaviours:

Aggressive, criminal, deviant, or violent acts/expressions that cause or intend to cause harm to self or others.

pro-social behaviours:

Acts/expressions that affirm, support, or validate others.

social capital:

Benefits derived from cooperation between individuals or groups. Social capital-forming behaviour can result in cohesion within neighbourhood as a product of the collective efforts of its members to interact, integrate, and provide for each other's needs. Anti-social, criminal, and violent behaviour can disintegrate social capital and trust contributing to a neighbourhood disintegrated and living in fear.

sport-based development:

The use of sport-based programming to holistically develop socially-competent youth who can exhibit control over their body, mind, and emotions to define and work towards future goals, while avoiding anti-social, destructive influences.

study participants:

Study participants refer to those persons who have been followed/interviewed during the course of this panel study. Not all research study participants were participants in the violence-reduction intervention (these persons formed the comparison group), though some crossover/contagion did occur.

intervention participants:

Intervention participants refer to persons participating in the sport-based youth development intervention, Amandla Edu-Football. Not all intervention participants were participants in the research study.

## 1.5 Overview of thesis chapters

This dissertation is comprised of ten chapters plus an appendix. *Chapter 1: Introduction* provided a brief overview of the purpose and rationale for the study, the key research questions, and an overview of the chapters.

*Chapter 2: Literature review and theoretical models* reviews the broad range of literature on youth violence and aggression, internationally as well as in the South African context. Bronfenbrenner's ecological model is used as the basis to evaluate risk and protective factors influent on violent behaviours, along with a new model to understand violent actions along selfish and anti-social continuums. The major competing theories of violence and criminality are discussed, with reference to the South African context and stages of development. I then review interventions to address violence and aggression and their effects, and on the prevailing theories and issues in the field of sport-based development. Following this review, the theoretical models explaining pathways to youth violence and potential areas for intervention are presented and discussed.

*Chapter 3: Intervention and panel study design* describes the process that led to the identification of the research subject (the intervention, Amandla Edu-Football) and details the subsequent study design, the numerous design and measurement issues inherent in youth violence and intervention research, and efforts to address these general issues along with select design challenges that arose during the course of the research.

*Chapter 4: The realized sample: Real-world panel study challenges and data issues* details the challenges encountered in the field work, the lessons learned and adaptations undertaken. It then presents a series of descriptive statistics for the three waves of data. Initial observations and comparisons are discussed.

*Chapter 5: Development of scales: process & learnings* presents the process of scale development, confirmation, and validation. Results are compared to those in the extant literature. The Violence Propensity Scorecard is then developed and validated as a unique and accessible instrument for measuring violence-risk potential and risk changes over time.

*Chapter 6: Prediction of Violence Potential* makes use of the scales developed in Chapter 5 to test cross-sectional and longitudinal models for the prediction of violence-potential, as a valid proxy for violent behaviour. Structural Equation Models are presented to test the theoretical models presented in Chapter 2 against the data, demonstrating a parsimonious model.

*Chapter 7: Case Studies – Most Significant Changes in the Violence Scorecard* presents several case studies where subjects underwent significant changes in their violence-potential. These are presented along with a discussion to illustrate stories of violence development and desistance.

*Chapter 8: Violence-reduction intervention effects: significance and durability* uses the same quantitative analysis approach presented in Chapter 6 to test for intervention effects. It further compares the effects of the key study intervention, Amandla Edu-Football, against those of another popular structured leisure activity, regular attendance to a place of worship. The paucity of empirical research on the effects of sports-based programming is noted in the analysis. Area-based crime data is explored in detail to understand apparent crime reduction trends and assess crime data veracity. The chapter concludes with a discussion of the findings and a detailed review of the Amandla intervention, as delivered.

*Chapter 9: Case Studies – Significant Amandla-related change* presents two case studies where subjects involved in the Amandla intervention underwent significant changes in their violence-potential. These cases illustrate the potential for the Amandla project to influence violence-related attitudes and behaviours and suggest the possibility of a buffering effect that may emerge (over further waves of study) in the empirical data.

The final chapter, *Chapter 10: Conclusions, limitations, and recommendations*, revisits the research questions, drawing conclusions based on the study findings and the relevant extant literature, and details the limitations alongside recommendations for future youth violence research and intervention.

## Chapter 2: Literature review & theoretical models

The purpose of this literature review chapter is to:

- develop an understanding of the definition and scope of violence to be reviewed
- explore theories of the development of violence
- situate violence in the South African context
- review evidence-based research on the factors influencing violence
- review the methods and findings of evidence-based research on violence prevention and reduction
- review theories underpinning the field of sport-based development and evidence of impact on violence/crime-reduction outcomes
- present a conceptual framework for the understanding and analysis of violence to be explored in this new research

### 2.1 Introduction

Studies of youth development, including the development of aggression and violence (and intervention), span the disciplines of psychology, sociology, criminology, epidemiology, public health, social work, development studies, education, sport and leisure studies, and programme evaluation, to name but a few. This review will attempt to draw from research across continents and disciplines to unpack what is known about the development of youth violence, internationally and in South Africa, the process of behavioural change, and the evaluation of violence-interventions and sport-based interventions.

In the field of criminology, two major theories have been presented and later tested in an effort to explain the roots of criminal behaviour. Gottfredson and Hirschi's (1990) general theory of crime (also known as latent trait theory) proposed that anti-social/criminal behaviour emerges in childhood due chiefly to latent deficient self-control and remains manifest throughout adulthood. Low self control is comprised of 6 elements (impulsivity, recklessness and risk-seeking, preference for physical activities, preference for simple tasks, impulsivity, self-centredness, and volatile temper<sup>4</sup>) and is essentially an inherent trait that does not diminish. Gottfredson and Hirschi (1990) assert that prior offending, as a marker of this latent lack of self-control, is the only strong and stable predictor of future offending, regardless of any would-be intervening mechanisms (Gottfredson and Hirschi, 1990; Cernkovich & Giordano, 2001). This would suggest that, according to general theory, social bonding,

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<sup>4</sup> High threshold for physical pain and outgoing/externalizing personality are two additional characteristics proposed by Gottfredson and Hirschi (1990) not directly related to lack of self-control.

deviant peer associations, and a host of other pro-social attachments or negative influences are irrelevant to the propensity to repeat violent/criminal behaviours. Although social and environmental factors can interact with this deficient self-control and influence opportunities for offending, general theory of crime is potentially irreconcilable with concepts of violence-reduction through social intervention, suggesting that violent criminals cannot really alter their lack of self-control. Thus, external control (chiefly through incarceration) becomes the only viable option to attenuate violent crime.

Such deterrence and control of criminal offenders has been the primary focus of the criminal justice system, informed through the study of criminology. In recent decades, public health experts have identified youth violence as a public health problem (an epidemic even, in some areas) and sought to reduce and prevent violence through mitigation of risk factors and promotion of protective factors (firmly rooted in an ecological view of the proximal and distal factors influent on an individual's violence propensity). A certain tension has developed between the criminologist's goal of developing a synthetic, etiological view of violence (and empirically testing such theories) and the public health specialist's desire to establish an effective public response (Moore et al, 1994), while potentially diminishing the importance of unifying theory.

The general theory, as described previously, distills the cause of criminal behaviour down to the singular construct of self-control, or the lack thereof, as manifest during developmental years, and disregards the influence of risk and protective factors, or life events. Alternatively, life-course perspective focuses on the broader range of factors that may serve to reinforce or redirect behavioural predilections for anti-social behaviour between adolescence and adulthood (Sampson & Laub, 1995) and is more compatible with public health approaches to violence prevention and reduction. Household deprivation and childhood poverty, for instance, may interact with a lack of self-control to mould a character prone to reactive violent behaviours. Thus, the life course perspective allows for more variation of levels of violence across countries and communities: "opportunity structures, control patterns, and strains typical for a given society may result in specific configurations of problem behaviour. For example, behaviour that involves aggression against others may be motivated by high levels of social inequality, while illicit drug consumption may rather be driven by the availability of respective substances." (Eisner, 2002, p.207).

Research testing the viability of the general theory/latent trait and life course perspective theories has yielded mixed results (Cernkovich & Giordano, 2001) on both fronts. The causes and correlates of offending and desistance seem to remain conditional, not universal.

Thus, the theoretical framework for this study necessarily takes a life-course perspective view that social bonding, social learning, and societal reaction all have potential mediating effects on

offending (and re-offending or desistance), that attitudes inform actions and that these can be attenuated. As Cernkovich & Giordano (2001, p. 402) state: “we have found that it is not the mere presence of a particular environmental feature that is necessarily related to significant changes in life direction (i.e., movement from a criminal to a noncriminal lifestyle). Rather, chances for change are enhanced when these factors are associated with cognitive shifts, often involving a transformation in the actor's conception of self”.

This transformation in self-conception reflects Erikson's (1968) theory of ego identity, in particular, the identity vs. role confusion stage characteristic of adolescence. Youth identities are being made and remade based on family, culture, societal norms, immediate friendships, explorations, and positive or negative feedback. While deviance is not uncommon in the testing and fixing of ego identity, extreme interpersonal violence (violence exposure, victimization, and/or perpetration) is not often foregrounded in normal developmental theories. With this in mind, I present a matrix theory of interpersonal behaviours as a guide to situate the violent behaviours that this study has sought to understand and measure (see figure 2.1 below) that also bears some resemblance to Marcia's (1966, 1967) identity status taxonomy (an elaboration of Erikson's identity vs. role confusion stage). If we visualize interpersonal violence as a construct of selfishness and anti-social behaviour, we have two axes, or continua along which behaviours, and the attitudes that inform or reinforce them, can be placed, understood and potentially influenced.

The diagram below (figure 2.1) is an attempt to display these characteristics and visualize the shifting of behaviours and attitudes. The two axes in the diagram represent indexes of pro-social/anti-social attitudes/behaviours and selfish/selfless attitudes/actions. The bottom-left (negative x, negative y) quadrant encompasses the extremes of anti-social, selfish actions, such as the act of murder. In this quadrant, the diffuse individuals (Marcia 1966, 1967) with no identity-defining commitments would be situated, with psychosocial impairment at the extreme. The opposite, top-right (positive x, positive y) quadrant contains the pro-social, selfless actions that serve to develop social capital. For young people this can mean participating in community activities and social-benefit organizations, volunteering, spending time with the sick and elderly, or mentoring other younger children. In this quadrant, identity-achieved individuals (Marcia, 1966, 1967) would be found with high levels of ego development, motivation, self-esteem, moral reasoning and emotional connectedness. Behavioural outcomes (and the attitudinal measures that inform them) in this study can be thought to occupy points on this graph in a range of socially positive and socially destructive regions. The more selfless and pro-social behaviours serve to build social capital and mitigate violent behaviours and attitudes and are reflective of matured, holistically-developed young people. Socially destructive behaviours that are not selfish per se are potentially aberrant in the Khayelitsha context but exhibited in distant, aloof, ‘loner’

personalities. This is not unlike aspects of Marcia’s (1966, 1967) moratorium identity status (although this is also seen as a normative phase of adolescent ego identity development, ‘the searching for answers’) where individuals are searching for identity status and have little faith in knowing anything with certainty. Much more common (in the Khayelitsha context) are selfish behaviours that have social-conforming components, acts that seek affirmation, acceptance from peers but are ultimately self-serving, predicated on individual gain. These behaviours can be characterized as materialistic and opportunistic. These may be likened to foreclosed individuals (Marcia, 1966, 1967) who conform to peer pressures, exhibit prejudices, and have yet to open up to new experiences and ideas. Behavioural change (and identity development) would occur when normative behaviours are shifted along each continuum. Positive youth development practitioners (Catalano et al, 2002) seek to shift behaviours (and reduce proximal risk factors), largely through promotion of the attitudes that inform those normative behaviours, from the selfish/anti-social quadrant(s) to the selfless/pro-social quadrant, ascribing, in essence, a positive youth development trajectory.

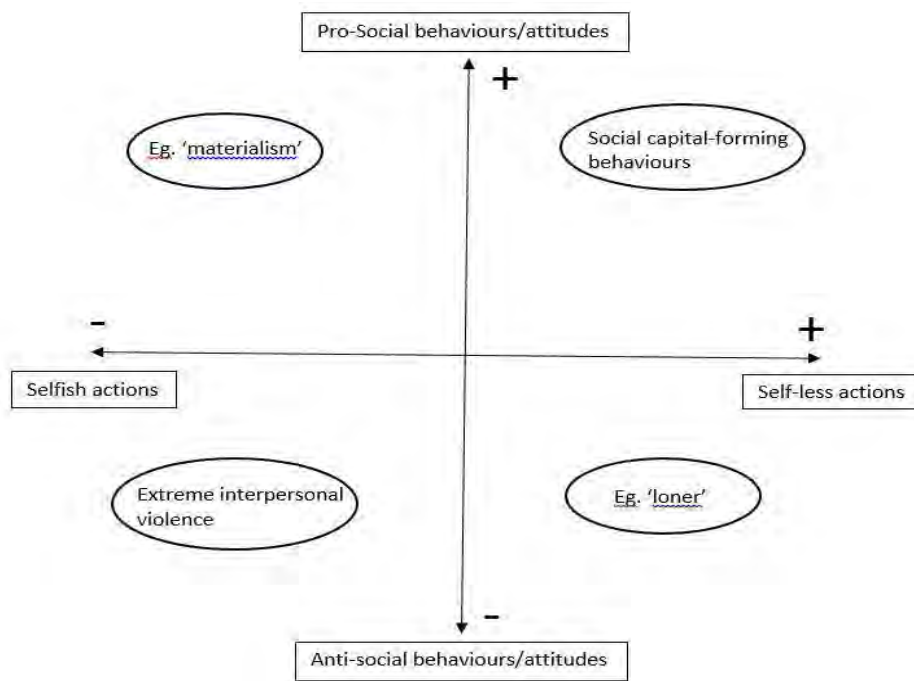


Figure 2.1. Four dimensions of interpersonal behaviours.

## 2.2 Definition of violence

For the purposes of understanding the literature, violence “includes the threatened or actual use of physical force on another person or group and encompasses acts that may be reactive or proactive, criminal and noncriminal, acts that can occur within the context of other problem behaviours, and acts that can result in lethal and nonlethal outcomes.” (Dahlberg & Potter, 2001, p. 4). Definitions of violence are debated among scholars; alternative definitions include material and symbolic deprivation

as well as psychological damage (Galtung, 1985, 1986; Schröder & Schmidt, 2001). A broader framework (see table 2.2 below) thus includes economic, institutional, political, and social spheres of violence (Moser & McIlwaine, 2004, 2006):

<b>Category of violence</b>	<b>Description</b>	<b>Examples</b>
Economic	Violent acts motivated by the desire for economic gain	Street crime, carjacking, kidnapping, drug trafficking, gang/collective territorial ('turf') violence
Institutional	Violent acts by individual or collective to express institutional power over others	violence perpetrated by state entities (i.e. army, police, health, education depts.); social cleansing/xenophobia by civil vigilante groups; lynching of suspected criminal by community groups
Structural	Indirect violence induced by relative deprivation, inequality, social polarization	Apartheid policies restricting movement, employment, home ownership; discriminatory zoning, lending practices
Political	Violent acts motivated by the desire to achieve or maintain political power	Guerrilla and paramilitary conflict, political assassinations, conflict between political parties
Social	Violent acts motivated by desire for social gain/social power	Interpersonal violence, spouse/child abuse, sexual assault, violence resulting from arguments, gang/collective identity-based violence

Table 2.2. Table of categories of violence. Adapted from Moser and McIlwaine (2004).

This study was primarily focused on direct, interpersonal social (and economically-driven) violence and its prevention or reduction. However, indirect forms of violence, at the structural and institutional levels, play integral roles in an individuals' conception of (and justification for) violence. For many of the urban poor globally this "layering of multiple forms of violence, and above all its associated fear and insecurity, has become 'routinized' or 'normalized'" (Moser & McIlwaine, 2006, p. 90). In such an environment, violent crime and everyday violence can be conceived as legitimate means of survival, a kind of currency used to establish the economic or social superiority of a group or individual over others.

Moser & McIlwaine (2006) propose a causal triangle (see figure 2.3 below) for explaining everyday violence incorporating: 1) societal structure (eg. unemployment, concentrated poverty, low-quality education, high inequalities); 2) Identity (eg. gang culture, masculinity, acceptance/rejection from family, school peers, conceptions of 'success') and 3) Agency ("the power of actors to operate independently of the determining constraints of social structure", McDowell & Sharp, 1999, p.3). Here, the structural dynamics of concentrated poverty and perceived lack of conventional opportunities for economic and social gain create the 'playing field' upon which identity is shaped and contested. Individuals with more daring, more bravado, more agency, and less concern for their physical self and that of their victims may find rewards, in the form of direct economic gain and popularity, fear, or

‘respect’, through the utilization of violence. Indeed, in Khayelitsha, youth describe the ‘cult’ that surrounds violent male youth gang leaders. They are both feared and worshipped while other boys vie to become their sidekicks and girls, to sleep with them.<sup>5</sup>

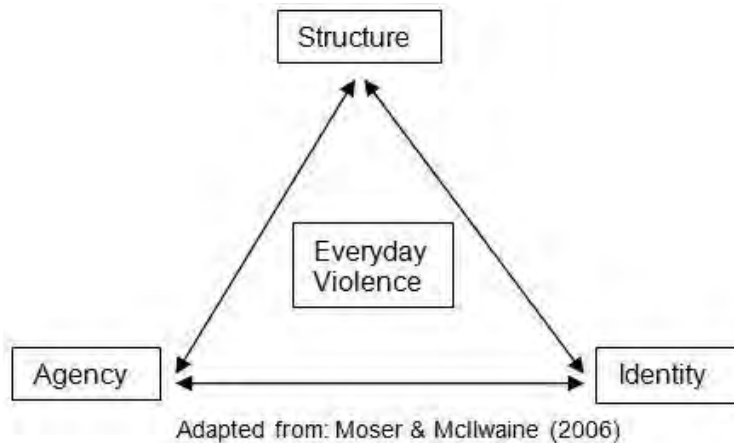


Figure 2.3. Everyday violence diagram (Moser & McIlwaine, 2006)

While Moser & McIlwaine theorize the drivers of everyday violence at the community level, it is critical to unpack the component of individual Agency; ‘what drives one individual to use violence when many others choose to desist?’ It is commonly acknowledged that not all (or even most) people in violence-prone, disadvantaged communities are actually violent and, therefore, this suggests that other biological and sociological factors may be influent. Accordingly, an ecological approach to the understanding of violence takes into account the contexts of the broader society, the community, family, school, peer group, and an individual’s characteristics, along with the interactions between the individual and these contexts (Ward, van der Merwe, Dawes, 2012). These levels can be likened to concentric circles, with the individual on the inside, most proximally affected by family, school and peer group (see figure 2.4 below). Thus, individual (largely biological) characteristics and the interaction with family level factors would have an effect on social groups and levels of interaction. In line with such an ecological approach, this review will explore aspects of violence on these various levels.

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<sup>5</sup> For illustration, an excerpt from an open-ended interview with a young Khayelitsha offender: “we would really rob people on a daily basis and we would normally take phones, blackberrys and tablets and sell them and buy booze and weed and then we go to parties and we would get girls”.

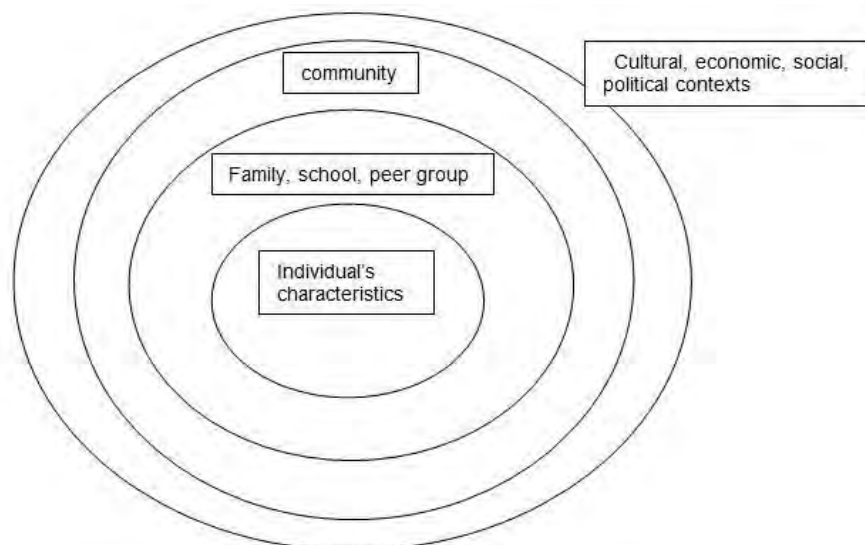


Figure 2.4. Ecological risk model. Adapted from Bronfenbrenner (1979) and Ward, van der Merwe & Dawes (2012).

## 2.3 Violence in South Africa

South Africa has, in the recent past, ranked highest in the world in available data of intentional homicides, between 40 and 69 per 100,000 people (UNODC, 2009) and assaults per capita, 12 per 1000 people (UNODC, 2004), among numerous violent crime statistics in which the country ranks near the top. While more recent statistics suggest significant declines in South Africa's murder rates, it should be noted that there is ongoing debate about the veracity of crime statistics with perverse incentives for police to under-report crimes (Bruce, 2010; Gould et al, 2014). Regardless of the rankings, South Africa is clearly among the most violent countries in the world today (Foster, 2012). In line with the ecological risk model for individuals, I now explore the community-level dynamics of violence.

### 2.3.1 Violence in Khayelitsha

The township of Khayelitsha, some 30km west of the Cape Town central business district, contains a population of between 400,000 to 450,000 people, with an estimated 75% of the 118,000 households below the upper poverty line (R524 per person per month) and more than half living in informal dwellings with limited electricity (including street lighting), water, and sanitation services (O' Regan et al, 2014). There are now 3 police stations (Khayelitsha Station, Harare Station, and Lingeletu West Station) serving this enormous population, resulting in a very low ratio of police officers-to-citizens. The number of murders in Khayelitsha (police station precinct area) is consistently 150-200, among the highest of any police precinct in South Africa, 2nd highest in 2011-12 and 3<sup>rd</sup> in 2012-2013 (Crime Hub, 2013). Murder rates are not centrally calculated as census data is not broken down by police precinct. This makes meaningful comparisons of murder rates across locations and

time virtually impossible. In a crude analysis for the Khayelitsha Commission of Enquiry, De Kock (in O'Regan et al, 2014) suggests that, taken as a whole, the 'Greater Khayelitsha reporting area' (combining data from all three police precincts) saw 354 murders in the 2012/2013 reporting year (O'Regan et al, 2014), well above that for any single police precinct in the rest of South Africa (the highest station reports were 262 murders in Nyanga police precinct). Based on the median estimated population of 425,000, this would translate into a murder rate of 83/100,000.

Crime analysts in South Africa have argued that murder statistics may be a fairly accurate reflection of the true incidence of the crime (as there is generally a body to be accounted for) but most other contact crimes are likely highly under-reported (O'Regan et al, 2014). This is particularly problematic in the Khayelitsha context, where over-crowding, under-policing, poverty, and opportunities for contact crime abound and residents are sceptical that reporting crimes will lead to positive outcomes. Redpath (in O'Regan et al, 2014) estimates that 40% of all crimes in Khayelitsha may go unreported. In addition to reports of high sexual violence, gender-based violence, corrective rape, attempted murder, assaults, aggravated robbery, violent youth gangs, and xenophobic violence, there are also frequent reports of vigilante killings where Khayelitsha residents have acted as de facto police officers, judge, jury, and executioners. Taken as a whole, the available data and analysis suggest that the variety and severity of violence and crime in Khayelitsha results in serious safety concerns for its residents and a toxic level of violence exposure for its youth.

According to the latest data available from the City of Cape Town, the Khayelitsha population is 99% Black African (Statistics South Africa, 2011; City of Cape Town 2011) Black Africans represent roughly 80% of South Africa's population and account for approximately the same ratio of murder victims and of violence perpetrators (Foster, 2012). It is worth noting that racial classifications, particularly when used to frame explanations of violence, remain problematic. Studies of risk factors for violence internationally have not demonstrated that certain racial groups are more prone to violence when environmental, individual, and family factors are controlled for (Caldwell et al, 2004; Almgren et al, 1998; Brezina et al, 2009; Cook et al, 1998; Lauritsen et al, 1991; and Satcher, 2001).

### **2.3.2 Cultural, economic, social, political violence**

The roots of violence in South Africa are deep and widespread: "South African history is steeped in violence, from pre-colonial times through colonisation, slavery, and apartheid, to the period of resistance and liberation when many thousands of black youths were subject to state violence and white youths were conscripted to exert the force required to sustain the system of white privilege and domination." (Ward, van der Merwe, Dawes, 2012, p.4). Today, everyday violence is systemic in South Africa, effectively engrained in the culture, both through the lingering history of Apartheid

segregation, disenfranchisement, and family separation, as well as through the currently widening gap of economic and educational inequality.

Apartheid embedded a structure of violence within urban South African society. Blacks were forced to live in squalid conditions far from the centres of commercial activity. When they were able to find employment (despite rigid restrictions on their movements), they were either working in dangerous and deplorable conditions and/or exposed to a degree of wealth that would never be available to them. Naturally, symbols of success were then modelled on the visible accoutrements of the privileged white minority.

This contradiction between expectations and reality has led to what Stevens and Lockhat (1997) describe as role confusion for many black South African youth who “have been exposed to the imagery, symbols and values that encouraged individual achievement and social mobility, but simultaneously have been refused access to any significant material resources that allowed for this.” (Stevens and Lockhat, 1997, p.254). In effect, Erikson’s (1963) stages of development were altered for an entire population: “psychosocial moratorium did not apply to the majority of black adolescents. The assurance of economic independence was frequently not attainable, preparation for occupational and family life was commonly viewed as preparation for psychological and material enslavement, and value and ethical systems that emerged were often in direct conflict with those of the status quo, resulting in further alienation.” (Stevens and Lockhat, 1997, p.254).

While the apartheid pass laws and geographic restrictions are removed today, allowing all people to reside and work where their resources and skills (or connections) allow, the actual level of inequality has risen since the dawn of democracy (Demombynes & Ozler, 2005) and is today among the very highest in the world (World Bank, 2012). Significant international evidence confirms that higher levels of national inequality are linked with higher levels of physical violence in society (Foster, 2012; Wilkinson, 1996, 2005; Marmot, 2004).

In an attempt at redistribution since 1994, government has built thousands of houses and increased the delivery of basic services (electricity, water, and sanitation) to some poor communities (Government of South Africa, 2009), yet many citizens continue to voice their frustration at the pace of this service delivery. Meanwhile, unemployment remains chronically high, officially 25.5% for the third quarter of 2015 (Statistics South Africa, 2016), and the failures of the public education system to create a skilled young workforce (who may help to build and expand a domestic economy) are colossal. Despite spending \$848 per pupil per annum (in gross Department of Basic Education budgetary terms), South African students perform worse than their peers in Mozambique who spent a mere \$48 per pupil per annum (Edelstein, 2010).

Thus, the trajectory of social development in South Africa is not one that provides hope for a better tomorrow among today's urban poor, living close in geographic proximity to private and public symbols of wealth, yet having little to no legitimate means of overcoming poverty, food insecurity, temporary housing, disease prevalence, limited sanitation and access to clean water, dismal education, poor public transportation, and, lastly, exposure to violence.

Crime in South Africa is distinctive not so much for its frequency but, rather for its extraordinary violence (Altbeker, 2007, p.33). This may be linked to historical aspects as well as to current ineffective policing and prosecution, creating a sense of impunity among violent offenders (O'Regan et al, 2014; Seekings & Thaler, 2010). There are some commonalities in the violence found in South Africa and in Latin America where "the shift from authoritarian regimes toward democratic governments has arguably led to the democratization of violence itself with the use of force no longer the primary preserve of armies, guerrilla, or paramilitary groups" (Moser & McIlwaine, 2006, p.90; Koonings, 2001; Krujit & Koonings, 1999). In this regard, the spread of violence may have both political and economic dimensions, with the advent of democracy opening new spaces for the poor and vulnerable to be preyed upon.

When stark inequalities are paired with a dearth of legitimate pathways to economic success and the attainment of status, social polarization is a result. Marginalized members of an unequal society may resort to violence to attain some measure of symbolic success. Eric Pelser describes the social polarization of the poor in the South African context:

"Excluded by the debilitating effects of poverty, dysfunctional home environments, poor education, lack of appropriate skills and unemployment, this "underclass" cannot access the dominant or mainstream culture and yet is incorporated into it and is constantly aware of and seeks to achieve its primary symbols – wealth and conspicuous, acquisitive consumption. Lacking access to legitimate pathways of achieving society's normative goals, a significant proportion of South Africa's youth has "normalised" illegitimate means – crime and violence – of acquiring the prevailing symbols of 'success', to demonstrate cultural compliance, individual status and 'control' over their environments." (Pelser, 2008).

Though poverty, alone, is often thought to be a predictor of violence, decades of international crime and economic data have shown that "inequality and exclusion, associated with unequal distribution of economic, political, and social resources in urban contexts, intersect with poverty to precipitate violence" (Moser & McIlwaine, 2006; Fajnzylber, Lederman, & Loayza, 1998, 2000). In South Africa, similar findings are confirmed by Demombynes & Ozler (2005). Thus, a simplified (and, perhaps, more accurate) trigger for interpersonal violence is relative deprivation combined with Strain, both by-products of highly unequal societies. While evidence supporting the relative deprivation

theory of violence is mixed, Agnew's (1999) adaptation of General Strain Theory (Merton, 1938) to account for community differences in crime rates due to differing levels of social organization, deprivation, and differences in motivation for crime (or use of violence) shows promise. Agnew (1999) explains that negative stimuli, relative deprivation, and goal blockage (the inability to achieve normative goals through conventional, legal means), all contribute to increasing levels of negative affect among residents of high crime/violence-ridden communities. These heightened levels, in turn, increase the chances of angry/frustrated individuals meeting one another and engaging in violence (as accomplices or opponents). Once crime and violence are set in motion, victimization leads to further strain and yet more violence.

In developmental terms, goal blockage and role confusion are more normative for under-privileged black South African youth and young adults than goal and identity achievement, resulting in communities of youth exhibiting collective alienation and strain. This inevitably calls into question Northern theories of normative youth development (and aberrant aggression and violence), and how they can be meaningfully reconciled within a developing-country context where most individuals may never reach the phase of identity achievement.

#### **2.4 Who is most at risk of violence?**

In South Africa in 2005, youth, 10-29 year-olds by World Health Organisation classification, accounted for 48% of the victims of homicide and murder in a national study (Prinsloo, Kotzenberg & Seedat, 2007). Also in 2005, a Centre for Justice and Crime Prevention (CJCP) study found that young people (12-21 year-olds) in South Africa experience assault at eight times the adult rate, theft at five times, and robbery at four times the adult rate (Leoschut & Burton, 2006). Further, 76% of all young criminal offenders have themselves been victims of violent crime (Leoschut & Burton, 2006).

While the reported murder rate in South Africa has dropped from 66/100,000 in 1994/5 to 40/100,000 in 2006, violent crime against children under 18 increased from 2002 to 2005: rape of children under 18 increased by 55%, murder by 45%, and serious assault by 50%. Overall murder rate declines are likely due to reductions in firearm-related deaths but poor investigations, mis-reporting, and incentives for police under-reporting may have a significant impact on certain categories of violent crime data (Foster, 2012, p. 31; Bruce, 2012; Gould et al, 2014). A comprehensive report on the violent nature of crime in SA, conducted by the Centre for the Study of Violence and Reconciliation (CSVR) found that 31% of all suspects in crime-related murders were 19 or younger (Bruce et al, 2008).

Violence in South Africa comes in many forms (personal, interpersonal, property-related, cultural, structural, state-orchestrated or condoned), but the acceptance and development of violence

among youth is a particular cause for concern. Youth, 14-35 years, according to South African National Youth Policy definition (Ward, Dawes & Matzopoulos, 2012), are by far the most common perpetrators and victims of violence and it is this young generation that will model behaviour for the next cohort; violent youth will beget more violent youth. In recent research for the Khayelitsha Commissions of Enquiry (O'Regan et al, 2014, p.136), Burton found that most young Khayelitsha subjects would not bother to report violent crime to the police, suggesting the degree to which youth involvement in violence is normalized and reporting to police, stigmatized.

The most common perpetrator of violence in South Africa is not only young and likely a victim, himself, but also male. Male perpetrators of violence in South Africa outnumber female perpetrators by between 7:1 and 13:1 (Foster, 2012). Males are also the more common victims of non-natural death, accounting for 81% of such deaths. A study by Kopano Ratele found that there are more than 6 male homicides for every one female victim in South Africa, as compared with a 3:1 ratio, globally. In comparing homicides in Cape Town, Durban, Johannesburg, and Pretoria, Ratele found that the rate is highest in Cape Town, both among black and coloured groups (Ratele, 2009).

In South Africa, coloured males are overrepresented in official records of convicted perpetrators, with coloured youths offending at 4.4 times the rate of black South Africans and 16 times higher than the rate of offending among Indian South Africans (Glanz et al, 1992; Foster, 2014). This disproportionate offending is also mirrored in sexual offences and prison statistics over a 50-year period, suggesting that other lurking variables are influential (Glanz et al, 1992; Foster, 2012). Foster suggests, "This cannot be purely a proxy for class, since Africans in general have been less educated, more unemployed and poorer. The urban situation of coloured people in the Western Cape, forced removals and the high prevalence of male gangs must be other factors, but the coloured areas in Cape Town are certainly marginalised, deprived, and poor." (Foster, 2012, p.37).

Notwithstanding the statistics on male-on-male violence cited above, violence against women in South Africa is also an epidemic of serious concern (Abrahams, Martin & Vetten, 2004). Although subject to heavy under-reporting<sup>6</sup>, as many as 30% of South African women report abuse on an annual basis. The knock-on effects of this violence against women are estimated to cost the South African economy 1-2% of GDP (KPMG, 2014).

## **2.5 Factors that influence violence**

Most recent and longitudinal studies of youth violence and deviance in the United States have employed a public health approach to highlight risk factors within the individual, family, peer, school,

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<sup>6</sup> Abrahams, Martin & Vetten (2004) report a 9-fold difference between police-reported sex crimes (240 per 100,000) and the incidence reported in a community survey (2040 per 100,000).

and community/societal domains that place an individual at greater risk for violence perpetration (Dodge et al, 2008; Farrington, 1998; Hall et al, 2012; Loeber & Hay, 1997; Lösel & Farrington, 2012). Recent trends in research have focused on resilience and protective factors that mitigate violent outcomes in the presence of such risk factors. The bulk of this research has studied deviant behavioural outcomes, with less direct focus on violence. The result is that we know a fair amount about what places American youth at greater risk of anti-social behaviour (and much of this is put in motion by early childhood) but we know relatively little about what leads some at-risk youth to employ violence, while the majority do not. And, within South Africa, we have no body of evidence from which to draw any conclusions (Ward et al, 2012).

### **2.5.1 Community context**

Urban areas with high population density and unequal levels of development across communities give rise to youth who are exposed to family violence, suffer from poor schooling, are exposed to deviant peers or family members, and, thus, have a greater predilection toward violence.

Popular South African culture glorifies cars, sex (including male prowess), shopping, and “bling” (ostentatious jewellery, sunglasses, designer labels). There are even instances of urban youth destroying designer clothes as a symbol of their expendable wealth, part of the i’ kothane craze (Nkosi, 2011). In Soweto, South Africa’s largest conglomerated township, these youths are likely the offspring of the “Class of 1976”, the former youth of the Soweto Uprising who revolted against the use of Afrikaans as the primary medium of study in black public schools. At that time, children prepared to die (and, indeed, gave their lives) for the right to a meaningful education as a pathway out of poverty and their struggle both symbolized and galvanised the anti-apartheid movement.

According to Stevens and Lockhat (1997, p. 258), “In apartheid South Africa, it was partly due to a shared political consciousness that many adolescents were able to develop a collective identity that resisted and challenged the pervasive racist ideology. The new role models, economic structures and dominance of western ideologies, however, have now encouraged an ideological shift from collectivism to individualism”. Thus, one social generation period in post-Apartheid South Africa has yielded a youth popular culture that now identifies more with material excess and the veneer of gangsterism than with equality of opportunity through education.

This propensity for instant gratification and the flaunting of material symbols of wealth create strong incentives for criminality and violence: “The cynicism related to not being able to experience tangible benefits in the 'new' South Africa, the double-bind as a result of confusing and contradictory role prescriptions, the lack of structural containment and programmes to allow for the development of healthy independence and judgement; have all contributed to even fewer healthy options for black

South African adolescents than before. What we now also encounter is a proliferation of gangsterism, substance abuse, anti-social behaviour” (Stevens & Lockhat, 1997, p.259). Ward finds that, in South Africa, community contexts (homes, schools, neighbourhoods) “are rich in pro-violent models and messages” (Ward, 2007, p.27) and early aggressive behaviour leads youth toward social contexts that teach yet more violence. This “reciprocal determinism”, both learning from the environment and eliciting reactions from that environment, is a key component to understanding the rationalization for violent behaviour. Non-violent means of solving problems are, by contrast, in short supply (Ward, 2007).

A lack of positive male role models, within the family or community, has been found to contribute to risk factors for youth anti-social behaviour in South Africa and, internationally (Leoschut & Burton, 2006; Pelsler, 2008; Thornton et al, 2000). Young boys tend to model their behaviour on older boys and men, both those in the home and in the immediate environment. When fathers are absent, surrogate male role models are sought, directly or passively. In poor urban contexts, the most visible examples of male success may indeed be those persons in the community who have attained and exhibit-symbols of material success which have been illegally acquired. The working poor, by contrast, have little material success to impress urban youth within a strongly materially-oriented society, of which South Africa, as a whole, is also a national victim.

### **2.5.2 Family, school, and peer group contexts**

While no single factor can explain why some individuals choose violent actions, Resnick et al. (2004) find that the most significant risk factors, by far, are history of violence perpetration and victimization; effectively, direct prior exposure to violence as a legitimized behaviour. The personal ‘decision’ to resort to violence must be seen against the backdrop of the community and family prevalence and tolerance of violence, the degree to which it has become normalized within the daily environment.

As the fundamental unit in which human behaviour is learned, the family and its dynamics are central. Ward states: “The high rates of abuse and neglect of young children [in South Africa] suggest that few children experience warm relationships with their parents in which they are able to learn empathy for others and so develop the guilt that may inhibit violent actions” (Ward, 2007, pp.28-29). This abuse can have both emotional and physical dimensions. Further, on a biological level, pre-natal maternal substance abuse, poor nutrition and medical care negatively impact foetal development and, in turn, early pro-social behavioural development (Ward, 2007).

Easy access to firearms in the home and a family member who has attempted or completed suicide also may increase the risk of violent behaviour (Resnick et al, 2004). By contrast, positive

family dynamics can provide protection from such risk factors for violence. The ability to discuss problems with parents; high parental expectations for school performance; shared activities with parents; at least one parent consistently present during waking hours, arrival from school, dinner time, and bedtime, all serve as buffers for violent outcomes (Resnick et al, 2004).

An individual's connectedness to school and their focus on academic achievement are also strong buffers against violence. However, schools can often become breeding grounds for violent behaviours. Poorly managed schools within violent neighbourhoods discourage learning (and retention of quality teachers) and perpetuate disadvantage. School violence may involve bullying, gang activity, corporal punishment or, more broadly, educator-on-learner violence, and sexual violence (Gevers & Flisher, 2012). The public education system in South Africa was a key tool through which Apartheid was reinforced, through separate and unequal development and tight state control. Acts of state violence and youth revolt were played out in urban township schools (Edelstein, 2010). Today, educational inequalities persist and the various forms of violence in schools are manifest (Burton & Leoschut, 2003).

Exposure to deviant peers is associated with increased deviant behaviour. However, there is some debate on the direction of the relationship; the peers may influence an individual's behaviour just as the individual's deviant behaviour may lead them to seek out more deviant peers (Menard & Elliot, 1994). In either case, adolescence is characterized by a shift from a focus on the family unit to a focus on peer identity and acceptance. Being popular among one's peers may require the display of deviant behaviour or the difficult choice to select new, non-deviant friends. Protective factors within the family and the school are critical to buoy an at-risk youth from seeking acceptance through deviant peers and gangs. It is within this adolescent developmental stage that the 'cult of gang membership' is so dangerously seductive. Engagement in group violence, even through fighting against other neighbourhood gangs, can provide a quick pathway to peer group popularity and respect, if not fear, as well as a measure of material success (if you beat someone up or kill them, you might as well take what they have of value-shoes, clothes, electronics, cash).

### **2.5.3 Individual characteristics**

Prior acts of violence, history of violence victimization, emotional distress, bringing weapons to school, skipping school, learning problems, poor self-assessed general health, a prior suicide attempt, frequent use of alcohol, marijuana, or other illicit drugs all increase the risk of violent behaviours. According to Resnick et al, "young peoples' susceptibility to health-compromising behaviours and adverse outcomes are influenced by the number and specific nature of stressors they face as well as by the presence of protective factors that can offset the deleterious effects of risk factors" (Resnick et al,

2004, p.424.e3). In this way, each element in the ecological model can be seen as a risk or protective factor, leading to (or away from) pathways toward violent behaviour.

In adolescence and into early adulthood, male aggression and violence increases before tapering off. Loeber & Hay (1997) cite 5 reasons for these increases in the American context: 1) increased possession and use of weapons with age; 2) increased pressure from peer groups; 3) increased strength with increased physical development; 4) increases in cross-gender aggression; 5) onset of sexual maturity and potential aggression toward own children/family/partners.

Snyder et al (1996) found that weapon carrying in schools doubled from 6<sup>th</sup> grade (average age of 12 years-old) to 9<sup>th</sup> grade (average age of 15 years-old) before levelling off. This lends support to the notion that early adolescence, 12-15 years of age, is a distinct developmental period where peer influence and risk-taking is on the rise. In late adolescence, 16-18 years, aggressive and violent behaviours may become more refined, for instrumental purposes among potentially emerging career criminals, or rejected by individuals who have aged out of peer-influenced aggressive behaviours.

## **2.6 Developmental pathways to violence**

Research by Krug (2002) and Moffitt et al. (2001, 2003) has identified two development paths to violence: life-course-persistent and adolescence-limited. Life-course-persistent offending is a neuro-cognitive disorder that can be detected in early childhood (often through aggressive behaviour) and typically affects between 5% - 15% of all violent offenders. The male-to-female ratio of life-course-persistent offenders is 10:1.

Adolescence-limited offending is the product of social influence, peer pressure, and group dynamics. It accounts for the vast majority of youth anti-social behaviours and does not persist beyond the early 20's. Such offenders "are likely to engage in antisocial behaviour in situations where such responses seem profitable to them, but they are also able to abandon antisocial behaviour when prosocial styles are more rewarding" (Moffitt, 1993, p, 686). In this sense, a potential remedy for adolescence-limited offending is to increase the opportunities and the rewards for prosocial group behaviour. With less-violent offences, there is little gender difference in terms of the age of onset or the number of offences. However, for violent criminal offences and convictions, the ratio begins to slant toward males, 3.5 male offenders-to-1 female offender for self-reported violent offences and up to 32-to-1 for violent crime convictions by age 21 (Foster, 2012; Moffitt et al, 2001). Thus, male adolescence is a critical period/demographic to target with pro-social intervention.

Moffitt's Dunedin, New Zealand study (Moffitt, 2001) found a concentration of crimes among a small number of life-course offenders for both males (8% responsible for half of all self-reported offences) and females (6% responsible for half of all self-reported offences). In South Africa, Souverin

et al (2015) found evidence for a distinct category of life-course offenders among convicted youth and the South African Birth-to-Twenty project (Barbarin & Richter, 2001) also found a concentration of offences among a small number of youth (Foster, 2012). Interventions that attempt to engage only this group of potential life-course offenders have shown mixed results with some programmes actually increasing violent outcomes and reinforcing deviant peer associations (Beelmann & Raabe, 2009).

The constructs of resiliency and vulnerability have emerged from developmental psychopathology (Rutter, 1990) and may explain what leads individuals down different developmental paths. According to Bernard (1993), resilient youth: have social competence (an ability to establish positive relations with peers and adults); are autonomous (know themselves and can reject peer pressure); and, possess optimism and hope (can set goals and persevere). By contrast, vulnerability to anti-social and violent behaviour can be increased in youth who struggle to form positive relationships and lack self-confidence. This deficit of self-confidence has been characterized as 'Learned Helplessness' (Seligman, 1990), a maladaptation where individuals "have little, or no control over social and academic outcomes [and] will quickly give up when faced with a challenge or temporary setback" (Martinek and Hellison, 1997, p.38). Thus, the pathway toward pro-social development is precarious, especially for young males in disadvantaged South African communities where healthy relations with successful adult males are strained or absent and collective black identity has been sacrificed at the altar of western individualism and materialism (Stevens & Lockhat, 1997).

In a 12-year longitudinal study, Dodge et al (2008) tested an 'Idealized Dynamic Cascade Model of the Development of Serious Violence in Adolescence' to explore such pathways and concluded that: "An early social context of *disadvantage* predicts *harsh-inconsistent parenting*, which predicts *social and cognitive deficits*, which predicts *conduct problem behavior*, which predicts *elementary school social and academic failure*, which predicts *parental withdrawal from supervision and monitoring*, which predicts *deviant peer associations*, which ultimately predicts *adolescent violence*" (Dodge et al, 2008, p.1, italics added).

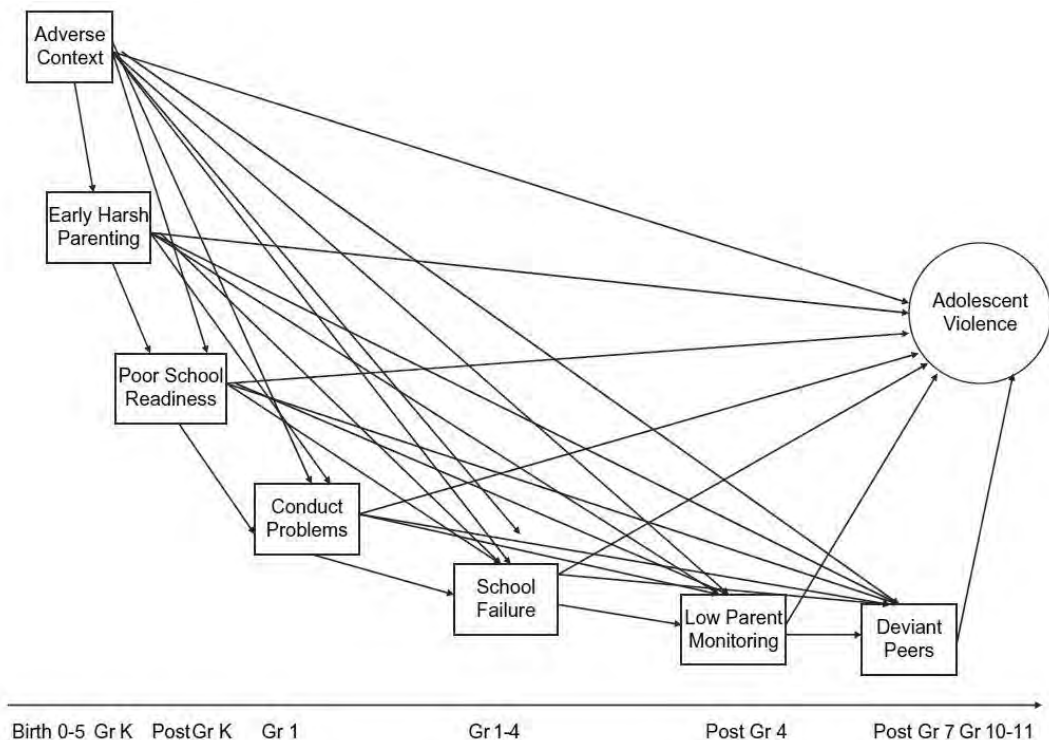


Figure 2.5. Hypothesized correlations among domains in the development of violence from birth to age 18, from Dodge et al (2008).

This saturated model (figure 2.5, above) suggests the complex interplay of key risk and protective factors that build over time into violent behaviours. A violence-reduction intervention (and impact assessment) would need to influence or control for this full range of factors (if a randomized control trial is not possible). As Dodge et al (2008) aptly describe, “the model is one in which a high-risk child traverses a deepening stream across development toward a violent outcome, with each stage of development being predicted partially from previous events and providing growing inevitability toward the violent outcome, but also offering a new opportunity to begin a different tributary toward a nonviolent outcome” (Dodge et al, 2008, p.6). This model offers a clear theory of the proximal factors influencing early anti-social, risky behaviour and reciprocating back into a negative development trajectory leading towards (greater likelihood of) violent offending. The Dodge et al (2008) study ran from ages 5 through 18 with annual assessments, yet was still limited by measurement issues (for instance, an internal reliability of only  $\alpha=0.49$  for the adolescent violent behaviour outcome measure), potential lurking variables, and did not attempt to assess changes in risk (acceleration or deceleration). However, their integrated theory, incorporating “transactional effects and reciprocal influences across time” (Dodge et al, 2008, p. 17) advances the cumulating risk factor approach, common to many other longitudinal studies.

To conclude this section reviewing violence and risk, in the South African context, youth from poor neighbourhoods lack protection from violence and crime, lack constructive activities outside of

school hours, and have limited social and family support systems, particularly healthy adult male relationships. As a result, youth are often the victims and/or perpetrators of violence, especially boys and young men who must navigate the hegemonic aspects of South African masculinity (Morrell, Jewkes & Lindegger, 2012), the exertion of control over their immediate environments through the use of sometimes-violent force.

## **2.7 Strategies for reducing / preventing violence**

"Violence prevention programs should seek either to prevent the emergence of violent behaviour in childhood or to prevent the spread of violence in adolescence" (Howell & Hawkins, 1998, p.263).

Violence prevention is intended to target those at-risk individuals who have not yet engaged in violent behaviours. Violence-reduction strategies are designed to reduce/alter behaviours that have already been manifest in some shape or form. The latter include diversion programmes for youth that have been convicted of criminal and violent crimes.

Early prevention programmes may target young parents to improve parenting skills and parent-child interactions and to provide inputs to early child education (Howell & Hawkins, 1998). The idea is to address family-level risk factors before social problems develop and school performance is impacted. Such programmes have shown some sustained results in reduced violent outcomes in the United States. In particular, the Abecedarian project (Campbell, et al, 2002), the Perry High Scope project (Schweinhart, Barnes, Weikart, 1993), and the Syracuse Family Development Research programme (Lally, Mangione & Honig, 1988) reduced severe and chronic delinquency as determined through long-term (10+ year) follow-ups. In the High Scope study, five times fewer (7% vs. 35%) experiment group subjects were arrested 5 times or more by age 27 (Schweinhart et al, 1993).

Although programmes that target early violent offenders show smaller effect sizes, a small impact-even altering the behaviour of only one would-be lifetime offender-can save society an enormous amount. Research from the USA has found that each lifetime offender costs society \$2 million USD over the course of their 'careers'. Thus, if a violence intervention programme with a modest budget and potential for replication can reach even several potential lifetime offenders and correct their anti-social behaviours, it is a worthwhile investment (Ward, van der Merwe, Dawes, 2012). Although the apparent impacts of such programmes have justified the costs of implementation and assessment in the American context, it should be borne in mind that "given South African resource constraints, the direct transfer of programmes at this level of sophistication to significant numbers ... is unlikely" (Tomlinson, Dawes, & Flisher, 2012, p.151). Thus, promising small-scale programmes must be tested and researched in South Africa to develop best practice examples.

School-based programmes are designed to reach youth either at the onset of deviant/anti-social behaviour, through behaviour management and the promotion of school functioning, or during the course of adolescence (when violent behaviours may already be manifest), through promoting non-violence, teaching life skills, and eliminating weapons at school (Howell & Hawkins, 1998). Whole-school approaches are more costly but may achieve more sustainable improvements in school-based violence, especially when students, educators, parents, and community stakeholders are all involved. Targeted programmes to address specific issues or vulnerable groups tend to be more easily implemented but less sustainable. The capacity of poorly performing schools to effectively implement violence-reduction programmes must also be considered (Tomlinson et al, 2012). Given the under-performance of public schools in poor, urban (and poor rural) communities in South Africa, it is unrealistic to expect programmes, even those with strong international evidence, to be well-implemented and to show results.

However, out-of-school contexts are worthy of consideration. The prime hours for youth-related violence and crime are from 3-6pm on weekdays (after school and before parents/guardians return home) and Friday and Saturday nights (where alcohol and drugs are most often involved). Studies from the USA have revealed that youth crime and violence peaks when young people are not at school. However, no comparable data is available from South Africa (Ward, Dawes, & Matzopolous, 2012, p.13).

Programming for out-of-school time can target after-school hours, weekends, holidays, and those youth no longer in school. Numerous youth interventions across the globe target these time frames with constructive, organized youth activity, or 'structured leisure'. In poor, violence-prone communities in South Africa, there is still a dearth of after-school and weekend activities for disadvantaged youth, resulting in an increased risk of gang membership, as identified by young South Africans, themselves (Ward & Bakhuis, 2009).

Funding to operate quality out-of-school programming in vulnerable communities is often limited and thus, sustainability becomes a concern. For this reason, many programmes are often connected to schools, at least making use of school infrastructure. While there is a great deal of rhetoric on the character-building qualities of sport as structured leisure activity, there is little evidence that any out-of-school programmes internationally have successfully curbed violence (Peachey & Cohen, 2015; Levermore, 2011a & 2011b). Yet, Howell & Hawkins (1998) maintain that "after-school recreation programs that aggressively recruit youths and maintain high participation rates may be a promising intervention for preventing delinquency and violence, but should be evaluated further with research designs employing random assignment to study groups" (p.295).

Free time for youth, time spent not working or in school, can be both a space for deviant behaviour and for pro-social development. Leisure "is the purposeful and intentional use of free time to engage in self-selected and self-directed activities and experiences that are meaningful and intrinsically motivating to the individual, in that they are enjoyable, fun, refreshing and pleasurable" (Wegner & Caldwell, 2012, p.214). Youth who are not highly motivated by the structured environment of school will, likewise, not be highly motivated to participate in leisure activities that approximate the routine and learning methodologies of formal schooling. However, programmes that incorporate activities popular among youth can be used as spaces for alternatively structured pro-social behaviour modelling and development. Dahl (2004) finds that brain activity during adolescence is highly active and receptive to social learning. During this period of high emotions, goals and passions are developed. "This early interaction of emotions and passions can be turned into a powerful, positive force if youths are directed to discover and explore personally meaningful and exciting new activities" (Wegner & Caldwell, 2012, p.218).

The intervention under study in this research, the Amandla Edu-Football project, is a structured leisure intervention incorporating five-a-side football competition, a football-based life skills curriculum, and an accredited leadership programme.<sup>7</sup> The following table (see table 2.6 below) lists violence/gang reduction intervention studies that have run for 2-5 years and yielded some statistically significant results. This serves to suggest that it is possible that the Amandla intervention could show significant impact within the 3-year time period of this study. However, it should be borne in mind that evidence of successful violence reduction is scant, at best. In a 2012 meta-review of experimental and quasi-experimental violence reduction research in the United states, Fagan and Catalano (2013) could only identify 17 studies, going back to 1992, that showed some significant intervention effects (including short-term, and even iatrogenic, effects).

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<sup>7</sup> See Amandla theory of change on page 42 and detailed explanation of Amanda in chapter 3.

<b>Intervention/ location/ time frame</b>	<b>Description</b>	<b>Research period/ method</b>	<b>Findings</b>
Operation Ceasefire, Boston, USA, 1996-1998; youth up to 24 city-wide. (Braga et al, 2001)	coordinated criminal justice response, gang outreach/ communication	3 years, one-group time-series design	significant reductions in youth homicide, shots-fired calls for service, and gun assault incidents
Gang Resistance Education and Training (G.R.E.A.T.), USA-national 1994-2000; (n=5935, cross-sectional study; n=3568, longitudinal study) 7th grade youth. (Esbensen & Osgood, 1999 and Esbensen, 2001)	9-week, 9-lesson curriculum for middle school students covering: cultural sensitivity, drugs, conflict resolution, goal setting, and resisting peer pressure	1-Cross-sectional study of 8th graders in 11 U.S. cities. Questionnaire assessing attitudes toward gang membership and self-reported delinquency.  2- 5-year longitudinal, quasi-experimental design in 6 cities with 76 GREAT classrooms and 77 control classrooms. Same questionnaire used as in cross-sectional study.	Cross-sectional results: one year after GREAT, participants reported significantly lower levels of gang affiliation and delinquency, significantly more positive attitudes about police, more negative attitudes about gangs, higher levels of guilt at committing deviant acts, and more commitment to school, as compared with non-participants.  Longitudinal results: Pre/post testing with follow-ups conducted one and two years after GREAT curriculum was administered found no sustained behavioural or attitudinal differences between participants and non-participants.
Little Village Gang Violence Reduction Project, Chicago, USA, 2000-2002 (Spergel et al, 2003); (n=200) gang members	community mobilization, youth outreach, educational and employment opportunities, suppression	2-year time series study with control group	Logistic analysis found that youth with more individual counselling were more likely to reduce their involvement in gangs. Compared with control groups, violent crime arrests of target youth at all ages were significantly reduced

Table 2.6. Table of two-five-year gang-violence reduction intervention studies

### 2.7.1 Violence reduction in South Africa

"SA programmes are frequently mounted on the basis of what its proponents believe to work, as opposed to being informed by evidence" (Ward, van der Merwe, Dawes, 2012, p.6). In fact, Ward, van der Merwe, and Dawes state explicitly that, "there is widespread agreement that randomised controlled

trials or times-series designs provide the best approach to understanding the causal mechanisms responsible for behavioural change, including anti-social conduct ...[yet] there are **no South African youth violence prevention interventions that have employed these evaluation methods**. Quasi-experimental evaluations using comparison and intervention groups can be counted on one hand." (Ward, van der Merwe, Dawes, 2012, p.10, bold emphasis added). Given the magnitude of violence in South African society and the resources that are directed to policing and incarceration, it seems problematic that so little is invested in rigidly testing approaches for reducing violence in childhood.

Internationally, evidence suggests that comprehensive programmes that target parents, children, and communities with a range of interventions are more likely to reduce violence. However, this approach requires significant financial resources, coordination between service providers, and large-scale longitudinal research to explore impact. A critical view is that this multi-dimensional approach is also akin to social re-engineering, manipulating realities in order to achieve a different outcome. In a resource-limited, high-need context such as urban poor areas in South Africa, this comprehensive approach is impractical.

The only early-childhood violence prevention programme in South Africa to have been tested for efficacy is the Community Psychological Empowerment Services (COPES) project in Lavender Hill, Cape Town (Tomlinson, Dawes, & Flisher, 2012). COPES adopted a multi-level approach to provide training to parents, teachers, and children to shape positive behaviour and increase empathy. Peterson and Carolissen (2000) evaluated the programme with treatment and comparison groups and found improvements in child aggressive behaviour, as assessed by educators and parents. However, the study's lack of randomisation and objective measures of behavioural change make it difficult to draw meaningful conclusions about impact (Tomlinson, Dawes, & Flisher, 2012).

One whole-school development programme at a primary school in the Cape Town region was reviewed by Flisher et al (2000). The project intended to involve learners, educators, and parents in addressing the consequences of gang activity and limited health-seeking behaviours. Relations among the learners, educators, and parents were strengthened and positive attitudes improved. A deficiency of the programme was in the attraction and retention of the adult participants, parents and educators.

The Brown Paper Performing Arts Project (BPPAP) was an after-school programme borne out of a 5-year school-based intervention, HealthWise South Africa: Life Skills for Young Adults, which ran in 9 Cape Town-area schools. BPPAP was the result of a process, informed by evaluation of the Healthwise programme, to assist learners and educators to establish and sustain after-school programming. BPPAP involved university student-volunteers and high school learners meeting twice a week for 7 weeks to explore performing arts. Unpublished qualitative findings revealed that

participants formed new peer relationships and improved cross-cultural understanding and acceptance (Lesko, Bosman & Wegner, 2006).

In a review of violence interventions in out-of-school contexts, Wegner and Caldwell (2012) could not identify any empirically-researched programmes in South Africa. Further, the international evidence base using longitudinal designs in the out-of-school intervention field is mostly limited to North American studies (see table 2.6 of two-five-year gang-violence reduction intervention studies).

## **2.8 Sport-based development and evidence of impact**

Sport-based development, as defined in this study, is intended to holistically develop socially-competent youth who can exhibit control over their body, mind, and emotions to define and work towards future goals, while avoiding anti-social, destructive influences. As Amandla Edu-Football employs a sport-based development model to deliver life skills and violence-reduction programming, it is necessary to review the theories and evidence within the field.

While the sport-for-development ‘field’ has existed in the literature for several decades (Purdy & Taylor, 1983; Robins, 1990), there is little empirical evidence (despite numerous programme evaluations<sup>8</sup>) that describes the mechanisms through which sport-based development alters the behaviours of youth-at-risk. Caruso (2011) presents, perhaps, the only empirical evidence internationally of effects on crime (that has yet to be challenged as with Midnight Basketball effects, discussed later in this section). Caruso (2011) found that sport participation in Italy was associated with reductions in property and juvenile crime, alongside a small, yet admittedly statistically significant, **increase** in violent crime, meaning that effects were mixed, and possibly iatrogenic in terms of aggression and violence. In South Africa, where there appears to be a concentration of sport-based development programmes (as per Langer, 2015), this field of empirical research and rigid impact evaluation has not been tapped into, whatsoever.

Ekholm (2013) conducted an extensive review of the literature on sport and crime prevention and found no empirical evidence of a sports project yielding a crime reduction effect. Additionally, Ekholm (2013) found conflicting theories on how sport might be able to effect reductions in crime, either by changing individual behaviours (presumably of those who have or would potentially engage in violent crime), or by hypothetically creating change at a societal level, dealing with the underlying socio-economic factors that influence crime in high-risk communities. Ekholm (2013) suggests that Sport-for-Development theorists place (untested) faith in the notions of transferability (that participant learnings from the sport-based project can be directly transferred and utilized in the ‘real world’) and

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<sup>8</sup> See for instance, Fight For Peace Independent Assessment: [http://www.fightforpeace.net/wp-content/uploads/2012/11/UELreport\\_portrait4lowres.pdf](http://www.fightforpeace.net/wp-content/uploads/2012/11/UELreport_portrait4lowres.pdf)

individuality (that decisions to engage in crime or to desist are solely determined by the individual and their capacity to overcome hardships and pressures in their environment), with limited regard for structural determinants of disadvantage and strain.

One branch of the extant literature consists of sport-for-development critics who question the mechanisms through which sport is professed (by the so-called ‘sport-for-development evangelists’) to impact crime (and other critical development indicators) and who demand more rigid and replicable empirical evaluations of impact (Ekholm, 2013). This critique has been present in the literature for roughly a quarter-century (Purdy & Taylor, 1983; Robins, 1990), yet there remains no rigid, peer-reviewed base of evidence that sports projects can measurably alter developmental indicators, including crime and violence. In fact, Ekholm concludes that, overall, “evidence is lacking, evaluations are problematic and no inherent essence in sport is identified” (Ekholm, 2013, p. 3).

On the African continent, Langer (2015) produced the first and only systematic review of ‘sport-for-development’s evidence base in Africa’ and found “that there is currently no available evidence that supports or refutes the assumption that sport can positively influence development outcomes,” and even cautioned “against the continued rhetoric and promotion of sport-for-development as an effective approach to poverty reduction and international development” (Langer, 2015; p. 66). This dynamic of attributing false claims of impact to sport-for-development was captured by Mwaanga (2010), “who, using the example of failed initial attempts to position sport as an effective solution to HIV prevention, explains how sport-for-development’s advocates overstated the capacity of sport to combat HIV/AIDS and at the same time failed to appreciate the complexity of the disease” (Langer, 2015, p. 69).

In perhaps the strongest indictment of lack of evidence overwhelmed by false claims, Langer (2015, p.71) concludes: “The controversial notion of research evidence in sport-for-development has led to a paradoxical situation in which a dearth of reliable evidence is contrasted by extensive claims of sport-for-development’s effectiveness. Despite the fact that there is no systematic evidence of the relative or absolute effectiveness of sport for development interventions, sport is positioned to support the achievement of a number of development objectives. For example, the UN considers sport as a low-cost, high-impact tool ... that can make an important contribution to public health; universal education; gender equality; poverty reduction; prevention of HIV and AIDS and other diseases; environmental sustainability as well as peace-building and conflict resolution (Beutler, 2008, pp. 359-361).”

Such blind faith (and funding) in the power of sport to achieve developmental outcomes truly borders on evangelism and begs the question ‘why’? How is it that a field of practice has developed and seemingly flourished for decades with absolutely no base of scientific evidence, yet received endorsement at the highest levels of international development cooperation? While it may not have

precipitated this evangelical sport-development movement, the Late Night Basketball phenomenon is perhaps emblematic of this seeming triumph of faith over reason. Hartmann & Depro (2006) provide the only ‘preliminary’ evidence suggesting that the phenomenon of Midnight Basketball that swept across many American cities in the late 1990’s, amid bipartisan political support and extraordinary (and entirely unsubstantiated) claims of crime-reduction effects (before academics trashed these claims and politicians soon lost interest) actually may have been associated with some reductions in property crimes in the cities where it was initially implemented. However, their data (city-wide per capita crime data) and analytical methods (Wilcoxon rank order analysis to suggest that rank-ordered crime reductions among early midnight-basketball-adopting cities as compared with all other U.S. cities and OLS regression analysis at a very forgiving  $p=0.1$  significance level) are both lacking in resolution and statistical rigor. Furthermore, despite spending more than 10 years on the subject of Midnight Basketball (serving as both a technical advisor and independent researcher), Hartmann appears never to have followed up on this “preliminary analysis” with anything more conclusive.

In previous articles (eg., Hartmann & Wheelock, 2002), Hartmann had already identified poor organizational management, a near-total failure to deliver meaningfully on the intended social development components of the project, and seeming conflicts of interest between data collection/theory testing/impact assessment and the day-to-day functions of the programme.

In essence, I would argue that the Midnight Basketball phenomenon embodies the very worst aspects of the Sport-For-Development field. It generated tremendous popular interest, national news coverage, feel-good stories, fanciful assertions of disproportionate social impact, and extensive public and private funding (and political support) without ever showing either sound programme methodology or any empirical evidence of effectiveness. Midnight Basketball then became something of a ‘political football’ for learned academics and aspiring politicians to kick about as they professed their evidence-based policy expertise. Just as quickly as it rose to national (and, apparently, some international) fame, it was dethroned and defrocked and few academics have dared touch it ever since (even those who were once comfortable publishing articles on Midnight Basketball and the need for more evidence). Oddly enough, some two decades later, there are still scores of sports projects targeting inner city and at-risk youth, making similarly wild and fanciful claims of curative impact, with (still) no sound base of empirical, published and peer-reviewed, evidence. Meanwhile, there are still groups of sport-for-development academics who continue to publish papers calling for evidence, criticizing the neo-liberal, neo-colonial under-pinnings of Sport-for-Development practitioners and their evangelical theories. While a field of practice and publishing in sport-based development abounds, still no one seems to be truly engaged with building a base of evidence, of impact evaluation (attempts at impact assessment, at

the very least), and publishing the learnings necessary to bring some modest maturity to the oeuvre (e.g., Hartmann & Kwauk, 2011).

Setting aside this lack of evidence (that sport-based development may have a positive impact on developmental outcomes) and evolution, Hartmann and Wheelock (2002) identify four competing theories of how sport could contribute to risk prevention:

- *Sport-as-character-building*: the act of participating in sport "cultivates the virtues of hard work and playing by the rules thought to be lacking among many young, inner-city men of color [in the United States context]."
- *Sport-as-mobility*: sport can provide enhanced educational opportunities (college and university scholarships) or direct employment through coaching, officiating, programme management, or professional sports.
- *Sport-as-social-control*: sport keeps at-risk youth off the streets during leisure hours and offers "new role models and moral codes".
- *Sport-as-hook (or as bait-and-switch)*: sport is only the vehicle to attract otherwise hard-to-reach youth in order to engage them in other prevention activities such as education and employment. (Hartmann and Wheelock, 2002, p.14).

In the United States, basketball has been identified as one activity that is successful in attracting low-income young men of colour to development-oriented programming. However the life-skills programming is often the most difficult to deliver and the quickest to be forgotten when staff resources are limited: "on one hand, the primary rationale for the program has little to do with sport; on the other hand, it is the sport-specific part of the program that turns out to be the top priority on a day-to-day basis... When resources are tight, it is typically the prevention-oriented aspects of the program (the "switch") that are the first to be neglected. Program operators have few choices because sport (the "bait") is the only reason participants get involved in the first place" (Hartmann and Wheelock, 2002, p.15).

Similarly, Jay Coakley (2002) identifies two dreams about the power of youth sports:

- 1) The social control and deficit-reduction dream: "The dream of using sports to control deviance and violence by constraining and constructively socializing young people who have been identified in dominant public discourse as lacking the character required to restrain themselves from disrupting the social order... The dream focuses on changing the personal characteristics and behaviours of these young people so they can escape their immediate environments and become productive citizens in the very same social and economic system that gave rise to the conditions that limited their lives in the first place." (Coakley, 2002, p.16)

- 2) The social opportunity and privilege promotion dream: “sees sports as microcosms of the larger world—a world in which competition prevails, where individual confidence makes a person a good competitor, and where teamwork is needed to put together the deals that lead to success in the marketplace... The dream does not focus on young people learning to pull themselves up by their athletic shoelaces. Instead, it focuses on young people achieving success by learning how to take advantage of the privileged positions their parents have obtained in the society.”  
(Coakley, 2002, p. 17)

In the first dream, sport is the magical bridge that transports violent youth from a life of crime to a land of opportunity. Clearly, the notion of becoming a professional athlete may temporarily seduce some youth into believing that if they are talented enough, they will achieve fame and fortune on the playing field. In the United States, the odds of becoming a professional athlete are 1 in 24,550 (Collegetimes, 2012). This, too, may be characterised as a misuse of sport-based development, drawing youth into an unrealistic vision for their future.

In the second dream, sport acts as a great leveller, inspiring healthy competition and teamwork. It ignores the realities of unfair competition, of the drive to win at all costs, of the big business aspects that dominate professional (and some amateur) sports, and the structural inequalities that may limit pathways to economic independence. Coakley posits that these myths should be replaced by alternative dreams focused on community development rather than individual achievement. Similarly, the youth-at-risk should be seen as youth with positive potential: “If we are not cautious we may unwittingly reaffirm ideological positions that identify young people, especially young people of color, as ‘problems’” (Coakley, 2002, p. 22). For sports-based programming to truly address violent behaviours, participation must be “accompanied by an emphasis on a philosophy of non-violence, respect for self and others, the importance of fitness and control over self, confidence in physical skills, and a sense of responsibility” (Coakley, 2002, p.24).

Coakley further states, “positive transitions from childhood to adolescence to adulthood are most likely when young people live in a context in which they are physically safe, personally valued, socially connected, morally and economically supported, personally and politically empowered, and hopeful about the future. To the extent that sports programs serve these needs, we can expect them to contribute to the positive development of participants” (Coakley, 2002, p.25). So long as sport remains the vehicle for pro-social behavioural development, it can be seen as a potentially effective tool. Otherwise, it can easily be a space for the replication of problematic behaviours prevalent in the greater society.

Larry Hawkins, a Chicago-based sport-for-development pioneer, was not a proponent of sport for sport's sake and often drew the ire of those in the amateur sporting world. He admitted that “sport

is not a monolithic institution or activity; rather, it is a diverse, sometimes conflicting set of understandings and practices whose social consequences and impacts vary in equally complicated ways" (Hartmann, 2003, p.128). Sport can be used for the building of social capital and for its destruction through individual gain. It is critical, therefore, to see sport as "more than just a game where everybody feels good or bad depending on whether they win or lose" (Hartmann, 2003, p.129).

The conundrum for sport-based development is that "those who know most about sport tend not to have the inclination or ability to realize its broader social connections and significance or think critically about it; on the other hand, those who have the requisite skills to understand the broader social dimensions tend to ignore or dismiss sport as a phenomenon worthy of serious social investigation" (Hartmann, 2003, p.129-130). This conundrum, within the South Africa context, sets the stage for this study: sport is clearly popular in South Africa, even (and especially) among at-risk young males. Youth violence is clearly an ongoing concern. The lack of empirical violence/intervention studies and limited resources require a careful study of a promising, and affordable, intervention for this demographic.

## **2.9 Conceptual framework for understanding/evaluating violence in this study**

Drawing from the literature review and the integrated theory proposed and tested by Dodge et al (2008, see figure 2.5, above), I turn to a presentation of the theoretical models that were hypothesized, and those that were ultimately tested with the available data generated in this study. It is important to note here that unanticipated fieldwork complications (poor wave 1 scale performance, potentially falsified data, high initial panel attrition, detailed in chapters 3 and 4) required mid-study design adjustments while inadequate project funding (and associated issues of weak implementation, fidelity and participant uptake) forced the closure of the intervention replication site, rendering the Kagiso data (initially n=296) unsuitable for analysis.

The first theoretical model (see figure 2.7 below) considers the intended 3-wave, 36-month period of study and the chronological sequencing that complete data (3 waves) would have provided. While visually complex (although not fully saturated, as with the Dodge et al (2008) model), it proposes the influential relationships between family factors, childhood and peer-related indicators (or warning signs), school and resiliency attitudinal factors, and violence potential (Violence Propensity Score) as an outcome, alongside measures of offending, school dropout, and pro-social goal realization

(gainful employment or further education/training that were conceived and measured as normative/idealized for study participants to begin realizing by late adolescence/early adulthood)<sup>9</sup>.

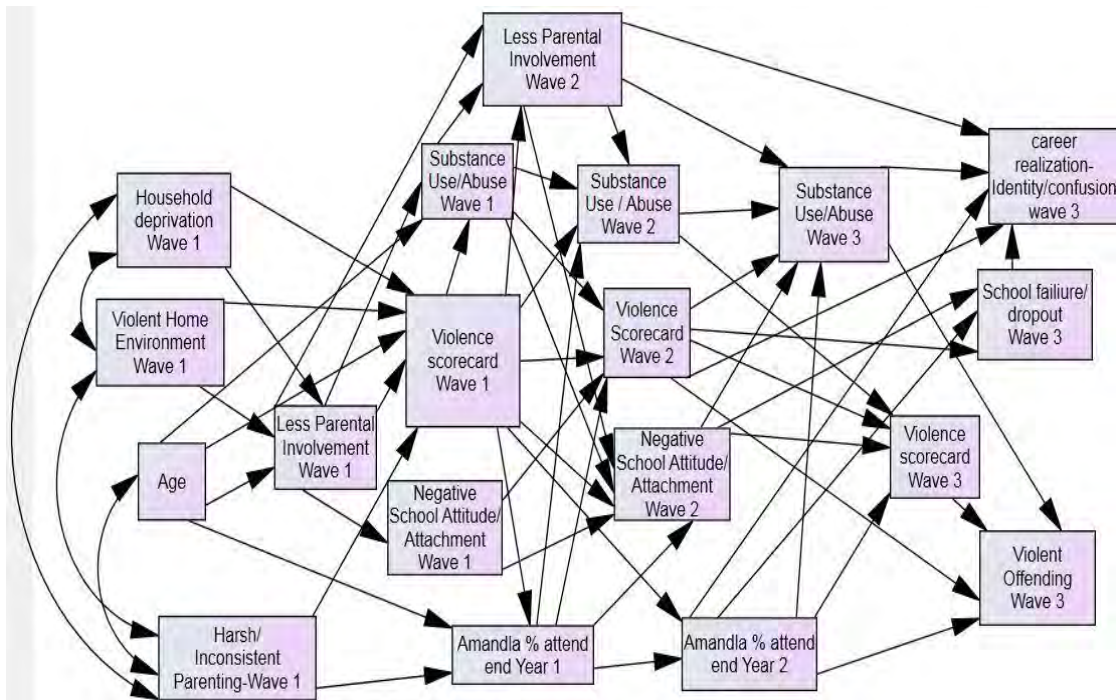


Figure 2.7. Theorized factors and pathways to violent offending, school failure, and goal realization via gainful employment or tertiary education over three longitudinal waves with Amandla intervention measures.

A background of household deprivation, or poverty, may result in more violence in the home (between adults) and poorer parenting practices (less parental involvement and harsh, inconsistent parenting). Violence in the home and harsh parenting may influence one another while a violent home environment would also directly influence parental involvement in the child’s life, schooling, and relationships. A violent home environment is also theorized to directly influence a subject’s early violence-potential / Violence Propensity Score, in the form of deviant peer association, gang-favourable attitudes, attitudes toward the use of violence, and engagement in fighting (the four subscales of this Violence Propensity Score). Harsh and inconsistent parenting is theorized to directly influence a subject’s deviant peer associations and attitude toward the use of violence as it may be legitimized in the home. These aspects are both captured in the Violence Propensity Score.

Age is incorporated into the model as it is theorized that as subjects age their assessment of their parents’ harsh/inconsistent parenting will diminish and parental involvement will decrease, both as subjects gain independence. Age will also directly affect use of alcohol and other drugs as alcohol becomes legally available (for those 18 or older) and drugs, more accessible. Age is also theorized to

<sup>9</sup> The reported incidences of employment of any kind (only 6% reported by wave 3) and tertiary education enrolment (only 7% by wave 3) were so low as to obviate inclusion in a testable model.

influence greater deviant peer associations, as a sub-scale of the Violence Propensity Score, as, with age, more peers tend to experiment with deviant or criminal behaviour.

Parental involvement is a critical factor that influences attitudes toward school and the future. These are akin to a subject's commitment to and faith in a pro-social development pathway, while navigating through peer pressure and risky associations.

These family/demographic factors may, in turn, influence a child's decision to seek comfort, respect, belonging, and approval from deviant peers (other kids hanging out on the streets, avoiding their own potentially negative home environments), as captured in the early Violence Propensity Score. The impact of deviant peer associations, together with alcohol and drug use (measured as combined substance use/abuse) may further shape attitudes toward gang associations along with attitudes toward school, the future, and the use of violence. This brings into focus the dilemma of instant gratification: being cool now, even if through negative attention and damaging/violent behaviour vs. working toward long-term goals, i.e. quality education and gainful, professional employment. The decision to employ interpersonal violence is theorized to be explained largely by peer and family influence and a subject's attachment to school and the future. Violence potential or Propensity, as measured through the Violence Propensity Scorecard, is used as a proxy for actual use of violence as this is very difficult to measure due to inconsistent and under-reporting (see discussion below) and its potential infrequency in prospective studies with largely random samples. That being said, actual participant reports of engagement in violent behaviour are measured along with an assessment of the subject's risky/dangerous behaviour from the primary maternal caregiver. These measures, though incomplete or potentially under-reported on their own, serve as a means of triangulating the veracity of the Violence Propensity Score and its sub-scale measures.

To a degree, all attitudinal constructs could be interlinked and mutually reinforcing. The danger with including pathways from every background to every attitudinal/behaviour-potential variable and of linking these attitudinal/behaviour-potential measures as covariates (a saturated model) is that one would effectively be predicting that 'everything influences everything'. The challenge with modelling violence is the degree to which a clear and parsimonious pathway-to and from violence-can be specified and tested. Thus, a limited number of pathways are theorized where the influence is predicted to be most proximate. In the measurement and testing phase, it was possible that some theorized pathways would emerge as significant, while others would be non-significant, and still other, un-theorized pathways, could be shown to better fit the data.

The Violence Propensity Scorecard is proposed, and later developed and tested, as a 100-point index of 4 violence-potential-related sub-scales: 1) Deviant criminal associations, 2) Attitudes favourable to gang affiliation, 3) Attitudes favourable to the use of instrumental/interpersonal violence,

and 4) self-reports of engagement in physical fighting in the past year. This Violence Propensity Score is utilised as the primary outcome, as opposed to self-reported violent behaviour for two reasons. Firstly, measuring actual violent behaviour is difficult (although it is attempted and analysed within this study). Reports must come from criminal records, often challenging and costly to obtain, particularly in the frame of a prospective study (where study participants are randomly selected) as opposed to a retrospective study (where only convicted offenders are studied). Alternatively, measures of violent behaviours can be obtained from the subjects themselves, through self-reporting and/or through parents or teachers who spend significant time with the subjects. Criminologists who have worked on both retrospective (selection based on confirmed criminality) and prospective (a population-representative sample with self-reported or adult-reported offending/aggressive behaviour) research have found that the actual prevalence of violence is much greater than that which is picked up by the criminal justice system (Loeber & Farrington, 1994). Many, if not most, crimes are not reported, investigated, and successfully prosecuted, particularly in South African contexts like Khayelitsha (O' Regan et al, 2014). Thus, on one hand, measuring self-reported offending appears to be more desirable and certainly more expedient than verified criminal offending.

However, subject-reported offending is still subject to a lack of disclosure and honesty, or non-random variation, i.e. validity problems (Landsheer, 2014), and potentially inconsistent reporting in longitudinal study (Lauritsen, 1998). Offending scales have been shown to exhibit significantly poorer validity and reliability once nil-reporting individuals (the vast majority of subjects in most general population studies report zero offending) are removed and scale relationships are only considered among self-reporting offenders (Landsheer, 2014). As has been discussed with adolescent-limited offending, subjects who may be engaged in violent offending know that it is wrong and, conditioned by social desirability (Elliot & Ageton, 1980; Krohn et al, 2010), are ashamed or afraid to reveal these acts to any adult (even with assurances of confidentiality). Still, some subjects do disclose offending, sometimes limited to more socially acceptable offences like underage drinking, and, among small subgroups, with great frequency and depth (even suggesting over-reporting or exaggeration). Yet, there is no easy way to understand how these instances of disclosure relate to the actual rates of violent offending or why some subjects choose to self-disclose some behaviours (some of the time) and others do not. Landsheer (2014) contends that within the zero-reporting or norm-conforming group, there are likely subjects who have not self-reported actual offending and others who may have the propensity to offend but not the opportunity.

Thus, the second reason for use of the Violence Scorecard: any measure of violent offending will potentially suffer from both internal validity (not necessarily an accurate measure of the behaviour among the study participants) and external validity (an incomplete and inconsistent report of violence

which cannot be generalized to a population). Therefore, self-reported offending, particularly as a standalone outcome, may not offer much ‘traction’ for the explanatory factors leading to this actual behaviour in a general population.

Intentional violent behaviour is, effectively, the decision to employ violence to achieve an outcome. It is the product of thinking (on some level, even in the heat of the moment) and can, potentially, be reflected in a subject’s hypothetical attitudes toward the use of violence, alongside the influence of their peers. By asking a battery of questions which probe into anger, aggression, opportunities to use violence, and deviant/criminal/gang-affiliated associations, every respondent, even those unwilling to disclose actual deviant or violent behaviours directly, can still present a complete violence-potential score. By keeping these questions mostly hypothetical, there is less connection with actual events or the fear of prosecution that could follow from the disclosure of criminal acts. Thus, it is hoped that, with reinforced emphasis on confidentiality and honest responses without judgement or consequence, the Violence Propensity Scorecard can provide a richer set of scores for all study participants that accurately reflect the potential to use interpersonal violence. Further, as attitudes change, potentially as the result of violence-reduction intervention, changes in the Violence Scorecard could pick up this attitudinal/behavioural change.

After revising the theoretical model based on available data for waves 2 and 3 (for n=276 Khayelitsha study participants only<sup>10</sup>), the 10 factors presented below (figure 2.8) were directly (and adequately) measured in the study. Several other measures are included in the study but are not theorized to have a clear and direct impact on violence-potential.<sup>11</sup> It is acknowledged that analysis of only two waves of data over a 12-month period imposes a significant limitation on longitudinal modelling. Family and demographic factors, although theoretically historical in nature, are measured at the same moment as the interim risk factors (School Attitude/Attachment and Violence Propensity in wave 2). Further, the relationship between Violence Propensity Score (a combination of deviant peer influences, violence- and gang-supporting attitudes, and self-reported fighting) and Negative School Attitude/Attachment as measured at the same point in time, in the hypothetical middle of a longitudinal structural equation model, is somewhat problematic. As Dodge et al theorized, demographic and environmental factors (adverse context) may impact parenting and result in poor school readiness and conduct problems, influencing school performance and peer relationships, feeding a reciprocal loop. In this model (figure 2.8, below) it is not methodologically appropriate to covary Violence Scorecard

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<sup>10</sup> The n=318 sample was reduced to n=311 for regression analysis due to 7 cases with multivariate outliers and to n=276 for structural equation modelling following removal of 35 cases where subjects had completed schooling before wave 2 of the study.

<sup>11</sup> These measures include school performance, having a child, support from mother and father (separate from Parental Involvement), participation in religion, parents who have been to prison, abuse experienced at school, exposure to violence in the community, anomie or social distance, and victimization.

Wave 2 and Negative School Attitude/Attachment wave 2 (Reinartz et al, 2009), although it is acknowledged that they could be mutually reinforcing.

Thus, I argue that attitude toward school is less stable, more subject to fluctuation and recent influences, than the violence propensity measures (and indeed may be informed by them). Ideally, an earlier measure of school attitude, or early social adaptation to the school environment, would precede the initial violence propensity measure (as shown in figure 2.7, above).

Although the wide age range in this study was intended to cover the span of adolescence and adult transition (bearing in mind that many young Khayelitsha men do not finish high school before the age of 21) while controlling for linear age effects, within-subject trajectory analysis was an obvious limitation (at best, a 24-month period of study for developmental changes) from the outset. With only two data points over a 12-month period, there is an additional question of the chronological ordering of these measures for older subjects who may have exited schooling prior to or during the period of study. However, as suspected, relatively few study participants even completed schooling by age 18 (12 study participants, or 4%, passed grade 12 and 3 or 1% failed grade 12 by the age of 18), and more than half had failed at least one grade, meaning that secondary schooling was effectively extended into early adulthood. In wave 2, 83% (259) participants were still in school, 11% (34) had completed matric, 2% (7) had failed matric, and 4% (11) had dropped out (although they were still eligible to return to school). Further, by the end of the study period, none of the participants were living independently from a primary caregiver/provider. Thus, parental involvement (in schooling, further studies, or support in general) was still a viable construct for all study participants. Therefore, for SEM modelling, I have chosen to drop the 35 study participants who passed or failed matric and were not in other forms of education/training (for whom school attitude/attachment in wave 2 could truly only be historic) in order to correct an impossible contemporaneous association (between violence propensity and school attitude/attachment for those no longer in, or eligible to be in, any form of schooling).

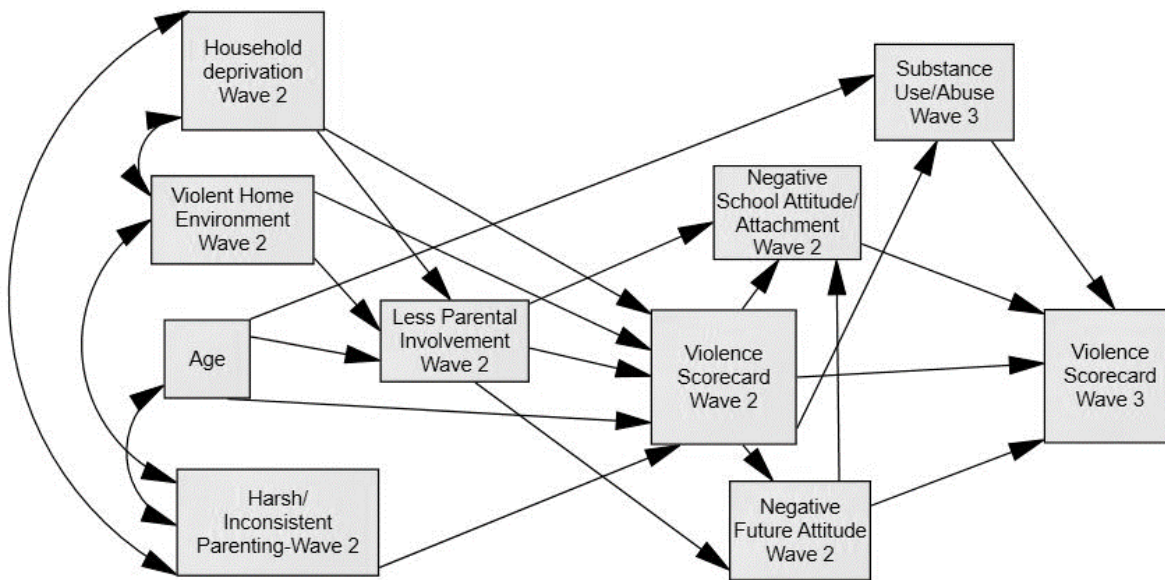


Figure 2.8. Theorized factors and pathways to Violence Potential over two longitudinal waves (as measured in the Violence Scorecard, a proxy measure for actual use of violence).

Next, the Amandla intervention theory of change (see figure 2.9, below) is presented as the basis for an alternative theoretical model incorporating intervention effects. Here the “early warning measures”, early substance use, deviant peers, pro-gangs attitude, and lack of ambition (which may be operationalized as poor school attitude and poor future orientation), are seen as “participant inputs” (really participant characteristics) that are then addressed with sport-based and life skills programming alongside mentorship, role modelling, and a support network. This takes place within an environment of respect and trust. The anticipated participant outcomes relate to improved education achievement and employability, future orientation and resilience, improved social skills and awareness, reduced risk taking, and improved physical health. The impacts reflect community-level changes that may or may not be directly measurable through available data.

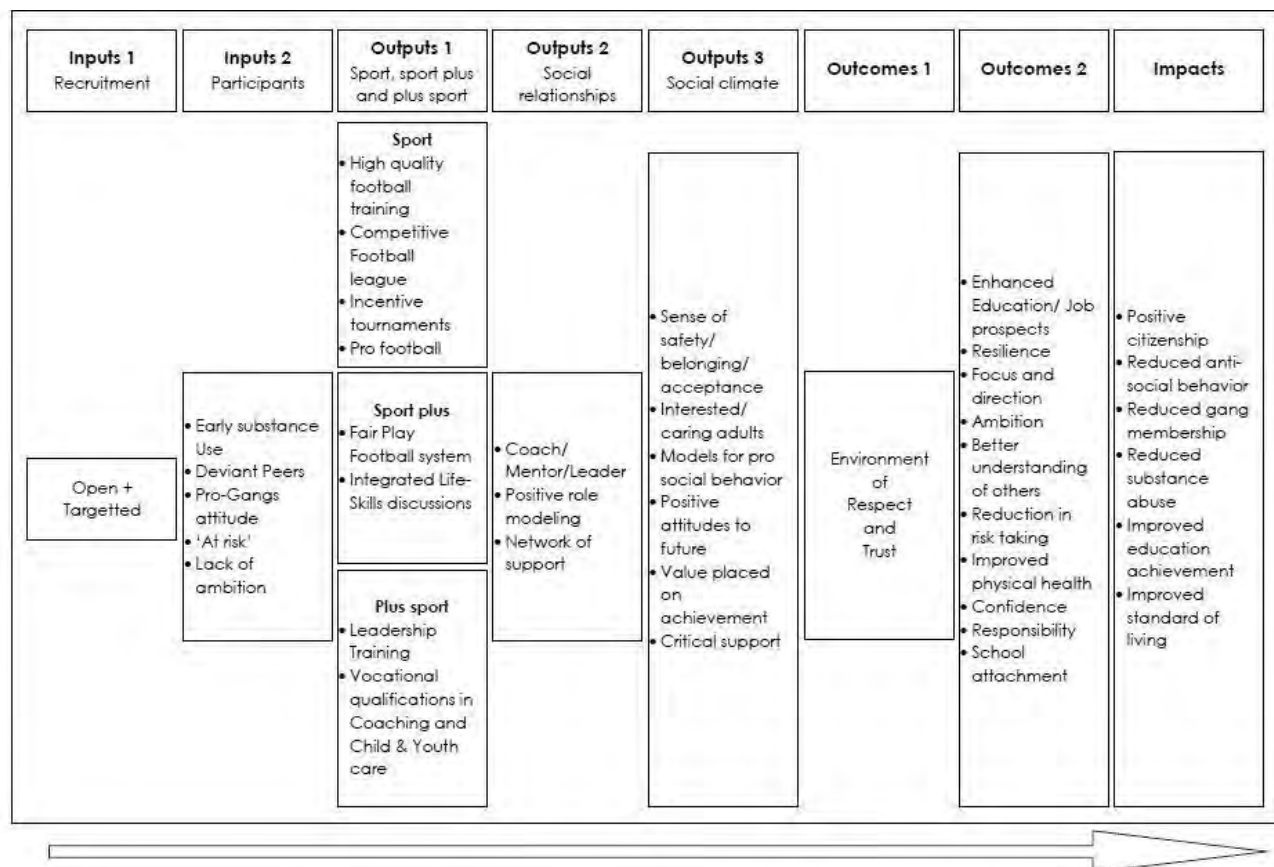


Figure 2.9. Amandla Edu-Football theory of change

Based upon the Amandla theory of change and, ultimately the availability and veracity of Amandla attendance data, a second alternate model (see figure 2.10, below) incorporates the theorized effects of structured leisure intervention (Amandla attendance over two waves of measurement, self-reported in wave 2, and Amandla-recorded in year 3, following the wave 3 interviews) to alter the peer and attitudinal constructs theorized to contribute directly to the Violence Scorecard. Parental factors are not addressed directly through this intervention but may affect the likelihood of a subject choosing to participate in Amandla. It is theorized that a structured leisure intervention targeting out-of-school hours and attracting youth who are more likely to be seeking stimuli outside of the home (and outside of other structured after-school / out-of-school activities) can provide pro-social inputs that are in deficit for subjects from broken, violent, or unstable homes or who have begun to engage with deviant peers and anti-social (drug-related, criminal, and/or violent) activities. The intervention attempts to create a safe space with rules, structure, and organized, respectful play. Positive role models in the form of older youth mentors, programme leaders, and, even, committed peers, offer youth a vision of a new pattern of group behaviour and individual development.

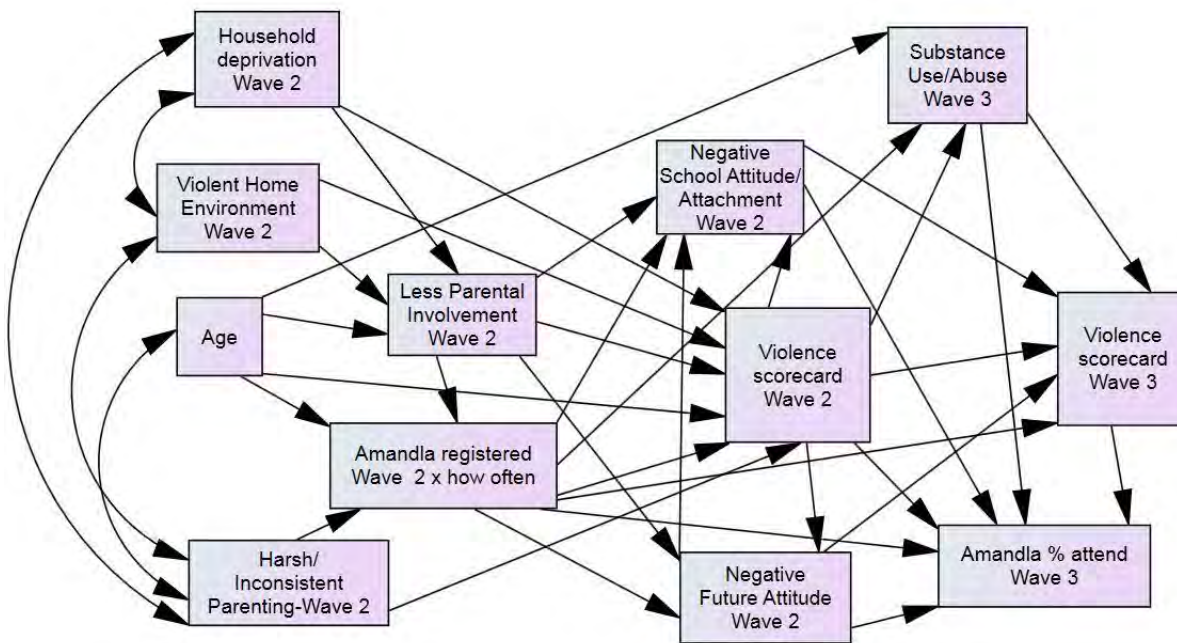


Figure 2.10. Theorized factors and pathways Violence Potential over two longitudinal waves (as measured in the Violence Scorecard, a proxy measure for actual use of violence), incorporating intervention paths (Amanda participation as measured in two waves).

## 2.10 Explanation of constructs in the models

I now discuss in greater detail each of the constructs in the theoretical models, along with references to the extant literature. **Household Deprivation**<sup>12</sup>, lower socio-economic status, or other measures of poverty are sighted in numerous studies internationally as predictive of more family instability, inconsistent parenting, and higher potential for family violence. At a societal level, greater inequality, or relative deprivation, is more closely linked with greater interpersonal violence (Moser & McIlwaine, 2006). While household deprivation is tested, it is theorized that the direct effects of household deprivation on pro-violence attitude will be negligible; most poor people are not favourable toward the use of violence. Poverty, or relative deprivation, can, however, alter one's view of their future, their prospects, and their confidence to compete with their peers (some of whom may be less materially deprived). Conversely, a background of deprivation may also condition some individuals to be more resilient, to know that they can overcome hardship and persevere to achieve their goals. Thus, it is uncertain what effects (if any) Household Deprivation may impart on the larger group in this study.

**Family Violence** or a **Violent Home Environment** draws from Social Learning Theory which proposes that attitudes and behaviours are learned through interactions with family, friends, and peers (Sutherland, 1939). Just as pro-social behaviours are learned through interactions (and reinforcement), so are aggressive behaviours. Seekings and Thaler (2010) found a relationship (though weak) between

<sup>12</sup> Hereafter, constructs developed and measured in this research are capitalized for identification purposes, to avoid confusion with reference to these real-world concepts.

childhood exposure to violence in the home and violence against strangers in early adulthood in data from the Cape-Area Panel Study in Cape Town. Childhood exposure to a family member who drank or used street drugs rendered a subject twice as likely to report hitting a stranger 7 years later. Thus, a Violent Home Environment may lead some subjects to replicate the violent behaviours they have witnessed while others may choose to reject violence. A Violent Home Environment may also lead youth to seek acceptance and safety outside of the home.

**Harsh and Inconsistent Parenting** has an intuitive connection to family violence, but this group of questions deal more directly with subjects' direct relationship with their parent(s) and not violence that may be witnessed in the home. Early harsh and inconsistent parenting (a parent who may be absent physically or emotionally, who does not send a clear, consistent message to the child about boundaries and expectations) may lead youth to spend more time out of the home without supervision, to seek more support and acceptance from peers rather than adults/parents, and to explore use of substances. According to Social Learning Theory, Harsh Parenting may condition children to respond with violence and aggression in conflict situations. Self-Control Theory/general theory of crime (Gottfredson & Hirschi, 1990) posits that ineffective parenting (not monitoring and correcting early aggressive behaviour) leads to the development of children with limited self-control and a predilection to: impulsivity and immediate gratification; risk or thrill-seeking behaviours; a preference for simplicity over complexity; physicality; self-centred desires and actions; and, to become angered easily. Thus, Harsh Parenting is theorized to increase Deviant Peer Associations and to directly affect violence-propensity, particularly when influenced by Violence in the Home.

**Less Parental Involvement** refers to the level of engagement of parents/primary caregivers in the lives of the study participants: if parents regularly attend school meetings, set clear household rules, check their homework, spend time with them, give good advice, make them feel good, and take an active interest in their friends (parental monitoring, as per Dodge et al, 2008). It emerged from discussions with former gang members in Khayelitsha that the absence of involved parenting was a strong contributing factor to delinquency, deviant peer associations, and, ultimately, decisions to engage in violence and criminality. A lack of Parental Involvement is theorised to affect the decision to explore and abuse substances (an involved parent is far more likely to know when their child is drinking or using drugs) and attitudes reinforced by delayed gratification (Attitudes toward School and the Future). A parent(-s) that demonstrates and reinforces the value of self-guided education and taking personal responsibility for one's future will help a child to set longer-term goals and accept delayed gratification.

A more **Positive Attitude toward one's Future** is also closely linked with the concept of **Resiliency** among at-risk youth, individual factors that allow one to overcome significant challenges

and reach productive, pro-social outcomes. A number of studies have explored factors that contribute to resiliency (against deviant/violent behaviour) in the face of adverse circumstances (Ward, et al, 2007). Resilience/Future Orientation is theorized to be stronger among subjects who have fewer Deviant Peers, less Use of Substances, and a greater **Attachment toward School**. This concept is theorized to partially (along with school attitude) and directly predict less violence-potential, and greater resistance to peer pressure. A person who looks toward the future with hope will be less likely to resort to violence in the 'heat of the moment', or to view it as a solution to a problem. This draws on Social Learning, Social Bond, and Self-Control theories.

Likewise, **School Attachment and Attitude towards Schooling** can be seen as mutually reinforcing Resiliency/Future Attitude<sup>13</sup>. Studies in South Africa (Ward et al, 2007) and elsewhere (Dodge et al, 2008) have found that school attachment is correlated with less anti-social and violent behaviours. Given the prevalence of youth unemployment (and unemployability) in South Africa, strong school attachment (and performance) may provide significant protection against future violent outcomes. Despite the shortcomings of public education in the South African context, school achievement remains the primary pathway to economic independence. A subject with a strong attachment to school will be less influenced by gangs and deviant peers, less likely to abuse substances, and more likely to view their future favourably. Lifestyle theory reinforces the notion that a person who spends more time at and exerts more effort in school, and in related pro-social activities, will be less exposed to risk of victimization or opportunities for violence perpetration (Hindelang, Gottfredson, & Garofalo, 1978).

The **Violence Propensity Scorecard** incorporates **Deviant Peer Associations** which can be mutually reinforcing with **early Substance Use / potential abuse** (a combination of regular alcohol use and multiple/regular drug use), as group drinking/drug-taking and group deviance/violence tend to co-occur. Some substance abusers may engage in more solitary behaviour that is not conditioned by deviant group associations (though in the Khayelitsha youth context, such solitary substance abuse is suspected to be uncommon). In such cases, substance abuse would directly affect attitude and attachment toward school as well as resiliency and a positive belief about one's future.

Local studies have found frequent or heavy alcohol use to be associated with more violent behaviours and more risk of victimization. In the Cape Area Panel Study, a male subject who was exposed to excessive drinking in his home during childhood and reported using alcohol over at least 2 waves was more than 5 times as likely to report violent behaviours than a subject who never reported

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<sup>13</sup> In fact, that data showed that Future Attitude did not explain any more variation in dependent variables after the effects of school attitude/attachment were controlled for. Therefore, Future Attitude was ultimately dropped from SEM measurement, in favour of a more parsimonious model.

alcohol use or childhood alcohol exposure (Seekings & Thaler, 2010). Alcohol initiation at younger ages may both impact mental development and increase risks associated with violence and victimization. As with higher alcohol use, more frequent drug use among youth is associated with more deviance and violence. In American studies, softer drugs (marijuana, tobacco, ecstasy) are seen as gateway drugs that may increase the risk of experimentation with, or addiction to, more serious harder drugs (heroin, cocaine, methamphetamine) (Resnick, Ireland, & Borowsky, 2004). There is less research supporting this connection in South Africa. In less-resourced communities, cheaper drugs are far more prevalent. Methamphetamine (known locally as 'tik') and glue/rubber cement (for inhaling) are most available and popular in Khayelitsha.

Lifestyle Theory (Hindelang, Gottfredson, & Garofalo, 1978) and Routine Activities Theory (Cohen & Felson, 1979) suggest that individuals with greater exposure to risk in their daily lives are more likely to become victims, just as youth with greater unstructured time (without adult presence and in conjunction with drugs or alcohol), combined with opportunities for crime, may be more likely to perpetrate crime or violence. Thus, Substance Abuse is theorized to be predicted by Deviant Peer Associations and family dynamics while it, in turn, directly influences School Attitude and Attachment (kids regularly engaged in substance use/abuse are not that attached to their school outcomes) and may help to solidify favourable attitudes toward gangs (a group who finds regular enjoyment in substance abuse may soon start to think and/or act like a gang, for both protection and sustenance).

Strong **Deviant Peer Associations**, particularly among young males, are likely to directly impact favourable **Attitudes Toward Gangs**, the second component of the **Violence Propensity Scorecard**. Such youth may already identify as gang members, believe gangs are a source of safety, respect, and support, or simply spend much of their free time in loose (or formal) gang associations. From this perspective, linked with Social Bond Theory (Hirschi, 1969), a positive attitude toward gangs would indicate more detachment from pro-social structures, such as school and career preparation. Social Bond Theory (Hirschi, 1969) refers to the normative attachment to others and desire for their support, commitment to conventional behaviour, involvement in conventional activities, and belief in common societal norms and values. The absence of such attachment, commitment, involvement, or belief, within an individual, results in a diminished social bond and higher likelihood of aberrant and potentially violent behaviour. Significant evidence from the United States links peer deviance with aggression, deviant behaviour, and violence (Dodge, Greenberg & Malone, 2008). In a small South African study, Ward, Martin, Theron, & Distiller (2007) found that peer delinquency was associated with conduct problems and depression.

**Tolerance toward the use of Violence or Pro-Violence Attitude** is the third key component of the **Violence Propensity Score** outcome variable in this study as it is through the cognition of

violence that thinking may be altered (through intervention) and, ultimately, violent behaviour attenuated. Social Learning Theory contributes to both the motivation for engagement in violence and the regulation of such behaviour through beliefs of appropriate behaviour (Bandura, 1986; Slaby & Guerra, 1988). If an individual is exposed to violent responses, he/she may develop beliefs supportive of the use of violence as a means of expression and action. Conversely, an individual who is exposed to non-violent responses to conflict and beliefs supporting peaceful resolution of conflicts, may develop their own beliefs reinforcing non-violence.

According to Slaby and Guerra (1998, p.581), “In addition to providing an individual with standards of conduct, beliefs can represent generalized response-outcome expectancies concerning the aggressor or the victim that support the use of aggression,” This suggest the connection with exposure to violence and victimization, which often co-occur. An individual’s actions are based both on a set of ideas (beliefs) about proper behaviour as well as an expected response-outcome, what response a given action will be likely to yield based on the situation and prior experience. This outcome could relate to enhanced social status (respect among peers) as well as economic gain (when related to aggravated robbery) through the use of violence (Bandura, 1973; Slaby & Guerra, 1998).

Here, Pro-Violence Attitude is used as a proxy for the potential to employ interpersonal violence, alongside **self-reported physical fighting** (the fourth and final component in the **Violence Propensity Score**). A tendency (particularly as revealed later in this study) for study participants to under-report and inconsistently report actual violent and deviant behaviours significantly reduces the number of violence-reporting subjects for which to test for explanatory factors.<sup>14</sup> Using an Attitudes-Toward-Violence sub-scale, within a four-factor **Violence Propensity Score** index, gives a measure for every subject, partially obviating the need for accurate self-reporting.

U.S.-based research has found attitudes favourable to the use of violence to be correlated with violent behaviours (Farrell & Flannery, 2006). Cotten et al (1994) found pro-violent attitudes correlated with self-reported violence among African-American teenagers, after controlling for age, gender, poverty, and family attitudes toward violence. As the study was cross-sectional, they could not test if pro-violence attitude was predictive of violent behaviour, was co-occurring, or was reinforced by violent behaviour. Shapiro et al (1998) tested attitudes toward guns and violence in a sample of 1,600 students in grades 3 to 12 in one Midwestern city and found that exposure to guns, particularly

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<sup>14</sup> 77 subjects (19%) in this study report any serious offending, including carrying a gun, knife, or other weapon for protection. 55 subjects (14%) in this study report ever using a weapon to threaten, steal, or injure; forced sex; robbery; arson; dealing drugs. Eight of 23 (35%) wave 2 subjects who disclosed ever carrying a weapon for protection in wave 2 admitted to ever carrying a weapon in wave 3. None of the 3 subjects who admitted to ever using force, threats, or a weapon to steal in wave 2 disclosed this in wave 3. None of the 6 subjects who admitted to ever breaking into a house or building in wave 2 disclosed this item ever in wave 3. None of the 6 subjects who admitted to ever using a weapon to threaten or injure someone in wave 2 disclosed this ever in wave 3. None of the 10 subjects who admitted in wave 2 to ever being in a gang fight admitted to the same ever in wave 3.

handguns (as opposed to hunting rifles), was related to higher levels of pro-violence attitudes. Again, this study lacked a longitudinal component. The authors proposed that exposure to violence and guns affects attitudes which, over time, influence behaviour. Slaby and Guerra (1988) tested social problem solving skills (habitual patterns of cognition) alongside general beliefs supporting aggression in a sample of adolescent offenders and non-offenders. Anti-social and aggressive subjects were most likely to hold beliefs that support the use of aggression, viewing violence as a legitimate response that increases self-esteem and did not consider the suffering of the victim. In a meta-analysis of 88 separate studies, Kraus (1995) found favourable attitudes to significantly predict future related behaviour. Lastly, in a cross-sectional Cape Town study, Abrahams et al found that men who justified why it is acceptable to hit a woman were almost 4 times as likely to report perpetrating intimate partner violence (Abrahams, Jewkes, Hoffman & Laubsher, 2004).

In this study, the Pro-Violence Attitude construct and Violence Propensity Score are tested for correlation with a Maternal Assessment of the male study participant's Risky Behaviours and actual Self-Reports of Serious Criminal and Violent Behaviours. If statistically significant correlations between these measures are found, it will serve as evidence -through triangulation- that Attitude Towards the Use of Violence and/or the Violence Propensity Score are accurate proxy measures for the potential to engage in violent behaviours.

To review before engaging with the study methods and data, the primary research questions under study are:

- What risk and protective factors predict or correlate with violence potential? Can these be successfully measured in the Khayelitsha context?
- Can evidence of behavioural or attitudinal change with regard to violence potential be discerned over a 3-year period?
- Is there a measurable change in violent behaviour/violence potential among Amandla participants compared with a reference group with similar environmental characteristics and risk factors?
- Are these "Amandla-effects" transient or sustained?

## Chapter 3: Study and intervention design

Following the previous chapter discussing youth violence in South Africa, violence interventions, and presentation of the theoretical pathways to/from violence to be tested, this chapter discusses:

- the study design and collection methods and issues
- data analysis methods and issues
- the process of identifying the violence intervention, along with a description of the intervention sites
- the research sample, sampling strategy, and procedure
- ethical issues and limitations.

### 3.1 Research design overview

Prospective longitudinal panel studies exploring the causes and correlates of youth violence are common in developed-country contexts, particularly in the United States (Denver, Pittsburg, Rochester: Huizinga et al, 1991 and Seattle: Hawkins et al, 2003), Canada (Tremblay et al, 2003), and New Zealand (Moffit, 2003), among others. In developing countries, such studies are far less common (Norris, Richter, & Fleetwood, 2007) and have been affected by resource constraints, high attrition rates, and even scale-compatibility issues (how well scales validated in developed-country contexts can be applied in developing-countries<sup>15</sup>). Several of these studies have also included an intervention and can be referred to as longitudinal-experimental youth violence studies (Farrington, 2006). Key studies in longitudinal-experimental youth development research include:

- The Montreal Longitudinal-Experimental Study which followed roughly 1000 boys who were assessed on their disruptive behaviour at age 6 and followed up between ages 10 and 17. Forty-six of the 366 boys (from the initial sample of 1,161) who scored above the 70th percentile on the disruptive behaviour assessment were randomly assigned to the experimental group and received skills training, while their parents received parenting training. One hundred twenty six boys scoring above the 70<sup>th</sup> percentile were retained for the control group. Boys in the experimental group self-reported less delinquency up to age 15 (being arrested, being in a gang, using alcohol or drugs) and less incidence of arrest and aggression up to age 17 (the end of the study) (Tremblay et al, 1995 & Tremblay et al, 2003).
- The Cambridge-Somerville study of 325 matched pairs of boys where one in each pair received special counselling between ages 10 and 15. Follow-ups were conducted over a 30-year period and found iatrogenic effects of the intervention; subjects in the experimental group were more likely to

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<sup>15</sup> For instance, Forsyth et al (2008) found significant cross-cultural variation in the application of an ethics scale for moral values.

have suffered alcohol and mental health problems and to have two or more convictions (McCord, 1992).

- The Abecedarian Project followed 104 subjects (whose parents scored high on a risk index) from birth through age 21. Roughly half (randomly assigned) received pedagogical early childhood education (pre-school) and half of the first experimental group also received home visits from a home-school resource teacher for the first 3 years of public schooling, designed to increase parental involvement. The pre-school intervention resulted in improved academic results (higher reading and math skills), reduced use of marijuana, and reduced teenage pregnancy into adulthood. The school age programme supported reading skills but did not exhibit significant effects beyond those of the pre-school intervention. Significant effects were not seen on self-reported violence and offending but trends suggested a potential positive treatment effect that could increase with time (Campbell et al, 2002).

The design of the present study draws inspiration from such long-term, large-scale youth violence studies in North America that have followed random (and non-random) samples of (largely urban) youth from childhood into adulthood but, due to time and resource constraints, follows an accelerated longitudinal design over a 3-year period with a quasi-experimental intervention. At the inception of the research, the intention was to develop a longitudinal quasi-experimental control group design with three waves of data collection across two sites, incorporating a total sample of  $n=700$ . Programmatic and field research issues (discussed in detail in chapter 4) led to an altered design and analysis, a quasi-experimental design focused on one site, two waves of data collection, and a sample size of  $n=318$  (reduced to  $n=311$  for regression analysis due to 7 cases with multivariate outliers and  $n=276$  for structural equation modelling following removal of 35 cases where subjects had completed schooling before wave 2 of the study). Thus, aspects of longitudinal-(quasi-) experimental panel study design and attendant design threats and limitations will be discussed.

### **3.2 Study design and data analysis: challenges and limitations**

I now turn to discuss some of the common study design and prediction challenges and limitations encountered in other prospective youth violence research and, where possible, discuss my intended methods to address these challenges.

#### **3.2.1 Time frame, sample size & attrition**

Prospective longitudinal designs are “less biased by confounded information on predictors and outcomes” (Lösel & Farrington, 2012). This is simply because the predictor variables are measured before (in some/ideal cases, many years before) violent outcomes. Yet, this can require time, money,

and a large number of study participants. Within a two-wave, longitudinal design, there is only one opportunity for prediction (in this study, wave 2 predicting wave 3, due to issues with the wave 1 sample and data).

Among the benefits of a prospective longitudinal-experimental panel study are that it can describe developmental effects separate from intervention effects, allow for between subject (cross-sectional) and within-subject (longitudinal) analysis for prediction, as well as analysis of change and stability (or acceleration, deceleration, delayed effects, short-term effects). Farrington states that longitudinal-experimental studies should run for at least 2 years prior to the experiment and 2 years after (a minimum of 5 years/waves) to distinguish sustained experiment effects from short-term effects, or other trends, and from non-linear effects (Farrington, 2006; Lösel & Farrington, 2012). In several of the more successful youth development experimental studies (Abecedarian Project, Campbell et al, 2002; and Perry Project, Schweinhart et al, 1985) time frames of 10 or 20 years were required to see significant effects emerge. While a 3-year panel study (as well as the two waves that are, ultimately, analysed here) is insufficient for some of this longitudinal analysis (stability or trajectory analysis, in particular), I have attempted to design the study as an accelerated longitudinal design (Loeber & Farrington, 1994; Bell, 1953, 1954). This is achieved through sampling three roughly equivalent developmental groups, 12-14 years, 15-17 years, and 18-21 years in the first wave, with the intention of maintaining at least 100 subjects per age group, in line with the recommendation of Farrington (2006). While cohort studies tend to consider a cohort as a group of subjects all born in the same year, there is ample evidence that the developmental effects of aging (in this case, through adolescence and into adulthood) do not occur uniformly within a same-age cohort; even physiological changes such as puberty are spread out over a multi-year period with varying ages of onset, duration, and outset/desistance (Loeber & Farrington, 1994).

In some accelerated longitudinal designs, researchers have attempted to match participants across the age range on key demographic variables to allow for quasi within-subject analysis of trajectories across the full age-range, essentially mapping the development of a hypothetical high-risk 12 year-old subject through his 21st year within a 3-year study. This would be achieved by linking the 12 year-old's data for the three years with that of a matched 15 year-old (at the beginning of the study) with that of an 18 year-old. I do not attempt this linking in the present study as it poses both analytical and conceptual challenges, particularly in a context (urban, high-risk South Africa) where no prior body of empirical youth violence research exists to delineate what key variables such subjects should be linked upon (let alone how well those variables are contextualized and can actually be reliably measured). This intended study design would allow for full-sample (n=700) analyses with the inclusion of independent variables for age and site (Khayelitsha vs. Kagiso) as well as separate age-

group analyses allowing for the exploration of non-linear (with respect to age) developmental effects. Within the reduced two-wave, one-site realized sample (n=311), reference/intervention group comparison and (limited) age-group analyses are possible.

It is acknowledged that: the time frame (3 waves within 3 years) may be insufficient to detect change and certainly to ascertain the stability of any potential change; that project budgets did not allow for a very large-n sample nor the hiring of highly skilled (and permanently employed) enumerators/translators; and that the bulk of research into youth violence prediction (much of it not hampered by these aforementioned limitations) shows little promise for the rigid prediction of future violence or of violence-related attitudinal or behavioural change. Even with the raft of published youth violence assessment and intervention studies, it is believed that many programme evaluations that fail to find significant positive programmatic effects are also never published (Loeber & Farrington, 1994), perhaps out of fear of damaging the reputation and funding sources of the programmes under study. This said, and as previously mentioned, there are several short-term (3 years or less) longitudinal gang intervention studies that have demonstrated some positive impact (Braga et al, 2001; Esbensen & Osgood, 1999; Spengel et al, 2003). However, in the case of the G.R.E.A.T. programme, Esbensen (2001) did not find evidence that initial post-test effects were sustained in one and two-year follow-ups.

Panel study duration, sample size, and attrition tend to go hand in hand. The longer a panel study is designed to run, the greater the number of 'exit points' through attrition (or the costs/challenges to relocate and follow-up, if the subject is found to have moved), and thus, the requirement for greater sample sizes, which are already necessarily large in prospective studies of serious violence (a likely rare outcome) among a general-youth-population sample. While it is evident that statistical power increases with sample size, cost is always a limiting factor. In this case, I have tried to find a delicate balance between sample size, quantity and quality of data drawn, and financial constraints.

Attrition - i.e. losing study participants who have moved out of the study area, have died or been incarcerated, can no longer be located, or refuse to participate in follow-ups- is a particular problem for longitudinal studies. Attrition has been found to be especially high in developing-country contexts where urbanisation and mobility are common and centralised records and means of tracing, nearly absent (Norris et al, 2007). Further, it has been found in previous longitudinal studies in developed-country contexts that subjects who attrit, or are more difficult and costly to trace, tend to be those who are also more delinquent (Loeber & Farrington, 1994). In this study, it was neither possible nor considered ethical to offer rewards to subjects for their participation in the study. Small calendars were offered as tokens of appreciation in waves 2 and 3. An unforeseen constraint, seemingly much more serious than attrition due to subjects who moved away or refused to participate in follow-up

waves, was attrition due to apparent falsification (where fieldworkers apparently fake a subject's details and the content of an entire interview). While steps were taken to correct this each time it was detected (by switching to newly contracted field work teams) there was little that could have been done at the outset to guard against it (having initially partnered for the fieldwork with the foremost youth violence research organisation in South Africa and, in the second wave, sub-contracted through referral by one of the largest nationally representative household survey companies in the country).

### **3.2.2 Panel and testing effects**

Panel effects occur once subjects learn that if they respond in the negative to probing questions, there will be fewer follow-up questions. This is particularly problematic when questions on self-reported delinquency and violence are followed by further questions of clarification on the nature (and severity) of the act. In such cases, subjects have been found to deny any behaviours after admitting to the same behaviours in previous waves due to the fact that they do not wish to be queried in more detail and have learned that outright denial results in fewer follow-up questions (Loeber & Farrington, 1994). This issue can be especially damaging in accelerated longitudinal designs where self-disclosure rates are likely to be higher in the first year of assessment than in subsequent years, making “the last assessment of one cohort not necessarily equivalent to the first assessment of the next cohort” (Loeber & Farrington, 1994, p.888).

In this study, there is evidence that most study participants who reported serious and violent offending in wave 2 did not report the same offending in wave 3 in response to the ‘have you ever’ items that they had disclosed a year earlier.<sup>16</sup> However, the overall rates of self-disclosed violent offending, as well as of alcohol and drug use, increased significantly with each successive wave suggesting that, overall, participants may have ‘forgotten’ to report their previous behaviours but were not averse to sensitive disclosure.

Testing effects can result in people changing their actual behaviours because they are under study. This is known as the ‘Hawthorne effect’ which usually occurs when people know that they are being watched in a study, altering their responses because they are under study (hiding information, amending, or exaggerating information). Testing effects can also result from subjects changing the nature of their responses during the course of the interview (due to interview fatigue, or boredom).

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<sup>16</sup> Eight of 23 (35%) wave 2 subjects who disclosed ever carrying a weapon for protection in wave 2 admitted to ever carrying a weapon in wave 3. None of the 3 subjects who admitted to ever using force, threats, or a weapon to steal in wave 2 disclosed this in wave 3. None of the 6 subjects who admitted to ever breaking into a house or building in wave 2 disclosed this item ever in wave 3. None of the 6 subjects who admitted to ever using a weapon to threaten or injure someone in wave 2 disclosed this ever in wave 3. None of the 10 subjects who admitted in wave 2 to ever being in a gang fight admitted to the same ever in wave 3.

Further effects have been found when the meaning of questionnaire items changes as subjects age (Lauritsen, 1998).

Guarding against testing effects requires sensitive, experienced fieldworkers who can develop a rapport with subjects, well enough to gain their trust (but not induce distorted or exaggerated responses) and who possess an ability to detect (and correct) when subjects show fatigue or slip into a conditioned-response pattern (such as giving the same answer over and over, regardless of the question, limiting responses to yes/no despite a wider Likert response option scale). With factor analysis, I identified poorly performing items (or entire sections) in each wave that were then removed from the following year's interview tool, reducing overall length by roughly 10% each year (from well over an hour, on average, to less than 45 minutes). New items were also researched and tested through focus group discussions and then included selectively in waves 2 and 3 where certain construct internal reliability scores were found wanting.

### **3.2.3 Intervention vs. developmental effects**

A true experimental design is required to distinguish intervention effects from the full range of lurking variables. Yet, an experiment is difficult to create in many real-world contexts where it is impossible or unethical to randomly assign humans to social experiments while denying treatment to (yet still studying) another group as a control. If the intervention is open to the public (as Amandla is), then there is virtually no way to ensure that control group members do not access the treatment (especially if they know about it). The alternative is to develop a quasi-experimental design (with as similar characteristics between treatment and comparison groups as possible) and to treat the intervention (operationalized as a dichotomous dummy variable or, ideally, a continuous 'dosage' variable) as simply another independent variable in the full model predicting violence (Farrington, 2006). This is sensible when the intervention is, effectively, a programme 'open to all' (where accurate attendance data is available) and the comparison group is not denied certain information or opportunities. This also hints at the issue of cross-over, when subjects from the control/comparison group receive treatment. This may be impossible to control in many real-world contexts with open programmes; attendance and registration data is key to partial out any dosage effects.

Even under circumstances where a true experiment has been established, the result of an intervention to reduce violence may require a great deal of time (years or decades) to manifest in significant affective, cognitive, or behavioural differences (a treatment effect) and the data and sample size must allow for clear delineation of different 'normal' developmental trajectories from those subjects whose trajectories may have been altered by the violence intervention under study. Speaking solely in terms of quantitative analysis of trends, Farrington (2006) says this requires a minimum of 5

years/waves (with 2 years/waves each before and after intervention to discern trends) but this suggested approach has never been followed in any longitudinal-experimental panel study. Further, “some problem behaviours have an insidious or gradual onset that makes it difficult to determine the precise time of onset with certainty” (Loeber & Farrington, 1994, p. 889), reinforcing the need for long-term developmental data from an early age.

An acknowledged limitation (or an over-ambition, perhaps) in this study is the wide age range of the sample. Evidence is abundant that the developmental stage of a 12-14 year-old is very different from that of a 21-24 year-old. This study includes a 10-year age range across the sample in an effort to understand age and developmental effects. An alternative approach would have been to isolate a narrower age group and, therefore, increase the respective sample size (per year of age) and potential for prediction and intervention effects. However, I had no a priori reason to include or exclude age groups (beyond the 12-21 year-old age range for high risk of violent offending, both in South Africa and internationally). The Amandla intervention, itself, targeted and included this entire age range and beyond (though programmatic elements differ). We might expect more “development” to occur (more rapidly) in adolescence, as the world gets much bigger as a young person’s body and mind become more adult and he is exposed to many more stimuli and potentially confounding variables. As subjects drop out or complete school in their late teens or early twenties, we can expect a certain degree of real-world reality to set in; schooling and childhood ends, adulthood and (at least, the need for) independence begins, which may induce some subjects to ‘quickly grow up’ and reject ‘silly youth behaviours’ while others may begin to embrace violence as a tool for perceived empowerment and economic advancement. In short, there are interesting questions to be explored across the 12-21 year-old age group that relate to violence, socialization, and intervention. The accelerated longitudinal design enables some limited exploration of different, non-linear developmental effects to be explored.

### **3.2.4 Lack of true randomization/ or targeted risk**

“Protective mechanisms and effects are part of the natural life course of individuals. They often refer to serious life risks (e.g., child neglect, growing up in poverty) that are not subject to randomization and experimental manipulation. Some potential protective factors are also extremely difficult to implement in experimental designs (e.g., attachment to a caregiver)”. (Lösel & Farrington, 2012).

We know that quasi-experimental studies cannot ensure complete randomization and separation of treatment and control groups and there are real-world limits to what factors can be feasibly/legally manipulated (as stated in the quote, above). When drawing a control/comparison group in a quasi-experimental design, the sampling strategy needs to be clearly elaborated and closely followed by

fieldworkers to ensure that control/comparison subjects are as representative as possible. In this study, fieldworkers were instructed to skip a pre-determined number of houses (from where they last conducted an intervention-group interview) to randomly locate a willing control-group participant of a similar age. Though a protocol was established to determine if there was more than one eligible subject in a home and to randomly determine which would be interviewed (the first, alphabetically, on odd days of the month, the last, alphabetically, on even days) it is highly unlikely that this procedure was rigorously followed. Most likely, a degree of ‘convenience sampling’ took hold, with fieldworkers continuing to skip until a willing subject was found that day, rather than returning multiple times to see if a randomly selected subject is home (and agrees to participate). We can, therefore, say with some confidence that the sample is representative of 12-21 year-old male subjects from the areas surrounding the intervention site, roughly known as Site B, Khayelitsha but that hard-to-reach subjects may have been under-sampled.

The challenge of reaching ‘hard-to-reach’ subjects is an issue not only for research, but also for treatment. Melde et al (2011) found that subjects in Cleveland, Ohio, referred for admission to a targeted gang intervention programme showed significantly fewer risk factors for gang affiliation than a general sample of high school students from a high-risk community within Cleveland. This finding suggests that even programmes intended for those subjects at highest risk within high-risk areas tend to enlist participants who are more motivated or cooperative (easier to be successfully referred to treatment). They make an important distinction between entire communities where the need for additional youth development support can be very high for nearly all subjects and the individuals within those communities who are at truly elevated risk of gang affiliation or serious violent offending.

These same dynamics are prevalent in the intervention under study here. Amandla cannot diagnose and treat selectively nor randomize due to real-world constraints: the need to achieve mass participation and the difficulty to ensure attendance (of any participants, with high or low risk) is consistent to achieve the theorized outcomes of a progressive life skills curriculum (based on a 75% rate of attendance over a 9-month programme period). And, this focus on ‘treating the more treatable’, in turn, has an impact on treatment effect sizes. Without pre-screening those youth most at-risk, there is the possibility that treatment effects will be diminished (Lipsey, 2009) by inclusion of subjects who may already exhibit low risk factors and thus, cannot exhibit large improvements following successful programming. This can be seen as a potential for Type 2 error, failure to find a significant effect when, in reality, there is an effect. Further, it is not only possible that the effect size can be minimized through inclusion of those less-at-risk in the programming, there is also the possibility of iatrogenic effects, where those previously ‘not at-risk’ initiate violence after being exposed to violent peers in the course of an intervention, known as ‘learning violence’ or ‘learning aggression’ (Bandura, 1973).

Other prospective longitudinal studies have chosen to focus only on high-risk males, based on screening and/or restriction to high-risk communities (as Khayelitsha and Kagiso sites could certainly be classified). When girls are included, the gender dummy variable is often the most significant predictor of less violence, meaning that in a resource-limited study, inclusion of girls effectively reduces predictive power for the principle violent offenders (boys). Pre-screening for study selection, of high-risk youth, or high-risk parents if the study and intervention is designed to begin from birth, is a costly process but can ensure that levels of reporting of serious offences, normally highly skewed (to no reports) in general populations, have more variance for quantitative analysis.

As with many other methodological approaches, there are trade-offs: “Findings from high-risk studies often have more clinical relevance, but population samples are normally larger, have more statistical power, and permit analyses of complex interaction effects” (Lösel & Farrington, 2012). In this study, the primary research and intervention site of Khayelitsha is prominently afflicted by violence and ineffective policing. A generalized sample of the demographic most at-risk of violence engagement from that community (12-21 year-olds boys/young men) is, therefore, of greatest contextual benefit.

### **3.2.5 Data, measurement and analysis challenges**

Even decades-long studies with significant budgets and means of ensuring triangulation of sensitive measures have, collectively, not yielded robust measures for the prediction of future violence (Farrington, 2006; Sherman, 2007; Lösel & Farrington, 2012; Shadish et al, 2002). Singular risk factors, taken individually, appear insufficient to predict future violence. And, even in the latest re-testing of data from the seminal longitudinal youth violence studies in the U.S., through the Center for Disease Control’s Expert Panel of Protective Factors for Youth Violence, the (theoretically) most consistent risk factor for youth violence, deviant peer association, revealed significant effects in both the theorized and un-theorized directions. Subjects exhibiting high-risk peer associations were more likely in some sites to engage in more violence at a later stage and less likely in other sites to engage in more violence, while the low peer deviance ‘protective factor’ also predicted higher future violence (Hall et al, 2012).

However, an accumulation of a variety of risk factors does seem to be consistently correlated with both past and future acts of violence or criminality (Drake & Melde, 2014). We know from Moffit (1993) that there are different categories of violent youth offenders, those that will naturally desist over the course of their adolescence (adolescence-limited offenders) and those that will, if detection and intervention is unsuccessful, become life-course offenders. Youth violence in the United States has triggered various fields of scientific inquiry and clinical, statutory, and community-based

intervention. The societal response to youth violence is, effectively, a multi-million dollar “industry”. Yet, rigid evidence of prediction of violence, alongside successful “treatment” and evidence of attitudinal (predisposition) and behavioural change is both limited and lamented by current researchers (Farrington, 2006; Sherman, 2007). These prediction constraints, even in far more resourced environments and under more controlled conditions, are certainly present in the current study.

### **3.2.5.1 Prediction of violence**

This study, ultimately, hinges upon the possibility of predicting serious interpersonal violence, or a valid proxy thereof. Thus, this element is a central, overarching concern for design, collection methods, analysis, validity and ethical considerations. As suggested previously, youth violence research, prevention, and intervention is a big business, particularly in the United States yet, “even the most sophisticated longitudinal designs and data analyses are limited in detecting causal effects” (Lösel & Farrington, 2012; Shadish et al, 2002). Much of the literature that is devoted to understanding youth violence only makes use of cross-sectional data, perhaps because of time, funding, and associated real-world constraints. Many studies that do incorporate follow-ups focus on outcomes related to child aggression, minor offences and deviance, and even gang associations but, rarely are able to investigate serious violent outcomes. The main concern with cross-sectional studies is that “in principle, risk factors and direct protective/buffering factors indicate only correlations between time-sequenced variables and do not necessarily show causal relationships” (Lösel & Farrington, 2012). Drake and Melde (2013) are among the more recent authors to discuss the challenge of prospective prediction of violence (in their case, of gang affiliation as the proxy). Cross-sectional data from large-n intervention studies reveal strong correlations between risk factors (theorized to precede gang affiliation) and actual self-reported gang affiliation but these models do not hold up to prediction of future gang-affiliation outcomes (using wave 1 risk measures to predict new gang affiliation in wave 2, or later).

This prediction issue emerged prominently in the Gang Resistance Through Education And Training (G.R.E.A.T.) project and subsequent evaluations. The first cross-sectional G.R.E.A.T. programme evaluations, conducted by Esbensen and Osgood (1999) and Esbensen (2001) found significant programme effects for youth exhibiting cumulative risk factors for gang affiliation. Esbensen, himself, later cautioned on the veracity of the findings; Melde and Esbensen (2011) found that “the relationship between gang membership and delinquency was mediated by ‘a substantial change in emotions, attitudes, and social controls conducive to delinquency’” (Drake and Melde, 2013, p. 63). This substantial change was found to be both the risk factor for gang membership, as well as the consequence of gang membership, meaning that it was impossible to distinguish cause from effect in cross-sectional studies that did not collect data before gang membership began. Nor was desistance

from gang affiliation linked with such a systematic change making the intended intervention effect, gang desistance, difficult to detect or predict.

Retrospective study of confirmed (adjudicated) offenders makes it possible to focus research only on violent offenders in an effort to understand the factors influential on their violent outcomes by exploring their histories. Yet, this approach can suffer from ‘retrospective bias’, where the recollection of data is affected by knowledge of the outcome. Loeber & Farrington (1994) offer an example of this bias when assessment of parental involvement (by children or the parents) is conditioned by knowledge of the child’s problem behaviour (the ‘maybe we didn’t do enough for him’ syndrome).

Still other researchers try to develop diagnostic tools for violence prediction from cross-sectional data. Stockdale, Olver, and Wong (2013) take a practical (yet retrospective) approach to the problem of prediction of violence by developing an assessment tool, the Violence-Risk Scale Youth Version (VRS-YV) based on elements extracted from criminal justice case evaluations of a small selection of youth offenders in Canada. They find that, when highly trained “enumerators” draw the retrospective data from official case records, cumulative risks show some ability to predict higher incidences of future violent offending. This methodology, however, does not allow for any generalizability to a youth population: it is a sample of prior offenders and makes use of historical data derived by case study analysis, akin to cherry picking influential factors following an outcome.

Henigan et al (2013) also attempt to develop and refine a tool for “identifying high risk youth for secondary gang prevention”. They worked together with social workers to refine an assessment tool to provide an empirical basis to determine which referred youth (deemed “at risk” by a referee) should actually be admitted into an intensive Gang Reduction and Youth Development (GRYD) programme. The study (which appears to form part of a longer, ongoing project, including an intervention and impact evaluation) only makes use of cross-sectional data. The outcome, gang affiliation, is measured at the same time as the risk-factor ‘predictors’. The efficacy of the assessment tool is, therefore, based solely on the correlation between self-reported risk factors and self-reported gang affiliation at one point in time. The study offers some insights into the assessment tool development process, in conjunction with practitioners who were not always scientifically-minded or as concerned with missing data or interview protocols as the academics. It also emerged that many of the referred subjects were not as high-risk as even the average school population in a local high school in a high-risk neighbourhood, suggesting that targeted programmes may not always have their ‘sights well-calibrated’ for detecting those who have experienced violence-onset.

Thus, even in the biggest, longest youth violence panel studies, prospective prediction of violence is weak. This is both an opportunity (especially in the South African context where no previous longitudinal youth violence panel study exists) and a very likely limitation. In the case of this

study design, risk/protective factor models were first tested using cross-sectional data and then verified with longitudinal data incorporating within-subject change (albeit over a 2-year period). This hybrid approach was designed to capitalize on the internal consistency of cross-sectional data, while exploring the predictive power of the longitudinal multi-wave data. To address the current lack of locally-tested youth violence prediction instrumentation in South Africa, the intent was to develop and test a risk assessment tool that can, ultimately, either be used to pre-screen youth at risk for secondary treatment (when they already demonstrate high risk of current or future violence engagement through either formal gang affiliation or non-formalised peer-group violence) or to establish baseline evidence at the outset of an intervention programme. Such applications would allow for follow-up assessment and simple programme evaluation based on changes in the assessment-tool scores (the Violence Propensity Scorecard) across a cohort.

### **3.2.5.2 Contextualization**

In primarily developed-country studies, assessment of youth potential for violence is linked with the broader field of study of child behavioural disorders (child psychopathology) such as aggression, oppositional defiance, attention-deficit hyperactivity, and hostile attribution bias that may be associated with delinquency (minor crimes) and, in the worst cases, severe interpersonal violence. As discussed previously, few prospective longitudinal studies explore the antecedents of severe interpersonal violence because this poses statistical challenges in representative (general) populations. The incidence is too low to serve as a statistically meaningful group for comparison purposes.

Researchers that have taken a clinical psychiatric approach to the retrospective study of severe interpersonal violence among incarcerated offenders make use of several industry-standard checklists to determine diagnoses. Among them, the Psychopathy Checklist-Revised (PCL-R; Hare, 1999) measures interpersonal characteristics (arrogance, grandiosity, deceitfulness), emotional or affective traits (lack of empathy or guilt), and deviant/criminal behaviours (Lilienfeld & Arkowitz, 2007). Its popular use has led to confusion between extreme violence, psychopathy, and anti-social personality disorder (ASPD), which even the American Psychiatric Association has described as synonymous with psychopathy (Lilienfeld & Arkowitz, 2007). Indeed, Salekin et al (1996) refer to psychopathy as the most robust, “unparalleled” predictor of violence. In a meta-review, Roberts et al (1998) estimate the prevalence of psychopathy in the general population (of Western countries where studies have been conducted) at 16%, though not all psychopaths are violent nor violent offenders, psychopathic.

The contextual challenge comes in high-violence communities where a certain normalization of violent responses has developed. The aberrant psychopathic or anti-social personality disorder no longer explains the causes or correlates of such high levels of interpersonal violence. It is also not

uncommon for people to describe how they were forcibly recruited into gangs or armed groups and, ultimately, engaged in acts of violence to gain social acceptance (or to avoid becoming further victims of violence themselves). Early focus group discussions with youth in Khayelitsha have suggested that they are well aware that extreme interpersonal violence is morally wrong but yet are swept up in something that is much bigger than them, that they are forced to take part in. In the Khayelitsha context, extreme violence is something of a tradable currency, increasing reputation, respect (or simply fear), and even the possibility of greater economic potential (at least for a short career) of its perpetrators. In this context, it seems problematic to label extreme interpersonal violence committed by boys and young men as strictly psychopathic, rather than (potentially frequently) socially-conditioned, peer-influenced, and (among such poor policing and rates of conviction), largely unsanctioned. In short, contextual similarities with US research, at the aggregate level (beyond the US micro-communities where some elements of gang violence and induced affiliation appear endemic), are very few.

Thus, it would seem that fundamentally different diagnostic tools and research approaches are required in communities where violence has become endemic, where many people engage in violence without displaying classic anti-social/psychopathic personality traits, yet still, large numbers of at-risk youth do manage to avoid such violent engagements.

### **3.2.5.3 Quality/veracity of data / attitudes vs. behaviours**

Issues of testing effects have been discussed earlier but, somewhat separate to these, is the difference in ‘accuracy’ of self-reported behaviours versus attitudes or cognitions, as well as the accuracy of the behaviours themselves. The development of self-report surveys was designed primarily to respond to the bias inherent in ‘official forms of data’ on offending from police, courts, correctional services, and even parents and teachers (Krohn et al, 2010). While some studies have found strong correlations between self-reports and official records of arrest, there is evidence to suggest a systematic racial bias in these correlations, at least in U.S. research where correlations between self-reports and official records are significantly lower for African Americans than other racial groups (Krohn et al, 2010). This could be a manifestation of wrongful arrest or the targeting of African Americans by police, known as ‘racial profiling’. It could also be the result of defiance of authority (including, even, toward the researchers).

The best available approach to address data quality is to ‘triangulate’, to have multiple sources of data or multiple informants on the same subject (parents, teachers, peers, criminal records) in order to “disentangle true relationships between important theoretical constructs from artifactual ones reflecting common response biases” (Loeber & Farrington, 1994, p.891). If this is not done, it can be

argued that there is no exogeneity to the modelling; the data can have high internal consistency but potentially limited external validity. In the present study, the short interview with the primary maternal caregiver is the only truly exogenous construct (besides Amandla records of attendance for those in the intervention). I have tested for correlation of the maternal assessment with the self-report measures but there are both limits to the analytical and theoretical utility of this external assessment. The mother doesn't know everything her son gets up to, especially the more serious and violent things that happen outside of the home and are not investigated, prosecuted, or adjudicated (which seems to happen with alarming frequency in Khayelitsha<sup>17</sup>). And she, herself, may be subject to testing and panel effects (in addition to possibly limiting her level of disclosure for fear of 'looking like a bad parent' or incriminating her child). While parental and teacher reports can be tested for correlation with subject self-reports, it is evident that, by its very nature, serious delinquency, offending, and violence often take place beyond the purview of parents and teachers (Loeber & Farrington, 1994). Improved disclosure of sensitive, socially undesirable behaviours has been found to increase in self-completed questionnaires using paper-and-pencil and, increasingly, computer aided-technologies (including audio for the illiterate or reading-impaired) as well as administration in more anonymous or confidential spaces (Krohn et al, 2010). Given that the sampling design for this study was based on geographical residence within the intervention catchment radius, dwelling-based random selection and recruitment was considered the preferred method (in addition to the likelihood that many at-risk potential study participants may not attend school). While computer and cellphone technologies were explored for data collection, it was deemed too costly to equip fieldworkers for a low-budget study and, importantly, much too risky for the fieldworkers to carry potentially valuable electronics in high-crime/low security areas. Further, language and reading comprehension issues were believed to pose a significant challenge to a subject-completed paper-and-pencil approach and offer too many opportunities to rush through questionnaire completion without properly understanding items and response options and ensuring considered answers.

Although triangulation can address some data quality issues surrounding behaviours and key action-outcomes, "elements of the social bond (attachment, commitment, involvement, and belief) are best measured by asking respondents about interactions, activities, and attitudes" (Krohn et al, 2010, p.518). In short, if we theorize that the use of violence is reinforced or avoided through thinking (cognitions) and feelings (affects) and that these domains may be altered through intervention, then subject-informed constructs, and changes in those constructs over time, are of primary importance. Again, developmental stage needs to be carefully considered in view of the constructs being assessed.

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<sup>17</sup> The recently concluded Khayelitsha Commission of Enquiry into Policing reported that, in some cases, 1% or less of actual crimes resulted in convictions (O'Regan et al, 2014).

It emerged over the course of this study that an Attitude Towards Employment scale of items that had been developed and administered to teenagers in the U.S.A. (and which has been shown to affect violence/deviance<sup>18</sup>) made no sense to most teenage Khayelitsha subjects because the availability and incidence of youth employment is extremely low; these are not normative, age-appropriate attitudes in this context. Yet, I was not alone in this confusion: “It is not always clear who the best informant is for reporting onset. Much needs to be learned about when children are mature enough to recall the onset of problem behaviours and about the types of behaviours that they can most reliably report” (Loeber & Farrington, 1994, p.889).

While there may be inhibitions on disclosure of deviant/illegal/violent behaviours or socially-aberrant attitudes because of fear of negative consequences, these fears can be partly allayed through strong confidentiality protocols. However, with attitudes, there are less clear answers; it is not necessarily the case that the subject knows ‘the real answer’ (as they likely do for questions relating to behaviours, actions, or witnessed acts), and simply need to decide whether or not to disclose that answer (in full or in part). Attitudes, by their very nature, can easily shift, can be open to interpretation, and can be shaped (in part) by the immediate environment, recent events, upcoming events or expectations, and even the personality, gender, age, and appearance of the enumerator. To wit, Hindelang et al (1981) found the reliability of self-reported offending stronger than many of the measures of attitude in a short (45-minute interval) test-retest experiment. Thus, use of attitudinal measures as key study variables in longitudinal designs is something of a double-edged sword. It may be possible to establish antecedents or, at least, less skewed correlates/proxies for violent offending but the shifting nature of attitudes and recall can greatly undermine validity and reliability.

Normality of data can be another serious issue for statistical analyses premised on assumptions of distribution normality. Where the prevalence of deviant/violent behaviours is low (particularly in a general population sample) the distribution of responses is likely to be highly skewed, with most subjects reporting the same (negative, or zero) response. Normality is also problematic with dichotomous variables (yes/no answers) where the true relationship with complex behavioural outcomes may be non-binary or non-linear (Loeber & Farrington, 1994). For this reason, I have tested composite scores for factor analysis and internal consistency to develop constructs such as a Pro-Gangs Attitude scale, rather than a dichotomous response to the question, ‘*Are you a gang member?*’. Likewise, use of alcohol and drugs is combined into a scale of use-abuse from 0 (no drug or alcohol use) to 15 (use of alcohol everyday plus use of 4 other different drugs every day). Several constructs required further statistical transformation to bring distribution normality within acceptable levels.

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<sup>18</sup> See Dahlberg et al, (2005)

### **3.2.5.4 Intervention fidelity and dosage**

An inherent assumption in longitudinal experimental (and longitudinal quasi-experimental) research is that the intervention is administered completely, effectively, and consistently to all experimental/intervention group subjects. This further assumes that subjects, themselves, will keep ‘taking the treatment’ in significant numbers over time (the ‘intent to treat principle’) while the treatment fidelity remains consistent across time (and geographical site). When a treatment group sample is drawn based upon treatment registration data at the outset of a study, it is a necessary requirement (or assumption) that the treatment group will remain (largely) intact and will continue to receive the theorized level (or levels) of treatment. Yet, in the real world, and, particularly in under-resourced, highly mobile, developing country contexts, such stability of treatment over time and space is challenging. This attendance challenge is especially damaging for a panel study where a single cohort is selected (based on theorized treatment and control/comparison) yet most treatment subjects do not maintain treatment targets (and some control/comparison subjects move into-and possibly again back out of-treatment). To respond to this issue (and to address falsified interviews) the study sample was redrawn in wave 2 (rendering much wave 1 data of limited analytical value).

Where the longitudinal research is conducted independent of the intervention, clear understandings and expectations need to be established so that the researcher(s) can access vital attendance/intervention dosage data and ensure its veracity and that issues of programme fidelity, between sites, between programme delivery staff, or across time are detected and addressed to ensure that programmatic outputs do not widely differ from programme theory and curriculum. The potential (as referenced in chapter 2 of this study) that, in sport-based development programming, the life skills is depleted in order to keep the sport, the hook, as enticing as possible, particularly when attendance is in decline, is a very real concern. In this study, it emerged over time that Amandla participants over the age of 15 were not receiving any life skills curriculum (though this was specified in earlier programme theory to extend up to 19 years of age). Thus, intervention participants over the age of 15 received a substantially different treatment. Further, site issues resulted in low programme fidelity in Kagiso and the ultimate cancellation of both intervention and research at that site (discussed in chapter 4, site issues). The challenges of intervention fidelity and dosage notwithstanding, there are still significant benefits derived from such concerted research efforts:

“Even if the experimental part cannot be carried through successfully, the longitudinal-experimental study will have yielded valuable knowledge about the natural history of development, and quasi-experimental research on the impact of life events will still be possible” (Loeber & Farrington, 1994, p.895).

### 3.2.6 Threats to validity

Any study can suffer from internal validity errors, finding a significant effect when, in reality, it does not exist and there are alternative explanations for the observed effect. Programme design becomes essential in guarding against these types of errors. To conclude this review of methodological issues, I begin by listing the common Type 1 errors (from: Loeber & Farrington, 1994):

- History error: effect caused by other independent variables changing in the same time
- Maturation error: effect is result of pre-existing trend
- Testing error: effect caused by previous testing of the subject
- Instrumentation error: effect caused by changes in the measurement techniques
- Regression error: effect caused by natural regression to the mean of outliers
- Selection error: effect caused by pre-existing group differences
- Mortality error: effect caused by differential attrition from treatment and control groups
- Instability error: effect reflects random variation
- Causal order error: the true causal order is in the opposite direction

History (or lurking variable) error is most easily controlled in an experiment or randomized control trial and is always a potential weakness in quasi-experimental designs. Theory based on prior empirical research is necessary to include assessment of (and control for) all of the likely lurking variables. Maturation error, or violence desistance in the case of this study, is a natural developmental phenomenon that most subjects will undergo. As Farrington recommends, the best longitudinal designs will collect data for several years before and after intervention. While this option was not possible, I have included subjects across the full range of the common youth male violence trajectory (12-21 years) to explore the effect of maturation. Testing error has been discussed and instrumentation changes have been conducted both to improve measurement techniques and reduce testing error. Natural regression to the mean cannot be controlled but normally distributed data (a function of instrumentation, sampling, and testing techniques) can negate the influence of outliers, as well as through the removal of severe outliers. Mortality error in the form of attrition from the study and from treatment (and cross-over) has been discussed; inclusion of an 'intervention dosage' variable is the most applicable solution. Instability error or random variation is reduced through increased sample size and through high internal consistency of constructs, which I have measured and addressed. Lastly, causal order, as discussed in the section on prediction of violence is addressed through the ordered use of longitudinal data, though this is not fool proof as the true moment of onset vs. the moment(s) of disclosure are crucial to discern.

In South Africa, there appears to be no established field of empirical programme evaluation of youth violence interventions, nor of the testing of violence-risk tools. Thus, the hope of this study was

to initiate this field of enquiry, to publish and make available an empirically-tested violence-risk assessment tool (the Violence Propensity Scorecard), purposely designed and tested among youth in one of the most highly violence-afflicted communities in South Africa, and to provide both a methodology for its administration and evaluation. Lastly, this study intends to discuss the real-world challenges of youth violence assessment, prediction, intervention, and impact evaluation, writ large (at least large compared to the scale of most NGO-practitioners- the most common implementers of youth development programming in the under-resourced South African community context).

### **3.3 Identification of the research subject (intervention)**

To begin, it is necessary to explain how the intervention was identified that then influenced sampling and study design. In my former capacity with the International Committee of the Red Cross, I was tasked, in 2011, with exploring effective responses to urban violence in South Africa. The identification of young, urban males as the target population led investigations to focus on physical activity-based interventions that would engage this demographic. Sport, with its physical, movement-related aspects as well as elements of competition (in a potentially safe space for power struggles) is a natural outlet for most male youth. However, in sport-based development theory, sport is only the vehicle for psycho-social development and support (Coakley, 2002). It creates an active 'classroom' where wayward youth are more likely to be attentive, motivated, and receptive.

A framework was then established for evaluating potential programming partners and gauging the benefit of site visits. Organisations were identified that were:

- Active year-round;
- Had an existing permanent space in a highly vulnerable community;
- Used sport as a vehicle to attract 12-21 year-old black or coloured males (the target population for violence reduction, other groups could be involved separately);
- Had been operational for at least two years;
- Had introduced some form of life skills (curriculum, counselling, educational enrichment);
- And, had the proven ability to work with at least 300 target youth on a weekly basis.

This criteria was set to identify organisations that could potentially impact, at a community level, real data on incidences of violence or other local-level indicators that serve as valid proxy for violence. Scale (number of target participants) and organizational efficacy and efficiency (in dealing with large numbers of vulnerable youth) were considered critical factors to potentially achieve impact at a community level. Eight organisations were identified that met some of the aforementioned criteria or were otherwise instrumental in sport-based development in the country and site visits were conducted (see table 3.1 below).

Organisation	Location	Type of intervention	Criteria evaluation
Youth Development Football (YDF)	Pretoria	Donor; Life skills through training of coaches.	Provide funding and technical support to sport-for-development orgs. Have included violence prevention in coach training manuals.
Amandla EduFootball	Khayelitsha, Cape Town	Sport-for-development for underprivileged youth in vulnerable communities and orphanages; Crime prevention programming through sport	Meet/exceed all criteria. Working with over 1500 target group youth / week.
Altus Sport/Sport for Social Change Network (SSCN)	Pretoria	Sport for Development training	Support org.
Donnas Mates	Orange Farm, Joburg	Sport for development field	Working with less than 200/week. Life skills is a new focus.
Grassroots Soccer/ Football for Hope Centre	Khayelitsha, Cape Town	Gender-based programming and HIV/AIDS awareness, prevention, and testing	Working through schools in 9-week formats. AIDS-prevention focus.
University of Western Cape (UWC) Interdisciplinary Centre of Excellence for Sport Science and Development (ICESSD)	Cape Town	Peace building & conflict resolution training for communities in monitoring and evaluation, community development, health and HIV	Research and training Institution.
Youth Empowerment Project - YEP Clan	Khayelitsha	broad range of youth programming	Programming unstructured
Hoops 4 Hope / Soccer 4 Hope	Gugulethu	sports-based life skills programming	Number served & theory of change unclear

Table 3.1. Summary of South Africa-based sport-development organisations site visits and findings (Edelstein, 2011)

### 3.3.1 Site-visit findings

From my direct observations, it appeared that there is no "silver bullet" or "magic pill" when it comes to life skills components. Curriculum alone is insufficient. Activity-based learning (i.e., soccer drills with life skills messages) may be a valuable improvement over a didactic dissemination approach to keep youth engaged and deliver messages indirectly. Yet, the behaviour of the coach and the relationship that he/she develops with the children (and how consistent his/her behaviour is over time) seems vital to the modelling of a positive lifestyle. This teaching does not likely happen overnight nor over a 9-week school term (with pre and post testing for measurement). It may happen cumulatively over months and years when healthy relationships are formed and maintained. Thus, a strong organisational management structure would need to be based around one facility / community / location while the youth development 'process' is perfected (Edelstein, 2011).

While a number of initiatives aimed to develop health-seeking and pro-social behaviours among vulnerable youth through sport-based programming, few had adequate feedback mechanisms to establish if their key messages were being received (and internalised) by participants. For those organisations that had established some feedback mechanisms (see: Amandla, 2010), a.k.a. monitoring and evaluation (M & E) systems, there remained the challenge to demonstrate impact at a community level (in the form of reduced crime, improved life choices or circumstances) or quantitatively among participants. This was due, in part, to resource constraints and the challenges inherent in determining causality of social outcomes, and due to a lack of coordination between stakeholders (community-based NGO's in partnership with schools, police stations, research institutions, donors, other NGO's, etc.). Findings suggested that this would require research that extends beyond one organisation's capacities and that would run for a medium term (3-5 year) duration, at minimum. Amandla produced qualitative evidence (testimonials from participants, community members, parents) and believed that local crime data would bear statistical evidence as well (Edelstein, 2011).

### **3.3.2 Description of the intervention - Amandla Edu-Football**

Amandla Edu-Football was founded in 2006 by Florian Zech, a young German college graduate, who had performed a year of service work with the Baphumelele Orphanage in Site B, Khayelitsha. During the year that Zech lived in Khayelitsha, he witnessed the tendency of young men to congregate on street corners, heard stories of the levels of crime and violence that kept residents in fear, and witnessed the dearth of after-school activities available to youth in the area. Amandla Edu-Football originally began as a life skills programme targeting youth from the orphanage. Zech soon realized that an educational structure was not attracting significant attendance, especially among the more hard-core youth. Football was then used as the “hook” to draw in participants and life skills were slowly woven into the training sessions and the formatting of matches. A fair play points system rewards teams for regular attendance and for good conduct on the field during matches. A leadership development programme provides an additional framework for highly motivated participants to serve as coaches / life skills facilitators and to complete an accredited 2-year learnership, improving their future employment opportunities.

Here are initial findings (from 2011 site visits):

*Amandla appears to make the best use of programmatic inputs: physical space, staff, time, resources (compared to all other organisations studied). According to Amandla staff, their level of participation has grown over a 5-year period from less than 200 youth per week to over 1500. In the same period, their implementing partnerships have grown from 10 to 45 (Amandla, 2010). It is clear*

*that their mission is embedded in each and every employee and volunteer. Each activity conducted by Amandla staff is run efficiently and on time. Even the night crime prevention league, bringing over 200 young men together in the township at 8pm on Friday evenings, begins exactly on time.*

*Most impressive was the full use of space and resources; every part of the field was utilized, every coach was engaging all youth in his/her group. It was clear that Amandla is capable of delivering on its activity goals in attracting young boys (and girls, in separate programmes) to play soccer, efficiently translating inputs into outputs. In terms of reducing crime, they have amassed numerous testimonials, but admit that the quantitative analysis requires further work (particularly in accessing crime stats from SAPS<sup>19</sup>). It is apparent that the early priorities for Amandla centred on the creation of a safe space for vulnerable youth, with indicators for measuring success of the project in reducing crime, secondary. Impact is a larger question that can be answered in part by testimonials but, will require more robust research to develop data and assess quantitative impact.*

### **3.3.3 Amandla theory of change**

By providing a safe space, Amandla ensures that participants are not on the streets (at least during Amandla activities), thus reducing their risk exposure. Within that space, Amandla creates a safe and violence/abuse-free environment while exposing participants to healthy social structures and positive adult and peer role models resulting in increased pro-social awareness and decreased violence potential. Soccer development and life skills programming focused on healthy lifestyles results in improved physical fitness, self-confidence, and increased health-seeking behaviour. The structure of Amandla activities establishes a routine that helps participants to establish goals and work towards their achievement (see Amandla Theory of Change, figure 2.8). Group and individual life-skills lessons focus on coping skills, dealing with frustration, non-abusive behaviour and communication, problem solving, and goal setting. These are higher-order developmental skills that require practice to acquire.

### **3.3.4 Amandla intervention sites: Site B, Khayelitsha and Tudor Shaft/Soul City, Kagiso**

#### **Khayelitsha**

Khayelitsha is the largest black African township in metropolitan Cape Town, first established in 1985. Its population estimates vary from 400,000 upward, with a safe estimate of 500,000 (Western Cape Government, 2006). Prior to 1994, there was little in the way of basic services (electricity, water, sanitation, hospitals, shopping centres). Today, there are several hospitals and shopping centres. Most formalized houses have access to electricity and water but a significant proportion of the population

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<sup>19</sup> The South African Police Service

still live in informal conditions, backyard shacks or informal settlements. Sections of Khayelitsha regularly report violent crime incidences among the highest in the country. Recent news reports suggest an increase in youth gang violence (Mackay, 2012) and vigilante justice alongside frequent service delivery protests that involve group violence (Silber, 2012). The Khayelitsha Commission of Enquiry into Allegations of Police Inefficiency in Khayelitsha and a Breakdown in Relations between the Community and Police in Khayelitsha was a year-long process that revealed high levels of criminality, inadequate policing, incompetent investigations, under-reporting of crimes by some 40%, and extraordinarily low rates of conviction for even the most serious crimes (O'Regan et al, 2014).

Within the Amandla Khayelitsha project catchment area there are several gang hotspots where the local, territorial youth gang, the Vatos, have engaged in street fights with the neighboring territorial gang, the Vuras. Though the gangs appear loosely organized with little apparent structure and rather young membership, their fights are lethal. Scores of teenagers have been killed by rivals in attacks using machetes, kitchen knives, and golf clubs. This youth gang violence has allegedly ebbed and flowed, according to Amandla staff, and former Amandla participants from rival territories have been prevented from attending, for fear of crossing the invisible gang boundaries.

In testimony to the Commission of Enquiry, a Ms. Yoliswa Dwane, Khayelitsha resident and representative from the NGO, Equal Education, one of the complainant organizations, provided the only testimony (in the entirety of the 500-page report plus additional submissions) on gangs in Khayelitsha. Ms. Dwane described: “there are four main youth gangs, the Vatos, the Vuras, the Italians and the Russians. The gangs are territorial in nature, that is, membership is determined by where a young person lives... the Italians are in Site B and Site C, while the Vuras are in Harare, and the Vatos are mainly from Kuyasa and Khayelitsha centre. She noted that gangs have preferred certain types of weapons including knives, pangas and guns... gangs engage in all types of violent crimes including robbery, assault, kidnapping, rape and murder. She also identified certain places where the youth gangs concentrate their activities [near schools, open spaces, and several overpasses]” (O'Regan et al, 2014, pp. 107-108).

Ms. Dwane further testified that Khayelitsha gangs have less direct economic motivations than gangs in Coloured communities in Cape Town: “Gangs in Manenberg are often connected to organised crime and drugs in her opinion, while the gangs in Khayelitsha are more about identity –“These fights actually are about claiming their space and their identity within these communities and also trying to show off that they are actually more powerful than the other groups” (O'Regan et al, 2014, pp. 107-108).

From this limited testimony (and apparently no further information on Khayelitsha gangs provided by the local police<sup>20</sup>), the Commission concluded that youth gangs in Khayelitsha were a top concern requiring a (yet-to-be-elaborated) coordinated response: “The evidence that emerged during the Commission made it plain that there is an emergent youth gang culture in Khayelitsha that requires an immediate response. The gangs are different to the gangs that operate in other areas on the Cape Flats, which appear to be closely related to prison gangs, and to the illegal drug trade. Witnesses told the Commission that the names of the youth gangs in Khayelitsha are Vatos, Vuras, Russians and Italians, and that the gangs operate territorially. Gang members carry weapons, often knives and other sharp instruments, and the gangs engage in vicious battles with one another, often on Friday afternoons. Several witnesses told the Commission that the places and times when gangs will fight are well-known. It is clear that each week children are injured, and die, in these battles. Children as young as ten years old join the gangs and find it hard to withdraw” (O’Regan et al, 2014, p. 383).

This testimony is, sadly, emblematic of what is known (and unknown) about the extent and structure of violence (organized or other) in Khayelitsha and the challenges for authorities and experts to diagnose and treat. As of the final writing of this dissertation in 2016, there have been no further efforts from the authorities to better understand and intervene with these Khayelitsha gangs.

### **Kagiso site**

Tudor Shaft and Soul City, near Kagiso, Gauteng, are adjacent informal settlements of approximately 4000 total families. There is no electricity for residents and very limited access to water taps and toilets. The area sits atop a former uranium mine and bears visible evidence of environmental contamination. The toxic metals from mine tailings and radioactive uranium can cause birth defects and brain damage. Initially setup in August 1995 as a temporary location for persons displaced from closed mines on the West Rand, it has been inhabited ever since. A section of the community was designated for resettlement in 2009 but it remains unclear how many families were permanently relocated and if any environmental risks have been reduced. An environmental expert who visited the community in 2011 determined that uranium levels are 15 times that of normal, comparable with the Chernobyl exclusion zone (Mashaba, 2012; Macleod, 2011).

Crime statistics are not readily available for Tudor Shaft/Soul City (disaggregated from the whole of Kagiso). One protest incident took place in 2012 on Tudor Road, adjacent to the settlements, following hit-and-run accidents in which one girl was killed and one boy severely injured (Seale and

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<sup>20</sup> In fact, one of the top police officials in Khayelitsha denied the problem entirely: “Brigadier Mlenga, the former Cluster Commander, considered the youth gangs to be “just a loose group of youngsters that are mischievous” and suggested that the problem should be addressed by calling in parents to deal with the problem.” (O’Regan et al, 2014, p.384).

Ndhlovu, 2012). Adjacent Kagiso township was host to a portion of the black-on-black hostel violence in the 1990's.

### 3.4 Study Design and Sampling Strategy

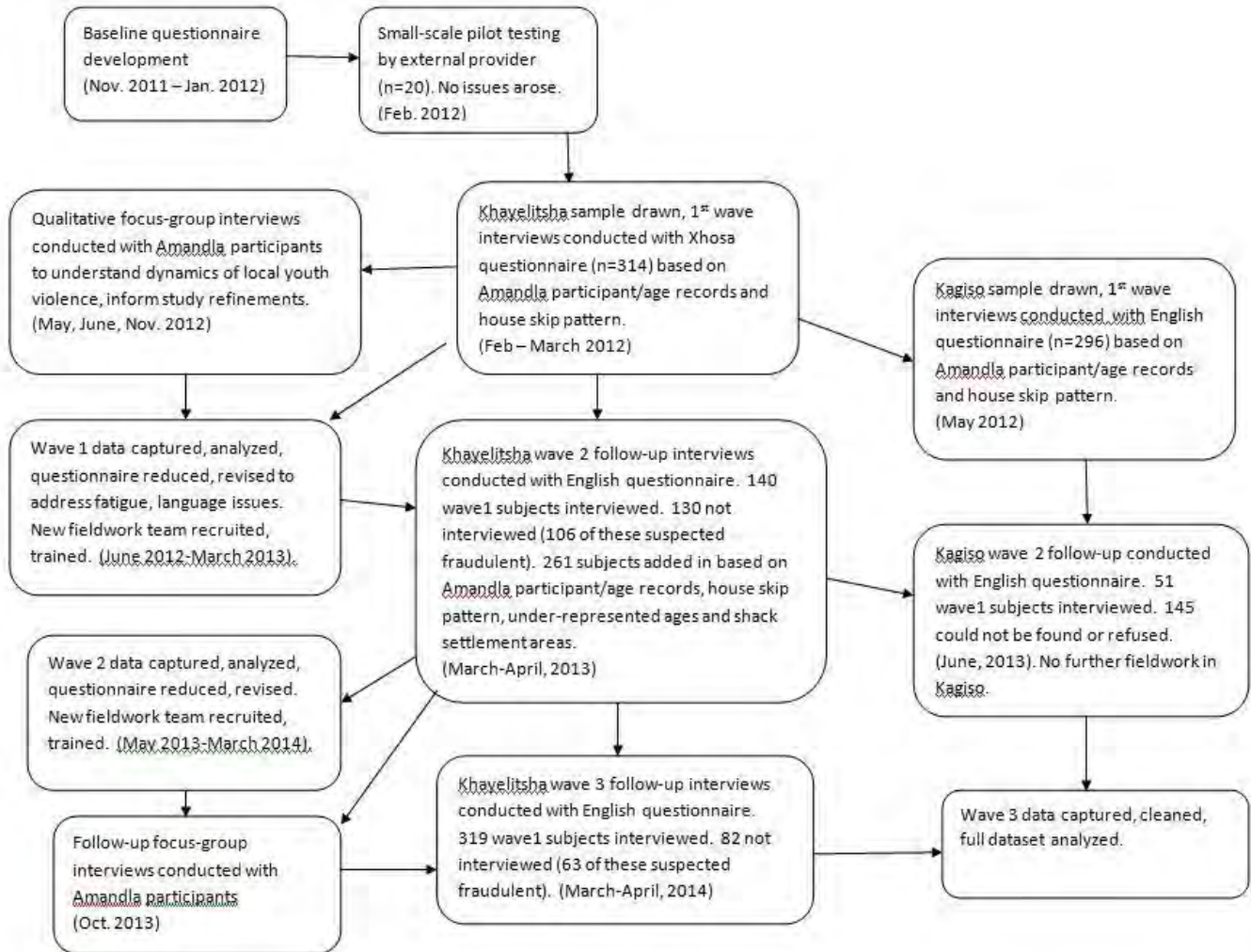


Figure 3.2. Panel study field research workflow

The overall study design plan (see research workflow, figure 3.2, above) was to recruit 400 Khayelitsha subjects (half Amandla participants and half non-Amandla participants matched by age and neighbourhood) and 300 Kagiso subjects. As Kagiso was a new Amandla project site, enrolment of participants over the age of 16 was limited (an Under-19 programme had not yet been established) thus, 100 study participants within the 17-21 year-old age range from the project catchment area were randomly identified and interviewed with the hope that a significant number of them would self-select into Amandla programming once it was implemented. This was conceived as a possibility due to the relatively small size of the community.

The study participants were to be interviewed each year over a 24-month, 3-wave period to enable comparison between treatment and comparison groups as well as analysis of within-subject changes over time, a panel study design with intervention and comparison/reference groups (Taris, 2000).

The initial study design had to reconcile several realities with potential opportunities. The intervention had been running for 3+ years prior to the first wave of data collection in the main intervention site, Khayelitsha. Thus, no pre-test was possible in this implementation. Random assignment was ruled out as a feasible strategy due to Amandla's open, mass participation approach, programme goals to increase registration, retention, and participation rates, and the potential for reputation damage that excluding would-be participants would present. However, the first programme replication was planned for Kagiso in 2012. While Amandla recruitment and programming had recently begun for the younger participant cohort (in Feb. 2012 while wave 1 interviews in Kagiso were conducted in May 2012), Amandla recruitment and programming had yet to begin for those above 15 years of age. While random assignment again seemed unrealistic, this did present an opportunity to draw a random sample from the targeted programme catchment area in the hope that (from a relatively small, contained community) a meaningful number of study participants would opt into Amandla programming after the baseline assessment.

The following notation (table 3.3, below) outlines the intended tailored quasi-experimental design, where N represents a non-random sample, R a random sample, X the intervention/treatment, and O the observations by wave. A sample of 200 confirmed Amandla participants was to be drawn from registration records with an even balance across the 12-21 year-old age range. Selection of Amandla participants for the study was to be stratified by age and then randomized where there were more than 20 registered Amandla participants for any year of age. As interviews were to be conducted in participants' homes, random sampling for the comparison group was intended to identify a non-Amandla participant matched by neighbourhood and similar age range.

For the Kagiso site, a similar approach was taken for 12-15 year-old Amandla participants and non-participants, resulting in a sample of 2 100-subject non-equivalent group. The first observation for these groups was not at true baseline but within the first 3 months of initial programming. For 16-21 year-olds, one random sample of 100 subjects were drawn, based on the assumption that, as Amandla programming scaled up and targeted this community and age-group, some members of this sample group would self-select into treatment. While self-selection into treatment may reflect a latent group difference, comparison on the baseline assessment would offer meaningful comparison. Further, comparison between the two sites and six conditions would improve internal validity and provide

insights on replication success.

Khayelitsha						Kagiso						
		March 2012		March 2013		March 2014		May 2012		May 2013		May 2014
N(200)	...X	O <sub>1</sub>	X	O <sub>2</sub>	X	O <sub>3</sub>	N(100)	O <sub>1</sub>	X	O <sub>2</sub>	X	O <sub>3</sub>
N(200)		O <sub>1</sub>		O <sub>2</sub>		O <sub>3</sub>	N(100)	O <sub>1</sub>		O <sub>2</sub>		O <sub>3</sub>
							R(50)	O <sub>1</sub>	X	O <sub>2</sub>	X	O <sub>3</sub>
							R(50)	O <sub>1</sub>		O <sub>2</sub>		O <sub>3</sub>

Table 3.3 Initial study design for two sites, 3 waves, incorporating random and non-random treatment and control/comparison groups

As Trochim & Land (1982) make clear, quasi-experimental designs, by their very nature, have to reconcile scientific standards with real-world realities, including financial constraints and unforeseen elements, (such as implementation failure, weak community/intervention relations, and fraudulent fieldwork, as experienced in this study).

Therefore, the realized sampling and design patch-ups prior to the second wave of fieldwork took the following form:

Khayelitsha						Kagiso						
		March 2012		March 2013		March 2014		May 2012		May 2013		May 2014
N(146)	...X	O <sub>1</sub>	X	O <sub>2</sub>	X	O <sub>3</sub>	N(94)	O <sub>1</sub>	X	O <sub>2</sub>	X	
N(124)		O <sub>1</sub>		O <sub>2</sub>		O <sub>3</sub>	N(102)	O <sub>1</sub>		O <sub>2</sub>		
N(131)	...X		X	O <sub>2</sub>	X	O <sub>3</sub>						
N(130)				O <sub>2</sub>		O <sub>3</sub>	R(100)	O <sub>1</sub>		O <sub>2</sub>		

Table 3.4 Revised study design for two sites, 3 waves (with additional sampling) in Khayelitsha, 2 waves with no randomized treatment in Kagiso. Note: in Kagiso wave 2, 23 treatment group participants were re-interviewed, 20 non-random comparison group participants, and 8 from the random sample (none of whom had self-selected in Amandla participation).

And, after taking into account validity and reliability of W1 data in Khayelitsha and the reality of implementation failure and study attrition in Kagiso, the following design was the only design/data suitable for quantitative analysis:

Khayelitsha			
		March 2013	March 2014
N(149)	...X	O <sub>2</sub>	X O <sub>3</sub>
N(162)		O <sub>2</sub>	O <sub>3</sub>

Table 3.5 Final revised study design for Khayelitsha site, based on usable data, 2 waves (no pre-test/baseline data), with a comparison group. Note that 53 of the treatment group attrited from the treatment before wave 3.

Design revisions are not uncommon in field research of this nature (Trochim & Land, 1982) and particularly so in violence-prone contexts like Khayelitsha (Nleya & Thompson, 2009) but it is acknowledged here that the limits on potential findings imposed by these revisions/adaptations are significant. Beyond the limitations represented in the notation, Amandla attendance data was not complete and accurate for the first two waves/programming years under study. Only attendance data for the third programming year (from Feb. to Dec. 2014, while wave 3 data was collected in March 2014) was available and accurate. Thus, intervention dosage data could not predict any outcome measures.

### **3.4.1 Sampling procedure**

Amandla participant lists with ages were provided and individuals randomly selected by age (where there were more than 20 registered participants for any year of age between 12-21 years, in year one). In this way, 200 Khayelitsha subjects and 100 Kagiso subjects were identified for study participation. The actual realized sample differed due to incorrectly captured ages (in Amandla registration records as compared with the dates of birth recorded in this study) and, in Khayelitsha in wave 1, some questionable fieldwork (discussed in chapter 4).

Non-Amandla participants, or comparison group subjects, were found through use of a house skip pattern, based on the date (month + day, reduced to a single digit), starting from the house where the Amandla-participant had been interviewed and counting off houses to skip before approaching the n-th house to enquire if there is a male subject with a similar age in the home (within 1 year of age of the last interviewed Amandla participant) who would agree to participate in order to create a near age/neighbourhood match.

### **3.4.2 Overview of information needed**

Based on the literature review and influent factors emerging in the field of youth violence research the following aspects were of interest to explore:

- Schooling and employment status
- Family demographics-income, assets, household deprivation
- Relationships with mother and father
- Parenting practices and violence in the home
- Leisure activities and community service
- Neighbourhood dynamics-safety, social distance/anomie
- Peer deviance
- Exposure to violence
- Substance use

- School Attitudes and experience of school abuse
- Victimisation
- Attitudes toward gangs and the use of violence
- Participation in organised youth activities
- General physical and mental health
- Participation in Amandla Edu-Football
- Self-reported criminal and violent offending
- Attitudes Toward Employment
- Perceptions of authority
- Attitudes toward women and sex
- View of the future and resiliency
- Questions for the subject's primary maternal caregiver about the subject's risky and aggressive behaviour

### **3.4.3 Data collection methods**

The basic instruments for data collection in most youth violence studies are subject interviews and their self-reported attitudes, attributes, and behaviours. Some studies have succeeded in including parent, teacher, and peer observations (or nominations of most aggressive classmates, in the case of peers) as a means of triangulation of the veracity of the subject's self-reported violence or aggression. In this study, I chose to include a short interview with the primary maternal caregiver on the subject's dangerous or risky behaviour both in the home and, to the extent that the caregivers were aware, outside of the home. School-based interviews with teachers and/or peers were not considered feasible in this context or within the budgetary constraints.

The components in the initial questionnaire used in this study were drawn from previous large-n cross-sectional studies conducted with youth in South Africa by the Centre for Justice and Crime Prevention (hereafter, CJCP), including the National Youth Victimisation Study (Leoschut & Burton, 2006), the National Youth Lifestyle Study (Leoschut, 2009), and the Youth Resilience To Crime in South Africa study (Burton, 2009).

Specific questions and sections were originally sourced from international studies that have been tested for validity and reliability (see table 3.6 below):

<b>Topic</b>	<b>Source</b>
Victimization	Juvenile Victimization Questionnaire (Finkelhor, Hamby, Ormrod & Turner, 2005)
Attitudes toward Employment	Attitudes Towards Employment-Work Opinion Questionnaire (Johnson, Messe & Crano, 1984)
Substance Use	South African Youth Risk Behaviour Survey (Reddy et al, 2003, 2010); Self-Reported Delinquency scale-Rochester Youth Development Study (Thornberry, Krohn, Lizotte, Smith & Tobin, 2003)
Attitudes toward violence	Houston Community Demonstration Project, 1993 Multisite Violence Prevention Project, 2004 Prothrow-Stith, 1987 Flewelling, Paschall & Ringwalt, 1993 Ward et al, 2007
Self-Reported Offending	South African Youth Risk Behaviour Survey (Reddy et al, 2003, 2010); Rochester Youth Development Study (Thornberry, Krohn, Lizotte, Smith & Tobin, 2003) Pittsburgh Youth Study (Loeber et al, 1998)
Attitudes toward women	Foshee, Fothergill & Stuart, 1992 Galambos, Petersen, Richards, & Gitelson, 1985
Attitudes toward school	Thornberry, Lizotte, Krohn, Farnworth & Jang, 1991 Ward et al, 2007
Attitudes toward gangs	Nadel, Spellmann, Alvarez-Canino, Lausell-Bryant & Landsberg, 1996 Ward et al, 2007
Adult support, role models	Nakkula et al., 1990
Attitude toward future and Resiliency	Rochester Youth Development Study (Thornberry, Krohn, Lizotte, Smith & Tobin, 2003) Rosenburg, 1965 Ward et al, 2007
Peer Deviance	Multisite Violence Prevention Project, 2004 Ward et al, 2007
Abuse at School	Orpinas, Frankowski, 2001 Nadel, Spellmann, Alvarez-Canino, Lausell-Bryant & Landsberg, 1991
Violent Home	Rochester Youth Development Study (Thornberry, Krohn, Lizotte, Smith & Tobin, 2003) Ward et al, 2007
Parental Involvement	Multisite Violence Prevention Project, 2004 Ward et al, 2007
Violence Exposure	Richters & Martinez, 1990

Table 3.6. Table of questionnaire topics and sources.

The interview consisted of a 17-section questionnaire administered verbally to the main male study participant by a trained field interviewer and a one-part questionnaire administered to the main male participant's primary maternal caregiver. All interviews were conducted in the participants' homes and in complete confidentiality. Written consent was obtained by all study participants and by their parent/guardian for those 16 and younger.

In year one, the questionnaire was administered in Xhosa in Khayelitsha and in English in Kagiso. It was believed that the majority of Khayelitsha youth would be Xhosa speaking whereas in Kagiso there are various home languages (Tswana, Zulu, Sotho, and Xhosa) making translation impractical. After the first wave of Khayelitsha interviews, due to challenges in consistent understanding of written Xhosa across study participants and field interviewers, a decision was taken to switch to the English version of the questionnaire in wave 2 and focus on clearer field interviewer comprehension (in both languages), giving the fieldworkers the freedom to explain select items in Xhosa, as required by study participants with less English comprehension.

With each wave, questions were dropped that did not contribute to the development of constructs (due to low factor loadings) or were not otherwise useful for descriptive analysis. Select questions were added in waves 2 and 3 in attempts to improve construct validity and reliability (see Chapter 5). These constructs provide the basis for multivariate regression and structural equation modelling techniques to model pathways to violence.

#### **3.4.4 Qualitative analysis methods**

Qualitative research was conducted each year through semi-structured focus group interviews utilizing a grounded theory approach to explore, analyse, and re-examine Amandla participant perspectives on violence, teamwork, respect, orientations toward the future, and dealing with frustration and disappointment. Focus groups were conducted with ten 10-member teams within the 10-12, 13-16, and 17-24 year-old age groups. In line with the methodology of Charmaz (2006), responses were coded as actions and compared for frequency and similarity between age groupings, gender, and team dynamics (Amandla had identified as well-formed/frequent participants, forming/inconsistent participants, and unformed/infrequent participants to provide a stratified sampling), Memo writing and synthesis followed from the coding and served to inform follow-up approaches to test the salience of emergent themes (theoretical sampling, as per Charmaz, 2012) and explore potential changes from participant perspectives (on their lived realities, the meaning of the Amandla intervention, and their relationship to violence, crime, and deviant influences). This qualitative data was used to illustrate quantitative findings of intervention effects and violence pathway modelling.

The following questions were used as the basis for the discussion, though some items were dropped and other questions included, based upon the level of response and rapport:

1. What is Amandla all about?
2. Why do you come? What do you get from participation?
3. What else would you (did you) be doing when/if not at Amandla?
4. Has Amandla changed you? How (with regard to getting into trouble)?
5. What future do you want for yourself and how will you get there? What must you do/ avoid?
6. What violence do you experience? What do you do about it?
7. Who do you look up to? Who are your role models, why?
8. What is fair play?
9. What are the biggest challenges/obstacles in your life? How do you deal with frustrations and disappointments?

An initial pilot test was conducted in May 2012 with 22 boys between the ages of 9 and 14. A native Xhosa speaker performed translation. Questions were understood and answered but the group was too large and restless to sit for long. A decision was then made to limit the groups to 1 team of 5 to 10 individuals and keep the length of interview under one hour.

Questions were asked in English with immediate translation into Xhosa (unless all subjects indicated that they understood the entire question in English. Subjects could respond in Xhosa or in English. It was clarified that the researcher would not ask subjects their names nor would he identify the source of any information. Participants were asked if they were comfortable to proceed and were requested to preserve the confidentiality of the other participants as well (should they reveal any sensitive information). Subjects were interviewed as a team so they were familiar with one another and more comfortable to share information. No Amandla staff members were present during the initial focus groups to ensure that responses were not affected by the presence of staff known to the participants. After the first two waves of focus group interviews (in May and November of 2012, wave 1 of the panel study), Amandla staff then adopted the focus group methodology in an effort to derive immediate programmatic feedback and incorporate into their own M & E system.

Questions were selected based on programmatic aspects of interest to Amandla and risk/protective factors that could potentially be easily articulated by the subjects (use of leisure time, violence exposure, adult influence/role models, life challenges, coping mechanisms, future orientation).

### **3.4.5 Quantitative data analysis methods**

The primary data used in this study is quantitative, based on number-coded Likert scale responses to questionnaire items. The items that are theorized to represent latent constructs were tested through exploratory and then confirmatory factor analysis before building mean construct scores and addressing missing data and distribution-normality issues. Items that comprised groups of actual self-reported behaviours were grouped according to theory and index scores developed. This process allowed for the construction and validation of the key factors theorized to influence or predict violent

outcomes, including the violence potential measure (the Violence Propensity Score) as the primary dependent variable. These factor scores were then used as the basis to develop multivariate linear regression models predicting violence-related outcomes with cross-sectional and longitudinal data. The linear regression method allowed for separate analyses within age groups to explore the presence of differing effects according to age and developmental stage. Based on review of these regression analyses, a final set of factors was identified for inclusion in a longitudinal structural equation model to test the theorized pathways to future violent outcomes and for the presence of any intervention effects. The qualitative data, gleaned from semi-structured focus groups with intervention participants, and informal interviews with former violence perpetrators, was then used to inform discussion and interpretation of the quantitative analysis findings.

### **3.5 Ethical considerations**

The research design and questionnaire was reviewed and approved by the University of Cape Town Faculty of Humanities Research Ethics Committee and conforms to the South African Human Sciences Research Council's code of research ethics.

All interviews were conducted with informed consent, total confidentiality, voluntary participation, and the right to refuse to answer any questions the study participants might not feel comfortable answering. These principles are especially important when conducting research with children and research of a sensitive nature, i.e. exposure to violence. The principle of beneficence was applied to ensure that interviews with children are only conducted in situations that provided for the physical and emotional safety of the child.

As part of the enumerator training, fieldworkers gathered information on local support services available to people in the research site(s) and had this information available with them at all times, should it have been required by a respondent following their participation in the study. All enumerators and field interviewers were requested to resist giving advice or providing counselling to any study participants. All datasets and analyses preserved the confidentiality and anonymity of participants. The three rounds of interviews in Khayelitsha and Kagiso did not yield any issues of ethical concern (beyond several refusals to participate).

The age of consent for social science research is not clarified in South African law (Strode, Slack & Essak, 2010). For some medical research and procedures, i.e. HIV testing, the age of consent is as low as 12. For this study, the mandatory age for parental consent for research participation was set at 16. Further, as a matter of courtesy, fieldworkers were asked to obtain permission from a parent to conduct interviews with all subjects younger than 18 years of age.

### 3.6 Summary

In summary, this chapter has presented a detailed review of the research goals, intervention and study design, sample and site description, data collection and analysis methods, and a review of design challenges and limitations. A quasi-experimental longitudinal panel study was designed to follow the violence trajectories of study subjects, drawn as separate intervention and comparison groups. Three waves of data collection at 12-month intervals were envisaged through administration of a detailed questionnaire on risk and protective factors and violence-related outcomes. Changes in the intervention and shortcomings in the initial sampling required design and analysis revision. The design ultimately used in the principle data analysis was reduced from a 3-wave longitudinal-quasi-experimental panel design to a 2-wave quasi-experimental panel design with reference group. The final sample used for data analysis included 318 male subjects<sup>21</sup>, aged 12-24 years in the final wave, from Site B, Khayelitsha. Just over half of the study participants (54%) were, at some point during the study, confirmed Amandla intervention participants.

A literature review informed the theoretical framework for the study design and analysis. Quantitative analysis methods were used to validate key construct before testing models in the prediction of violence-related outcomes. Quantitative analysis findings were interpreted through reference to the literature along with qualitative data illustrating participant perspectives on the general research questions. Finally, conclusions and recommendation were drawn to inform youth violence interventions and the study of youth violence in the South African context.

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<sup>21</sup> The n=318 sample was reduced to n=311 for regression analysis due to 7 cases with multivariate outliers and to n=276 for structural equation modelling following removal of 35 cases where subjects had completed schooling before wave 2 of the study.

## Chapter 4: The realized sample: Real-world panel study challenges and quantitative data issues

Following the previous chapter discussing study design issues and describing the chosen intervention and study designs, this chapter presents the realized sample and discusses the socio-political challenges and measurement issues encountered in the field, with the following sections:

- Sampling strategy & adjustments
- Site challenges: Khayelitsha
- Site challenges: Kagiso
- The realized sample, descriptive statistics and attrition analysis
- Data issues and conclusions

### 4.1 Khayelitsha sample

The initial intent of the panel study design was to achieve 400 male subject interviews in Khayelitsha, half with Amandla participants, half with non-participants balanced across the 10 year age range (12-21 years). However, due to fieldwork limitations, only 314 Khayelitsha subjects were interviewed in March 2012, wave 1. Review by Amandla staff of the wave 1 study participants (those who self-reported that they were Amandla participants) revealed concern that some of them were no longer regular Amandla participants or may have misstated their Amandla participation. An added concern was the under-representation of research participants living in informal structures, which may account for at least 50% of Amandla participants (and a similar percentage of the housing demographic of 12-21 year old males from the Khayelitsha Site B catchment area, by census estimates, comprised of more than 50% shack dwellings<sup>22</sup>). Forty-four wave 1 study participants were interviewed from sections of Khayelitsha beyond normal walking distance to the Amandla site. While there were some Amandla-registered participants from these sections in 2012, none of them re-registered for Amandla in 2013. Amandla staff attributed this to an increase in territorial youth gang violence, effectively cutting off safe passage to Amandla from these sections<sup>23</sup>. Thus, the following sections and study participants

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<sup>22</sup> Statistics South Africa. *Strategic Development Information and GIS from 2001 Census data*. Downloaded from: <http://www.capetown.gov.za/en/stats/2001census/Documents/Khayelitsha.htm> on 27 December 2012. According to Census 2011, Ward 90, encompassing most of the Amandla programme catchment area, 67% of residents live in informal dwellings, compared with 59% in adjacent Ward 91, where some study participants reside, and 87% in Ward 89 to the north, where a much smaller number of study/Amandla participants reside. (Source: 2011 Census Ward profiles, City of Capetown. Downloaded from: [https://www.capetown.gov.za/en/stats/Pages/wards\\_2011census.aspx](https://www.capetown.gov.za/en/stats/Pages/wards_2011census.aspx) on 15 May, 2014)

<sup>23</sup> Attempts were made to telephonically contact all twelve of these study participants who had indicated that they were Amandla participants in 2012 by phone following the field interviews to enquire if they could provide a reason for no longer participating in Amandla. Only two calls were successful; one person indicated that he was once attacked by gangs in Site B when returning from Amandla and one individual's father (the owner of the phone) said that he did not know the reason why his son no longer participated. All other phones were inoperative.

were dropped from any attempts at wave 2 interviews and from further analysis: 20 Section (3 study participants), 23 Section (5 study participants), A Section (8 study participants), Football for Hope Section (7 study participants), I section (11 study participants), K Section (3 study participants), L section (5 study participants), P section (2 study participants)<sup>24</sup>; a total 44 of study participants dropped, leaving 270 Wave 1 study participants with the following age and Amandla-participant distribution (see table 4.1, below):

Khayelitsha wave 1 study participants by age and self-stated Amandla participation (in wave 1 / 2012)	wave 1_amandla_participant		Total
	No	Yes	
	12	22	38
	13	15	28
	14	25	40
	15	12	21
	16	17	41
Age in 2012	17	13	29
	18	6	22
	19	5	19
	20	4	15
	21	2	11
	22	3	6
Total	146	124	270

Table 4.1. Khayelitsha wave 1 study participants by age and Amandla participation status

Only 27 (10%) of wave 1 study participants lived in informal (shack) dwellings, suggesting a possible bias by field interviewers to avoid entering and recruiting study participants from informal settlement areas.

In the second wave of interviews in March 2013, the target sample frame was set at 400 study participants, with an even age distribution (40 from each year of age from 13-22, as participants would have aged one year) and even split between Amandla-registered participants and non-Amandla study participants from the Site B area. As the project and study catchment area roughly corresponds to Khayelitsha wards 90 & 91, such sampling would allow for population weighting and some degree of generalization. New Amandla-registered individuals were added into the research study based on age (where there were fewer than 20 Amandla-participants for that year of age) and type of dwelling (those confirmed as living in informal dwellings were added first). Where necessary, Amandla-registered participants were assigned a random number and the lowest numbers per age were selected into the study until the quota was reached. New non-Amandla study participants were randomly recruited (based on the aforementioned house skip pattern) from the same Khayelitsha sections as the new Amandla-participants to the study, with the intent of matching age (within one year older or younger) and type of dwelling.

<sup>24</sup> Refer to Site B map (in appendix) for section designations. Sections 20, 23, and Football for Hope fall outside of the map, which includes Khayelitsha Site B and Site C.

Attempts were made to locate and re-interview all 270 wave 1 study participants who were still resident in Site B Khayelitsha<sup>25</sup>. One hundred forty study participants were successfully located and interviewed; 130 could not be interviewed for the following reasons:

- Approximately 106 subjects could not be located or make themselves available for interviews and/or were not known by residents at the address. This raised possible concerns that some wave 1 interviews were fabricated (by a different service provider and set of field interviewers from those employed in wave 2) or that residents were suspicious of the intent of the wave 2 interviewers. It is also possible that, within this number, additional subjects had moved or refused to participate but this information was not properly captured.
- Twelve were confirmed (by neighbours or family) to have moved (7 of those to the Eastern Cape, 3 to other parts of the Western Cape, one to Johannesburg).
- Four were residents of the RR informal section which burned down in a shack fire earlier in 2013 and were displaced (and unable to be contacted by phone).
- Seven E-section wave 1 study participants were not included in wave 2 (due to living in an outlying section, no longer within the theorized intervention or study catchment area). However, two study participants (one new Amandla participant and one wave 1 follow-up) were interviewed in E-section. These cases are retained for comparison purposes.
- Two wave 1 study participants openly refused to participate in wave 2
- One participant had since died

Four hundred and one interviews were conducted in wave 2 (140 study participants were follow-ups from wave 1 and 261 participants were newly added) with the following age and Amandla-participation<sup>26</sup> distribution (see table 4.2, below):

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<sup>25</sup> Forty-four study participants interviewed in wave 1 resided outside of Site B, Khayelitsha and were, therefore, beyond the current catchment area of the intervention.

<sup>26</sup> These “Amandla Participants” were registered to participate in 2013 although not all maintained regular attendance (adherence to treatment) over the course of the programme year.

Khayelitsha wave 2 study participants by age and self-stated Amanda participation	Amandla Participant		Total
	No	Yes	
	11	1	2
	12	3	11
	13	12	33
	14	13	36
	15	19	53
	16	21	44
Age in 2013	17	28	56
	18	10	36
	19	24	52
	20	24	34
	21	12	21
	22	8	19
	23	3	4
Total	178	223	401

Table 4.2. Khayelitsha Wave 2 study subjects by age and Amandla participation status

One 10 year-old and three 11 year-old Amandla participants were interviewed in wave 1 (identified incorrectly as 12 year-olds at the time) and were matched with one current (in wave 2) 11 year-old and three current (in wave 2) 12 year-old non-Amandla participants newly recruited into the study. Five additional 12 year-olds (in wave 2) were allowed into the study (due to discrepancies in listed age on Amandla records). Two hundred twenty three, or 56%, of the wave 2 study participants self-reported that they were current Amandla participants and could correctly identify an Amandla staff-member (as an additional means of verification). One hundred forty seven wave 2 study participants (37%) lived in informal (shack) dwellings, a significant improvement in coverage from the 10% (study participants who live in shack dwellings) that were recruited and interviewed in wave 1 (see table 4.3, below).

Khayelitsha Wave 2 - Distribution of study participants by age and informal dwelling	live in shack		Total
	no	Yes	
	11	1	2
	12	8	11
	13	19	33
	14	23	36
	15	37	53
	16	28	44
Wave 2 Age in years	17	30	56
	18	25	36
	19	35	52
	20	17	34
	21	16	21
	22	12	19
	23	3	4
Total	254	147	401

Table 4.3. Khayelitsha Wave 2 study participants by age and dwelling type (informal/live in shack)

In the third and final wave of Khayelitsha interviews, the sole intent was to track down and re-interview all 401 Wave 2 study participants who had not moved out of Khayelitsha. A number of field interviewers were retained from the wave 2 fieldwork, despite switching service providers, so that there

was familiarity with the process and knowledge of the neighbourhoods. Study participant-reported date of birth in wave 3 was checked against Wave 2 records as the primary means of verification of the participant. Where two of the three date-of-birth components (month, day, and year) differed from wave 2 records, the field supervisor was instructed to conduct a verification. This was the case for 46 study participants, who confirmed (to the field supervisor) that their dates of birth reported in wave 3 were correct.

Overall, 319 study participants (80%) were successfully re-interviewed in wave 3 (see table 4.4, below) and, of that group, 131 study participants were successfully interviewed in all 3 waves. One study participant was found to be 28 years old in wave 3 (his age having been mistakenly reported as 23 in wave 2) and was thus removed from the dataset. Eighty two wave 2 study participants could not be interviewed for the following reasons:

- 63 study participants (16% of the wave 2 sample) were not known by current residents at the given address nor at the given telephone numbers (where recorded), again raising concerns over falsified interviews, as all but 4 of these study participants were “newly recruited” in wave 2 and 6 of the 30 fieldworkers accounted for 46 (73%) of these potentially fraudulent wave 2 interviews. In two of these cases, the field supervisor was able to determine that the study participants had hid themselves from being located for the wave 3 interview, having realized (from their participation in wave 2) that there would be no direct benefit to participation in the study. In at least 3 other cases, the field supervisor strongly suspected that the study participant was hiding and that the residents at the given address were lying about not knowing the individual.
- 7 study participants had reportedly moved, according to residents at the given addresses (2 known to have moved to Paarl, one to the Eastern Cape, 2 others had moved reportedly following their delinquent behaviours in Khayelitsha. One study participant, reported to have moved may, in fact, have been hiding from the interviewer.)
- 5 study participants refused to participate in Wave 3 (one now a full-time student at University of Cape Town, the mother/caregiver refused to provide current contact details for 2 study participants who were not at home on 3 successive attempts, one claimed he had never been interviewed before-though his details had been captured in wave 2-and refused, and one was no longer interested in participating).
- 3 addresses appeared not to exist, study participants were not known by residents in the area, and phone numbers proved faulty (or went to voicemail and were never answered). In one of those cases, it was confirmed that the informal structure had been cleared from the plot.
- 3 study participants were not found at home after 3 successive attempts and were not reachable by phone.

- 1 study participant reportedly died in 2013

Khayelitsha Wave 3 - Distribution of study participants by age and Amandla Registration <sup>27</sup>	Amandla registered in 2014		Total	
	No	Yes		
	12	1	2	3
	13	5	1	6
	14	16	11	27
	15	19	10	29
	16	31	19	50
	17	26	15	41
Age in wave 3	18	28	13	41
	19	26	15	41
	20	24	6	30
	21	18	4	22
	22	13	0	13
	23	12	1	13
	24	2	0	2
Total	221	97	318	

Table 4.4. Khayelitsha wave 3 study participants by age and Amandla registration status

Of the 318 study participants interviewed and retained in wave 3 data, 101 study participants (32%) live in informal structures (see table 4.5, below). Thirty of the 82 study participants (37%) not known in wave 3 had listed addresses in informal sections, suggesting that there was no particular bias to fake interviews for study participants from informal settlements.

Khayelitsha Wave 3- Distribution of study participants by age and informal dwelling	live in shack		Total	
	no	yes		
	12	3	0	3
	13	4	2	6
	14	21	6	27
	15	19	10	29
	16	34	16	50
	17	22	19	41
Age in Wave 3	18	28	13	41
	19	22	19	41
	20	25	5	30
	21	17	5	22
	22	11	2	13
	23	9	4	13
	24	2	0	2
Total	217	101	318	

Table 4.5. Khayelitsha wave 3 study participants by age and dwelling type

## 4.2 Kagiso sample

In Kagiso, there were very few 17-21 year-old Amandla participants in year one of the study (also year one of Amandla programming in Kagiso). Thus, the sampling proportions (for non-Amandla study participants) were adjusted with the hope that, given the much smaller community and catchment

<sup>27</sup> Note that registering for Amandla in 2014 did not necessarily mean that subjects participated regularly.

area (than Khayelitsha), some of the Kagiso comparison group might self-select into Amandla participation as the programme developed (particularly from the 17-21 year-old range).

The initial intent was to recruit and interview 300 12-21 year-old male Kagiso study participants in May 2012, 30 subjects from each age, with half Amandla-registered participants and half randomly selected non-participants. In the 12-14 year-old range, Amandla participants were randomly selected into the study. In the 15-21 year-old range, all Amandla participants were recruited into the study as there were few registered Amandla participants at that stage of the project (only 49 Amandla-registered participants between 15 and 18 were interviewed).

Three hundred one interviews were completed but 5 were found to be duplicates (where the same study participant was interviewed on two different occasions by different fieldworkers). In these cases, the initial interviews were retained and the duplicates removed. The actual Wave 1 Kagiso sample (n=296) by age was as follows, with 237 study participants (80%) living in informal structures (see table 4.6, below):

Kagiso wave 1 - distribution of study participants by age and Amandla participation	current_amandla_participant		Total	
	No	Yes		
	12	15	14	29
	13	21	14	35
	14	16	17	33
	15	28	31	59
	16	22	17	39
Age in Years	17	3	0	3
	18	27	1	28
	19	28	0	28
	20	23	0	23
	21	18	0	18
	22	1	0	1
Total		202	94	296

Table 4.6. Kagiso wave 1 study participants by age and Amandla participation status

Attempts were made to relocate and re-interview all 296 Kagiso study participants in Wave 2 in June 2013. The same field interview team was contracted for a two-week period (10 field days were required in wave 1 to conduct the initial 296 interviews). However, only 51 Kagiso wave 2 interviews were successfully completed in that time frame (see table 4.7, below). Fieldworkers had challenges relocating the dwellings across an expanding informal settlement area where house numbers are often duplicated and no roads are marked. There was also a sense that residents were less than helpful in indicating that they knew study participants, households or addresses.

With each Kagiso study wave, I was required to address my field research request to the local ward councillor who, in each case, had insisted that the field interview team be comprised of local residents. I explained that the sensitive nature of the interview subject matter required field interviewers with training and experience who were not (in any way) known to the study participants.

Each year, we were reluctantly granted permission to proceed by the local ward council though there was a clear sense, ahead of the wave 2 interview attempts, that residents (particularly adults) did not feel that the Amandla project was of much benefit to the community (see discussion, in section 4.3, below).

Kagiso wave 2 - study participants by age and Amandla participation	Kagiso w2 Amandla participation		Total
	No	Yes	
13	3	9	12
14	5	4	9
15	3	5	8
16	6	3	9
Age in 2013	3	1	4
17	1	0	1
18	1	1	2
19	3	0	3
20	2	0	2
21	1	0	1
22			
Total	28	23	51

Table 4.7. Kagiso wave 2 study participants by age and Amandla participation status

### 4.3 Discussion: attrition and field work errors

The initial intention for the fieldwork was to contract with a South African non-governmental organisation (NGO) that had experience in conducting large-scale, nationally representative field interviews with young subjects (in schools, homes, and places of detention), on topics relating to crime, violence, victimization, deviant behaviours, and family dynamics. Thus, the targeted numbers of study participants and sampling strategies were developed according to the budgeted cost, tested sampling methods, and stated field capacity of the NGO. It was believed that this organization would be able to work efficiently in township communities, including within informal settlement areas, would be able to negotiate access with local structures (ward councils, street committees, etc.) and, most importantly, had years of experience in drawing random and representative samples and in securing trust from young subjects, allowing for adequate self-disclosure of sensitive information. To wit, I put my greatest concern, about inadequate disclosure of self-reported violent behaviours to the NGO director to which he responded that this (lack of self-disclosure of sensitive-and potentially incriminating-information) had not been an issue of concern in their prior studies of youth in South Africa. In fact, he said, the youth generally welcomed the opportunity to talk about their lives and self-disclose in the frame of a confidential interview.

This study was primarily interested in serious violent offending and its correlates, predictors, or proxies. Minor offending and deviant behaviour was not deemed to be of pressing concern in the Khayelitsha context of frequent, undetected violent crime and attendant safety concerns. Thus, there was doubt from the earliest study design phase whether or not such offending could be captured

accurately, consistently, and sufficiently for purposes of longitudinal analysis and prediction. The fact that South African crime data is, in its own right, woefully incomplete and inaccurate as a representation of the true incidence of crime (including many of the more serious violent crimes, see O' Regan et al, 2014) is cause for concern, coupled with the fact that the few self-report studies that have attempted to assess the incidence of violent offending in South Africa find levels many times higher than official records but suffer from their own internal inconsistencies and validity questions. There are only two known studies (Leoschut, 2009; Burton & Leoschut, 2013) in South Africa that have attempted to quantify levels of youth offending in nationally representative samples and these studies are mired in methodological concerns and wildly varied rates of incidence. Thus, there remains no real evidence of the incidence of youth violence in South Africa, nor a body of locally-tested methods and instruments to guide study design, data collection, and analysis. This results in both a call to action and, I would argue, a cry for help. Despite a raft of articles, books, and research projects on the various manifestations of violence in South Africa, there is no sound evidence explaining the incidence and variability of crime, violence, and insecurity, at national or local levels. For under-served, under-resourced, over-crowded communities like Khayelitsha, this paints a dire picture: violence and insecurity are daily realities, no one really knows how serious the problems are, police are woefully under-resourced, and, though some solutions are proposed and occasionally funded, no compelling evidence has been generated to quantify the problem and empirically test solutions. With these initial suspicions (that serious violent offending will not be adequately self-reported for statistical analysis), I sought to develop a proxy measure that could address issues of zero-reports, skewed distributions, social desirability, panel testing effects, and the ultimate goal, to measure changes in violence-propensity (Mills, 2005).

In Khayelitsha, it was clear that the vast majority of study participants would be native Xhosa speakers although most, if not all Khayelitsha youth, would have begun to learn English from 4<sup>th</sup> grade (10-11 years of age), if not sooner. In Kagiso, Gauteng Province, there was more expected heterogeneity of native languages, including Sesotho, Tswana, Sepedi (or Northern Sotho), and Zulu, posing challenges to any consideration of creating translated questionnaires. It was decided, after encouragement from UCT researchers, that a Xhosa translation should be produced and administered in Khayelitsha while the English version would have to be used, for practical purposes, in Kagiso (where it was also believed that, due to the heterogeneity of cultures, study participants would understand more English from a younger age).

A time window for the NGO to conduct fieldwork had been established early in 2012 and the decision to translate the Khayelitsha questionnaire required a quick response and slight adjustment to the scheduling. Two native Xhosa speakers were enlisted to conduct the translation, one an adult

Khayelitsha resident with field interview experience, the other a director of a Khayelitsha-based youth counselling organisation. Thus, both translators had significant exposure to the local Xhosa spoken by Khayelitsha youth (and their parents). While the initial goal was to produce a true double-blind translation, time constraints required adjusting this approach. Each translator began with roughly half of the English-based questionnaire and began to translate this into Xhosa; the second translator proved more efficient than the first and translated more than half. The translations and original English versions were then shared with each translator for them to review the other's translations and make comments and suggested corrections. These comments and corrections were compiled, shared with the initial translators, and a final version compiled, reviewed, and approved. This was completed in a 2-week period after which the contracted fieldwork NGO conducted a pilot test with ten young people and reported that the translated questionnaire was well-understood and administered without problems. It was not possible to obtain data from this pilot testing in order to check factor analysis and reliability.<sup>28</sup>

Due to the aforementioned delays, field work scheduling did not allow me to be present in Khayelitsha during the field worker training and initial period of wave 1 field interviews (commenced in late February, 2012). Assurance was given by the NGO that they were well-experienced in training the field work team and managing the field work process. They were to provide weekly progress updates and supply all paper interviews, a double-captured dataset, enumerator area maps used to detail the sampling strategy, and a full field report detailing the process and verifications, and field issues encountered. The field interview team consisted of 5 persons, two of whom were Amandla volunteers who had no prior field research experience (though they received one full day of training and several days of coaching in the field). The intent was to build local capacity and provide a paid work opportunity to several community members (who would not be known by the study participants).

Evidence from the wave 1 fieldwork suggests that, rather than begin by securing interviews with Amandla participants and then randomly searching for comparison-group study participants within the same community (as had been agreed at inception), fieldworkers travelled to particular sections and randomly visited households with the hope of finding a balance of Amandla participants and non-Amandla participants to recruit into the study. Thus, while 2 weeks were initially planned and budgeted for the field interviews, nearly 4 weeks were required before the team was pulled from the field (after completing only 343 interviews, 29 of which had to be rejected because they were of persons older than 22 years (26 individuals) or were duplicate interviews (3 study participants interviewed twice, the first interviews were retained)).

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<sup>28</sup> In fact, it became evident that the NGO had no expertise in inferential statistics nor in factor analysis (the vast majority of their research output confined to the reporting of descriptive statistics).

For various reasons, it seems plausible that a number of interviews were falsified and verification procedures (20% were to be randomly selected for call-back verification) were not adequately followed. Following the completion of fieldwork, the NGO could not furnish maps that had been created to inform the sampling and could not provide complete contact details (full name, street address, and phone number) for a number of participants, stating that a spreadsheet containing this information had been accidentally erased from a computer. Weekly field updates were not consistently provided and anecdotal fieldworker feedback suggested that the Xhosa questionnaire translation was, at times, poorly understood and difficult to administer and the questionnaire and interview process, overall, too long for study participants (especially younger individuals) to maintain focus (though these concerns were not detected or disclosed during the pilot testing). For these reasons, the relationship with the initial service provider had to be terminated.

Prior to wave 2 interviews, contact was made with a Cape Town-based, for-profit public survey company that had deeper experience conducting nationally representative household surveys and employs a GPS-based system for tracking fieldworker movements and verifying that specific houses were visited. The company reviewed the questionnaire and study participant details and (taking into account concerns over potentially falsified study participants, missing contact details, and field supervision) took the decision not to offer their services directly but instead to offer a referral to a sub-contractor that could provide an experienced Xhosa-speaking field research team (of 20 interviewers) and supervise their fieldwork. This new provider's quote was within budget to track down and re-interview as many of the 270 wave 1 study participants as possible (designated for tracing and follow-up interview after sampling frame revision and removal of 44 individuals from outlying communities as described above) and add-in a balance of study participants to reach the initially-intended target of 400 study participants (effectively re-establishing the intended wave 1 sample). Additionally, I recruited a team of 10 Khayelitsha-based, unemployed men, who were identified by a community partner of Amandla, and supervised their work directly. The intent was to include both teams in the same one-day training to be primarily led by the fieldwork contractor, with my assistance. Further, there was suspicion that interviewer effects detected in wave 1 were possibly the result of gender differences (and limited self-disclosure) between male study participants and female field interviewers.<sup>29</sup>

Based on the somewhat poor factor analysis results from the wave 1 Khayelitsha data<sup>30</sup> (on the whole, poorer, in terms of both construct validity and Cronbach's alpha reliability than the wave 1

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<sup>29</sup> Subsequent analysis of the wave 2 data did not reveal any clear fieldworker gender effects but may be obscured by different levels of fieldworker competence.

<sup>30</sup> See appendix for wave 1 factor analysis

Kagiso data, where the English-based questionnaire was employed), the decision was taken to work exclusively with the English-based questionnaire (in both sites). Khayelitsha fieldworker training was designed to ensure that all fieldworkers understood the entirety of the questionnaire in both English and Xhosa, enabling them to translate as necessary to and from Xhosa and English.

In advance of the commencement of wave 2 Khayelitsha fieldwork, current study participant information and the desired additional sampling (ensuring balance across age range, between Amandla participation and non-participation, and, wherever possible, increasing the sampling of study participants living in informal housing) was shared with the fieldwork contractor. The wave 2 fieldwork contractor, ultimately, could not establish a clear sampling and field supervision strategy (in advance nor ‘on the fly’) and was more inclined to review completed interviews and correct mistakes, conduct back checks and verifications than instruct fieldwork teams. This required my ad hoc adjustments to guide fieldwork teams in additional subject sampling. Further, the contractor promised to provide 20 experienced fieldworkers; 12 availed themselves for the full day of training, 7 only arrived on the second day of fieldwork, and at least two were dismissed by the contractor because, in fact, they had no prior fieldwork experience, nor English-language competency. Thus, implementation of the fieldwork strategy and field supervision remained a concern in wave 2.

It took approximately two months to complete the field interviews and satisfy queries about duplicate interviews (11 duplicate interviews were found in the initial wave 2 data) and study participants that, based on duplicated address or phone details, appeared to be sampled for convenience (in many cases in the same house or next door), rather than randomly sampled based on the agreed house skip pattern (based on the day of the month). Some of the fieldworkers indicated to me that the interview was not too long (taking them 40-45 minutes, on average, to complete) and was easily understood by study participants. Other field interviewers appeared to have more difficulty and produced fewer interviews (perhaps due to their own language deficiency or discomfort with moving on foot through sections of Khayelitsha). Despite these challenges, factor analysis and reliability testing suggested that wave 2 Khayelitsha data improved substantially in overall quality and disclosure from wave 1 (also supporting the decision to switch to an English-based questionnaire).

For wave 3, an initial strategy had been developed with Amandla to contract their newly-hired monitoring & evaluation manager to recruit, train, and supervise a field research team (utilising those field interviewers from wave 2 who proved competent and were still available for short-term work in 2014, complemented by additional new recruits). This strategy was selected to equip Amandla to take over the Khayelitsha panel study in subsequent years, which they had expressed great interest in pursuing for their own impact evaluation purposes and following an expression of support from the

Provincial Government of the Western Cape.<sup>31</sup> Unfortunately, the monitoring and evaluation manager resigned from the position before the field research team could be recruited.

This led to another scramble to secure a competent field supervisor and field research team two months before wave 3 fieldwork was scheduled to commence. Ultimately, one of the wave 2 field interviewers who appeared to achieve more subject self-disclosure than other interviewers was secured to recruit fieldworkers (with some suggestions on those who appeared more successful in wave 2 interviews), manage their work in the field, check interviews for accuracy and completion, and conduct verifications and queries (primarily when subject dates of birth differed substantially from wave 2 records). The hope was that his supervision would yield improved self-disclosure and preserve knowledge developed during the previous year's fieldwork.

I then led a one-day training session (although the field team had already met on their own and reviewed the questionnaire in full) to discuss the purpose of the research (how it was intended to address aspects of violence in the local community), advise on strategies to improve honesty and self-disclosure, and ensure that each interviewer had practiced asking, answering, and completing each item on the questionnaire in both Xhosa and English. As in wave 2, I spent the first week of the fieldwork in Khayelitsha and then had to return to Pretoria.

Completion of the wave 3 fieldwork took 6 weeks before all interviews were completed or adequate information obtained from those wave 2 study participants who were not found. Missing items<sup>32</sup> proved a challenge with nearly 70% of the interviews having multiple missing questionnaire items (bearing in mind that there were some 400 variables in the questionnaire), though relatively few from the items used in the key study indexes. Lists of missing and incorrect items were sent to the supervisor for follow-up but it proved challenging to correct most of these mistakes. A small portion of items were corrected, most inconsistent dates of birth (and, thus, study participants) verified, further attempts made to reach missing participants and, after feedback that both study participants and parents were no longer willing to cooperate (with further requests for correction of missing items) and fieldworkers were frustrated with not being paid in full, the decision was taken to stop the fieldwork and make do with the available data. This wave 3 experience highlighted the delicate balance between obtaining complete, accurate data and managing fieldworker and community relations, a common field research experience in contexts like Khayelitsha (Nleya & Thompson, 2009), where resources and expertise may be limited in comparison with expectations.

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<sup>31</sup> In meetings I attended with Amandla and representatives from the Western Cape Department of Social Development and Office of the Premier, interest was expressed in seeing the Khayelitsha study extend for at least 5 years alongside replication of this research approach at a second Amandla safe-hub site in Gugulethu/Manenburg. Amandla has subsequently applied for funding to conduct this research, in collaboration with the UCT Safety and Violence Initiative.

<sup>32</sup> See section 5.1.1 for more detail on the handling of missing items. Missing items for key construct scores was not a serious problem, with less than 5% of cases featuring 1-2 missing items in a given construct.

In Kagiso, the first wave of fieldwork appeared to go smoothly (after negotiating access through the ward councillor and ward committee). Aside from the 5 duplicate interviews, no immediate concerns emerged. The entire field work (301 interviews) was completed in under 3 weeks.

For the wave 2 Kagiso fieldwork, the wave 1 field supervisor was directly contracted to lead the same team of 5 fieldworkers. A half-day refresher training was conducted to ensure that returning fieldworkers were comfortable with the questionnaire and the process. Agreement was reached that 2 weeks would be sufficient to conduct all of the follow-up interviews, as before. There were to be no additional new Kagiso study participants added into the study. Though the very same field interviewers were employed in both waves of the study, locating addresses across this large informal settlement area, and securing cooperation from study participants, their families, or their neighbours, proved extraordinarily challenging.

Prior to commencement of each wave of Kagiso field interviews, the Amandla project manager was informed by the local ward councillor that the “community” would not permit the research to be done without direct benefit, namely the employment of local residents to conduct the field interviews. Each year, I met with the ward councillor and local ward committee to explain the purpose of the research and the sensitive nature of the subject matter which required trained outsiders (not known by the study participants) to conduct the interviews. Each year, permission was eventually granted to conduct the field interviews. In 2013, community reaction made it evident that there was limited appreciation for the Amandla project at the Kagiso site. The project utilized a pre-existing gravel field which is poorly secured and also hosts adult football games and events, where alcohol is often present. Whereas, at the Amandla site in Khayelitsha, it is completely secured and dedicated to Amandla youth programming; no alcohol, drugs, or weapons are allowed in and the artificial turf playing field (as opposed to the ubiquitous gravel in Kagiso), coupled with the level of security, creates a truly child-friendly, safe space for play and pro-social development. In Kagiso, this safe space is simply not visible, nor truly secured.

In two weeks in Kagiso in June 2013, the field team was only able to complete 51 wave 2 interviews of the 296 wave 1 study participants. For practical reasons, the decision was taken to end the field interview process and not to continue with a 3<sup>rd</sup> wave (in 2014 in Kagiso). It turned out that Amandla programming was also discontinued in the Kagiso site at the end of 2013, after principle donor support<sup>33</sup> was reduced below a level that Amandla believed necessary to deliver quality programming.

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<sup>33</sup> Unrelated to the intervention funding provided by the Red Cross, as discussed in the acknowledgements/statements of interest section.

#### 4.4 Fieldwork process conclusions

Conducting interviews with young people in urban township communities in South Africa is complex, in terms of locating pre-defined study participants, securing their cooperation and, most importantly, achieving honest responses to sensitive personal questions, with consistency across waves and across fieldworkers. With the added complexity of a panel study in a developing-country context, tracking the same study participants over time, these issues are compounded (Norris et al, 2007).

While the intention, to control as many of these complexities as possible by working with highly experienced organisations or sub-contractors, was appropriate, field research providers were not able to deliver clean, complete, accurate, well-documented work on time and at scale. Meagre field research budgets could have been a limiting factor influencing both provider selection (which individuals/organizations would accept the work) and their allocation of resources and expertise to the project. Certainly, employment of full-time, salaried fieldworkers (over casual/temporary workers) and research assistants would have added a different dynamic (seemingly a standard practice for large-scale longitudinal studies in South Africa; see Norris et al, 2007; Lam et al, 2006; Finn & Ranchhod, 2013). However, anecdotal evidence from discussion with other local researchers has revealed that some of these issues (fieldwork fraud, inconsistent subject disclosure, and panel attrition) are present in other South Africa studies. In the only published article on fieldworker fraud in South Africa, Finn & Ranchhod (2013) found that such fraud affected as much as 7% of the nationally representative sample (of some 7,300 households) in the longitudinal National Income Dynamics Study. They concluded that, had they not discovered the fraud and replaced the data before conclusion of the study, longitudinal analysis would have been significantly altered. In cross-sectional studies, the potential for attrition, fraud, and uneven disclosure is rarely discovered. Such (systematic) issues can only begin to be detected in follow-up waves.

Further, culture, language, and comprehension gaps are apparent between researchers (often more educated and 'historically privileged'), fieldworkers (often less-educated, sometimes only casually-employed, with potentially limited English skills), and research subjects who (in a sample targeting over-crowded, under-resourced, violence-affected urban South African communities) tend to be less-educated, less English-fluent, and (rightfully) suspicious of the intent of outsiders, both researchers and the fieldworkers, themselves (Nleya & Thompson, 2009). In the informal settlements surrounding the Amandla project site in Kagiso, Tudor Shaft and Soul City, numbers of residents have been removed forcibly due to environmental concerns (uranium-contaminated soil). Residents have been unwilling to move unless they receive permanent homes or are situated closer to their places of employment. Thus, there is an inherent suspicion of the intent of outsiders seeking information from residents.

Unfortunately, it would seem that the very social issues and inequalities that drive the need for social impact research also induce barriers that inhibit the production of good quality research that could drive better policy and programming. The alleged ‘faked interview’ is a clear manifestation of these dynamics and the principal-agent dilemma. Despite presenting to the fieldworkers the local value of the research (to help understand and address serious problems in their very communities) and the need for trust and maximum disclosure from the study participants, a number of the fieldworkers appeared to fall into a pattern of falsifying interviews, finding it more advantageous to create fake study participants and fake responses for immediate and short-term personal financial gain. It also appears that the faking may have started after conducting a number of legitimate interviews, suggesting that some fieldworkers found the actual study participant sampling, permission, and interview process too cumbersome. As these fieldworkers would probably have known that serial falsification could be detected (over time) in a panel study and would potentially affect their future employability, it is possible that it proved too challenging for them to engage legitimate study participants in the interviews. It further suggests that this chasm of (mis-)understanding (between study participants, fieldworkers, and researchers) and differential expectations (for a groundbreaking longitudinal study of violence, for short-term daily wage pay, or for any kind of non-monetary incentive to voluntarily participate in the study and disclose sensitive information) may have, at times, proved too wide. This underscores the social and economic divides that remain in South African society and the limits of this study (and this author) to successfully cross such divides<sup>34</sup>. This said, the data captured and presented in later chapters do evidence substantial hard work and good will from the majority of providers and study participants and will offer further opportunities for collaboration.

For the aforementioned reasons, Kagiso data will not be further presented and discussed (see appendix for descriptive statistics and factor analysis of Kagiso data) and, beyond attrition exploration and descriptive statistics including Khayelitsha wave 1 data, further analysis and inferential statistics will only be conducted on Khayelitsha study participants successfully interviewed and verified in waves 2 and 3.

In the next section, bivariate correlations were conducted with Khayelitsha study attritors to explore the presence of any significant relationships that may have contributed to attrition.

#### **4.5 Attrition effects**

A critical weakness evident in the second year of the panel study was the high rate of attrition. In Khayelitsha, 130 wave 1 study participants (48% of the sample intended for follow-up) could not be

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<sup>34</sup> Nleya and Thompson (2009) relate a similar experience with local realities, violence, and misunderstandings affecting a service delivery survey in Khayelitsha

re-located. While much of this attrition is qualitatively attributed to dishonest fieldwork in Khayelitsha wave 1, it is necessary to search for any possible explanation, or non-random attrition effects, in the available Khayelitsha data. The constructs tested below are described in detail in the next chapter. Two-tailed Pearson’s correlations were conducted between the key study constructs and a dummy variable for attrition. Correlations significant at the  $p \leq 0.05$  level are highlighted. Multivariate analysis was not conducted as wave 1 data suffered from weak construct validity and poor distribution normality. Thus, any bivariate associations with attrition cannot be ‘proven’ in a multivariate test.

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).		failed grade	Violence exposure	Pro Violence attit	Neg Future att	Neg school att	Pro gangs att	Deviant Peers	Harsh Parenting	Violent Home	H-hold deprivation	Comb substance abuse	Amandla partic.	Comb violence past12mos	Combine d victimizat ion	Religio us attend
Attrit after wave 1	Corr.	.138*	-.102	-.030	.034	.049	.018	.061	-.038	.104	.021	.198**	-.311**	.027	-.029	-.001
	Sig.	.024	.102	.631	.583	.421	.762	.333	.540	.091	.734	.000	.000	.653	.645	.987
	N	269	256	265	269	269	270	254	259	266	268	530	270	270	260	270

Table 4.8. Khayelitsha - correlations between 130 attrits (from wave 1 to wave 2) and key factors.

I first tested the bivariate correlations between all Khayelitsha Wave 2 attritors and key study variables (table 4.8, above). The likelihood of having failed a grade or more of school, reported Substance Abuse, and non-Amandla participation are significantly correlated with Khayelitsha study attrition from Wave 1 to Wave 2.

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).		age	failed grade	Violenc e expose	Pro Violenc e att	Neg Future att	Neg school att	Pro gangs att	Deviant Peers	Harsh Parentin g	Violent Home	H-hold depriv	Comb substanc e abuse	Amandla	Comb violence past12m os	Combin ed victimizati on	Religi ous attend
attrit after wave 1	Corr	.099	.122	-.104	-.028	.039	.044	.019	.046	-.068	.087	.011	.077	-.333**	.011	-.064	-.001
	Sig.	.115	.053	.107	.665	.533	.488	.762	.478	.289	.169	.868	.225	.000	.861	.320	.989
	N	270	252	241	248	252	252	253	237	242	249	251	252	253	253	244	253

Table 4.9. Khayelitsha - correlations between 115 attrits (from wave 1 to wave 2) and key factors.

After dropping 14 cases where the information was gathered that the wave 1 study participants were not known in wave 2 by residents at the given address (strongly suspected to be falsified interviews) and one deceased subject (who could not have voluntarily attritted), bivariate correlations were re-run (see table 4.9, above). In this analysis, only Non-Amandla participation is a significant predictor of attrition. This means that there is no statistical evidence in bivariate correlation analysis that real subject attrition from wave 1 to wave 2 in Khayelitsha is associated with the key study measures. It is anticipated that Amandla participation should result in less panel study attrition as there is a connection between this study and Amandla programming (some questions relate to Amandla participation and Amandla/study participants have been re-located, for interview scheduling, at the Amandla site).

		age	failed grade	Violence expose	Pro Violence att	Neg Future att	Neg school att	Pro gangs att	Deviant Peers	Harsh Parenting	Violent Home	H-hold depriv	Comb substance abuse	Amandla	Comb violence past12mos	Combined victimization	Religious attend
attrit after wave 1	Corr	.124*	.090	-.029	.029	.188**	.126*	.029	.129**	.085	.117*	.023	.153**	-.207**	.039	.039	-.018
	Sig.	.013	.073	.557	.569	.000	.012	.558	.010	.090	.019	.639	.002	.000	.435	.435	.726
	N	401	400	401	401	401	401	401	401	401	401	401	401	401	401	401	401

Table 4.10. Khayelitsha –correlations between 82 attrits (from wave 2 to wave 3) and key factors.

Among Khayelitsha study attritors from wave 2 to wave 3, there are significant correlations with age (attritors are older), Negative Attitude toward the Future and the closely linked Negative School Attitude (although school failure, or performance, is not significantly correlated), more Deviant Peer Associations, more Violence in the Home, and more Substance Abuse (self-reported use of alcohol and drugs). As seen among study attritors from wave 1 to wave 2, Amandla participants are significantly less likely to attrit. The significant bivariate correlation differences between attritors and non-attritors on attitudes toward school and the future, deviant peers and substance use are potentially some cause for concern. Given the large number of these 82 attritors that were unknown among neighbours, unverified, and, thus, potentially falsified (64 cases, or 78%), it is difficult to draw firm conclusions about true attrition (and not falsification) effects<sup>35</sup>. One could, theoretically, expect falsified interviews to yield more “disclosure” on sensitive or less culturally acceptable constructs, in an effort to make the fake interviews seem more real.

#### 4.6 Descriptive statistics

In order to understand certain aspects of the realized Khayelitsha sample, a range of descriptive statistics are presented and discussed, covering demographic, family, peer, neighbourhood, and behavioural domains. Many of these items are not analysed in later multivariate analyses therefore, some attention is paid to their contribution to the study.

<sup>35</sup> When bivariate correlations are run excluding the 64 attrition cases that may be falsified, only Negative Future Attitude remains as a significant correlate with attrition at corr.=0.121, p=0.026. However, this correlation is limited to a group of 18 attritors compared to 319 non-attritors.

Descriptive statistics. <u>Demographic information</u> . Subjects are all male and African (1 Coloured subject in Khayelitsha Wave 1 only)		Khayelitsha wave1 N=270	Khayelitsha wave2 N=401	Khayelitsha Wave3 N=318
Age, mean (SD)		15.8(2.8)	17.0(2.7)	17.7 (2.6)
Home language	Xhosa	96%	98%	Not asked
	Zulu			
	Sotho (North+South)	1%		
	Tswana			
Have heard of Amandla Edu-Football		82%	93%	99%
Have ever participated at Amandla		55%	71%	90%
Current Amandla participant (self-reported)		46%	56%	66%
Amandla registered participant		24%	56%	30%
Meeting 75% Amandla target attendance				9%
% living in informal housing		10%	37%	32%
Household size, mean (SD)		5.1(1.9)	5.3(2.0)	5.3(2.1)
Have own biological child		1.9%	4.7%	5 %
Have a disability affecting everyday activities		3.7%	0	2%
No. household members working	None	15%	12%	17%
	1	38%	43%	41%
	2	33%	31%	31%
	3 or more	12%	14%	11%
% - 1+ household member receives grant		74%	77%	77%
Subject employment status	full-time employed	1.1%	1.7%	3.1%
	Part-time employed	1.1%	4%	4%
	Temp/seasonal	0.4%	0.7%	0.3%
	Self-employed	0	0	0.3%
	not working, seeking work	8.8%	40%	21%
	not working, not seeking	82%	52%	66%
Currently attending school or other courses		83%	61%	53%
Failed matric (Grade 12)		0	2.5%	4.1%
Stopped schooling before Grade 12		0	4.7%	11.6%
Passed Matric		6.3%	14%	17%

Table 4.11. Descriptive statistics table for demographic information, Khayelitsha (waves 1, 2 and 3).

As shown in table 4.11, mean age is comparable across waves. It increased by approximately one year in each Khayelitsha wave, as would be expected (due to cohort aging and adjusted re-sampling). Home language distribution reflects the homogeneity of language groups in Khayelitsha, 96-98% Xhosa speaking.

In Khayelitsha in Wave 1, only 10% of study participants lived in informal housing, one reason behind adjusting the panel study sample for Wave 2. In Wave 2, this number increased to 37% in informal housing, dropping to 32% in wave 3, still well below 2011 census estimates for the area (66.5% informal dwellings in Khayelitsha Ward 90, 58% in Khayelitsha Ward 91) (City of Cape Town, 2013).

Household size is comparable across waves. These household size figures are significantly higher than those reported in Census 2001 (3.59 for Khayelitsha Ward 90, 3.86 for Khayelitsha Ward 91) and Census 2011 (3.06 for Khayelitsha Ward 90, 3.41 for Khayelitsha Ward 91) (City of Cape Town, 2013). This raises questions about how household size is understood (what does ‘living in the

house' mean, what about back rooms, relatives or non-relatives who are not always present, etc.) and suggests the possibility of under- or over- reporting, in this study or in the census.

Few study participants reported having a disability in wave 1 and wave 3 and no subjects at all in wave 2, suggesting possible under-reporting, especially in the case of HIV/AIDS as a disability, given its high prevalence among this demographic nationally.<sup>36</sup>

In Khayelitsha, 15% of wave 1 study participants reported that no one in the home was employed vs. 12% in wave 2 and 17% in wave 3. According to Census 2011 data, 20% of black African families in Khayelitsha Ward 90 reported no monthly income vs. 17% in Ward 91 (City of Cape Town, 2013). However, a large majority of study participants report that someone in the family receives a government grant (a high of 77% in Khayelitsha waves 2 and 3).

Most study participants were still in full-time schooling in wave 1 and were not seeking employment. Only 9% of Khayelitsha wave 1 study participants indicated that they were seeking employment. After clearer instructions to field interviewers were given ahead of wave 2 (that anyone, even those in school full-time, could be in some form of employment or seeking such employment), the percentage of employment-seekers in Khayelitsha increased to 40%, though this dropped again to 21% in wave 3, when it should have theoretically risen as more study participants aged out of school. By wave 3, 47% were no longer in schooling or other courses, but only 8% were in any form of employment and only 21% were unemployed and seeking work, meaning there were at least 18% unemployed, not seeking work, and out of school or formal training, a worrying demographic.

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<sup>36</sup> 2011 estimate of HIV prevalence among 15-49 year-olds was 16.6% nationally, Stats SA, 2011 Mid-year population estimate. Downloaded from: <http://www.statssa.gov.za/publications/P0302/P03022011.pdf> on 20 Jan. 2014,

Descriptive statistics. <u>Family/Home Dynamics.</u>		Khayelitsha wave1 N=270	Khayelitsha wave2 N=401	Khayelitsha Wave3 N=318
Birth father is deceased		29%	23%	27%
Never spent a lot of time with father-ever		34%		
Never spent time w/ father-past yr		25%	33%	10% (exclude deceased)
Birth mother is deceased		8.5%	8.5%	13%
Never spent a lot of time with mother-ever		7%		
Never spent time w/ mother-past yr		7%	9%	2.5% (exclude deceased)
Family member has been to prison		15%	23%	21%
Is currently in prison		4%	6%	7%
Gone w/out enough food to eat-past yr/	1-2 times	9%	19%	26%
	A few times	7%	11%	18%
	Many time/always	0.7%	2.4%	3.4%
Changed homes in the past year		6%	8%	3%
Arguments @ home lead to violence-sometimes+		16%	15%	
In past year		12%		18%
Fights @ home influenced by drugs/alcohol		12%	18%	
In past year		11%		17%
Someone @ home drinks too much-often/always			14%	6%
Parents hit, slap, cane, punch, beat you	Never	79%	64%	67%
	Sometimes	18%	14%	18%
	Most of the time/always	2%	23%	1%
Subjects feel safe in their home	feel very safe	83%	80%	83%
	Feel somewhat safe	16%	12%	10%
	Feel somewhat unsafe	1.1%	7%	6%
	Feel very unsafe at home	0	2%	2%

Table 4.12. Descriptive statistics table for Family dynamics: Khayelitsha (waves 1, 2 and 3).

According to table 4.12, more than 20% of all study participants had lost their father and more than 30% indicated that they had never spent much time with their fathers over the course of their lives, suggesting a high rate of paternal absenteeism. By contrast, participants reporting deceased mothers ranged between 8.5-13%. Only 7% of wave 1 subjects reported that they had never spent much time with their mothers in their lifetime.

High percentages of study participants reported that a family member had been to prison (15% in wave 1, 23% in wave 2 and 21% in wave 3). This hints at a high rate of criminality that participants may be directly exposed to in their homes or families.

As a basic measure of household deprivation, 0.7% of Wave 1 study participants reported going without enough to eat in the past 12 months many times or more. In wave 2, these numbers increased to 2.4% and to 3.4% in wave 3. Some of this differential could be expected by the much higher rate of study participants living in informal housing (in the improved Khayelitsha wave 2 sample). As no other questions explore food deprivation, this aspect cannot be explored in greater depth.

15-18% of study participants reported that arguments in the home sometimes (or more frequently) lead to violence while 12-18% report that fights at home are often influenced by drugs or

alcohol. As a follow-up in waves 2 and 3, participants were asked if there is someone in the home who drinks too much alcohol; 14% of wave 2 participants affirmed this question (most times or always) but only 6% did so in wave 3.

Descriptive statistics. <u>Neighbourhood dynamics.</u>		Khayelitsha wave1 N=270	Khayelitsha wave2 N=401	Khayelitsha Wave3 N=318
Subjects feel safe in their neighbourhood	feel very safe	44% <sup>0</sup>	41%	14%
	Feel somewhat safe	35%	25%	23%
	Feel somewhat unsafe	0	22%	57%
	Feel very unsafe	2.6%	11%	6%
There are people in my neighbourhood/ family I look up to (role models)	strongly agree/agree	58%	74%	86%
	Disagree/strongly disagree	39%	25%	13%
Their area has lots of crime	never	9%	9%	2%
	Sometimes a lot	51%	40%	51%
	All/most of the time	40%	50%	47%
Their area has lots of fights	never	10%	11%	3%
	Sometimes a lot	61%	50%	53%
	all/most of the time	30%	39%	43%
Living in their area is like living in a war zone	never	45%	48%	25%
	Sometimes	44%	40%	60%
	All/most of the time	10%	12%	15%
Have seen someone stabbed or shot	never	62%	30%	27%
	Once/twice in their life	26%	29%	20%
	A few times	8%	26%	37%
	Many times	3%	14%	16%
Have seen gangs in neighbourhood	never	34%	12%	9%
	Once/twice in their life	18%	20%	13%
	A few times	33%	26%	30%
	Many times	14%	41%	48%
Have been chased by a gang	never	84%	72%	62%
	Once/twice in their life	10%	16%	32%
	A few times	4%	8%	5%
	Many times	0.4%	4%	1%
Easy to get gun in neighbourhood	43%			
At school	4%			
Easy to get knife/other weapon in neighbourhood	74%			
At school	26%			
Know someone who makes a living from crime	56%	38%	46%	
Friends have stolen, mugged, assaulted-none	90%	81%	78%	
	One or two friends	2%	14%	18%
	3-4 friends	2%	4%	3%
	5+ friends	1%	1.5%	1%
Friends- stolen, mugged, assaulted past yr	2.2%	15%	21%	

Table 4.13. Descriptive statistics table for neighbourhood dynamics. Khayelitsha (waves 1, 2 and 3).

As shown in table 4.13 above, only 3% of wave 1 study participants reportedly felt unsafe in their community, though this increased exponentially to 33% in wave 2 and again to 63% in wave 3.<sup>37</sup>

<sup>37</sup> Such significant increases suggest potential measurement issues. As a result, perceptions of safety were not analysed further in this study.

38% of wave 1 study participants had witnessed a stabbing or shooting, up to 69% in wave 2, with 40% indicating witnessing stabbings or shootings more than twice, and 73% in wave 3 ever witnessing, with 52%, more than twice. This exposure to violence is extraordinarily high and certainly at odds with the relative sense of safety that subjects report in their neighbourhoods. Beyond obvious measurement and validity issues (of perceived community safety), this hints at a possible desensitization toward violence, where witnessing extreme interpersonal violence becomes commonplace, potentially even socially acceptable.

Only 1.55% of wave 1 study participants report being victims of assault in the past 12 months vs. 9.5% in wave 2 and 11% in wave 3. In the 2012 CJCP School Violence Study (Burton & Leoschut, 2013), 9.2% of all Western Cape province subjects (male and female) reported experiencing assault of any kind in 2012 vs. 5.3% in the 2008 study. Such increased reporting (or self-disclosure) might be explained through improved interview strategies in this study but seems problematic in the CJCP study, a large-scale, provincially representative sample (did the prevalence of assault among Western Cape school students really increase by 74% in a 4-year period?).

Wave 2 and wave 3 study participants reported serious victimization with 6% of wave 2 subjects reporting ever being the victim of a stabbing or shooting and 5% of wave 3 study participants reporting this victimization in the past year alone. Additionally, 9% of wave 2 study participants had ever been threatened with a weapon, while 12% of wave 3 participants had been threatened with a weapon in the last 12 months. And, 8% of wave 2 subjects reported that a family member had ever been murdered with 6% of wave 3 subjects reporting murder of a family member in the preceding 12 months. This further reinforces the extreme violence that young people in Khayelitsha are exposed to.

Only 2% reported having friends who have stolen from, mugged, or assaulted people in the past year in wave 1 vs. 15% in wave 2 and 21% in wave 3, suggesting the possibility of heavy under-reporting among wave 1 study participants.

Descriptive statistics. <u>Subject Behaviour</u> .		Khayelitsha wave1 N=270	Khayelitsha wave2 N=401	Khayelitsha Wave3 N=318
Plays team sport daily/weekly		52%	70%	82%
Attends church/mosque daily/weekly		54%	51%	53%
Participate in drama group		2%	9%	3%
Participate in dance group		2%	8%	4%
Participate in choir/singing group		4%	16%	19%
Participate in arts programme		2%	7%	0.3%
Visit shebeen	daily/weekly	9%	24%	30%
	Monthly	4%	8%	9%
	Less than monthly	3%	6%	2%
Use alcohol	daily/weekly	3%	16%	16%
	Monthly	6%	10%	12%
	Less than monthly	4%	21%	22%
Spent R100 or more on alcohol in past 7 days		6%	20%	29%
Use marijuana	daily/weekly	1.5%	7%	5%
	Monthly	4%	5%	3%
Use tik (methamphetamine) ever		1.2%	5.2%	5%
Use any other drugs ever		0	1%	0%
Have failed grade or more of school	Failed one grade	28%	40%	39%
	Failed twice/more	20%	10%	15%
Maternal caregiver response	son failed 1 grade		40%	44%
	Failed twice/ more		10%	13%
Victim of assault	Subject (ever)	2.6%	14%	18%(past yr)
	Family members	3%	10%	11%(past yr)
	Subject-past 12 mos	1.5%	9.5%	18%(past yr)
Victim of stabbing/shooting-subject (ever)			6%	5%(past yr)
Have been threatened with a weapon			9%	12%(past yr)
Have been injured with a weapon at school		3.3%	6%	5%(past yr)
Victim of murder of family member(s)		0.7%	8%	6.4% (past yr)
Victim of rape/sexual assault	subject	0	0.3%	0 (past yr)
	Family members	0.7%	4%	2%(past yr)
Carried gun, knife, other weapon	ever	1.5%	12%	18%
	In past year	0.4%	11%	13%
Used force, threats, or weapon to steal	ever	0.4%	1.5%	5%
	In past year	0	1.2%	3%
Used weapon to threaten/injure someone	ever	0	3.5%	5%
	In past year	0	3%	3%
Have broken into house/bldg. to steal	ever	0.4%	1.7%	2%
	In past year	0	0.7%	1%
Have forced sex (rape) with someone	ever	0	1.2%	0%
	In past year	0	0.5%	0
Have been involved in gang fights	ever	0.7%	4.7%	4%
	In past year	0	3%	3%
“I belong to a gang” is true/somewhat true+		1.5%	3%	6%

Table 4.14. Descriptive statistics table: study participant behaviour for Khayelitsha (waves 1, 2 and 3).

Despite the prevalence of reporting having friends who have stolen from, mugged, or assaulted people in the past year, only a small percentage admit to engaging in similar behaviours themselves: 0.4% in wave 1, increasing to 1.5% in wave 2 and up to 5% in wave 3. Likewise, few study participants admitted to using a weapon to threaten or injure someone: none in wave 1, 3.5% in wave 2 and 5% in wave 3. In the 2008 National Youth Lifestyle Study (NYLS), only 0.5% of all youth subjects (12-22 years old and including females) admitted to ever having used force, threats, or a

weapon to steal (Leoschut, 2008). This raises an important issue concerning the actual prevalence of violence among youth in South Africa. Percentages describing the problem tend to vary widely between studies, even between waves of the same study (as was shown previously in the reported rate of assault among Western Cape school students in the same NYLS). Yet, rates of self-disclosure of any violent, criminal behaviours are so low that this sub-group cannot be meaningfully studied, even in a large-N sample. At a rate of 0.5%, only 5 individuals in 1000 subjects would disclose violent behaviours. Thus, it is critical, if youth violence in South Africa is to be empirically understood, to find other methods of gaining traction on individuals' propensity to employ violent behaviours.

0.4% of wave 1 study participants reported carrying a weapon for protection in the past year, jumping to 11% in wave 2 and 13% in wave 3. These results accord (in part) with findings of the 2008 NYLS, where 9% of Western Cape youth reported carrying a weapon for their protection in the previous 12 months (Leoschut, 2008). However, the NYLS is nationally representative, including females, all races, and all income classes. Thus, we might expect higher levels among African male youth in urban townships where crime is high.

Many study participants report playing teams sports (soccer, in most cases) on a daily or weekly basis: 52% in wave 1, up to 70% in wave 2, and 82% in wave 3. Some of this is explained by Amandla participation (and study participants who were selected on the basis of their Amandla participation) but the wave 2 and wave 3 frequencies suggest that soccer participation is high, even among non-Amandla participants. This accords with Amandla experience that football is extremely popular among the Khayelitsha young male demographic. This could both make Amandla an appealing activity and suggest the possibility of multiple (and competing) opportunities for soccer participation.

Reported church attendance is lower than that of group sport participation (54% in wave 1, 51% and 53% in waves 2 and 3, respectively) but much higher than levels of participation in any other pro-social group activity including drama, dance, choir/singing, or arts. For this reason, church attendance is used as an alternative test for group effects of structured leisure participation, as compared with Amandla participation (see chapter 8).

13% of wave 1 study participants report visiting shebeens (pubs) monthly or more frequently, while 32% affirmed this in wave 2 and 39% in wave 3. At the same time, 9% of wave 1 participants admitted using alcohol monthly or more, climbing to 26% in wave 2 and 28% in wave 3. In the 2008 NYLS, 21.5% of Western Cape youth (12-22 years old) reported consuming alcohol in the past month (Leoschut, 2008).

Reported drug use is limited with 6% of Wave 1 study participants reporting marijuana use monthly (or more frequently) vs. 12% in wave 2 and 8% in wave 3. 1.2% reported using tik

(methamphetamine) in wave 1 and 5% in waves 2 and 3. The NYLS 2008 found 10% of Western Cape youth reported ever using marijuana (Leoschut, 2008).

Overall, Khayelitsha wave 2 frequencies of disclosure of sensitive information relating to victimization, vulnerability, violence perpetration, and risky behaviour compare favourably with the few nationally representative studies of youth behaviours (Leoschut, 2008; Burton & Leoschut, 2013). The high rates of attrition/disappearance between waves (and the adjusted sample in Khayelitsha) have potentially impacted the relative stability of many of these descriptive statistics. As anticipated, somewhat improved fieldworker training and oversight in the 3<sup>rd</sup> wave in Khayelitsha may have yielded more stable rates of self-disclosure on sensitive topics, with some increases potentially attributable to age effects.

This chapter has discussed the strategy used to draw and revise the panel study sample and unpacked the complexity of conducting panel study field research with limited budgets in the South African context. A presentation of descriptive statistics for the three waves in Khayelitsha provides some insight on the sample, changes between waves, and, where applicable, comparison with similar data from other South African youth studies.

## **Chapter 5: Development of scales: process and learnings**

Following the presentation and discussion of the realized sample in the previous chapter, this chapter will present:

- Factor analysis methods
- Factor analysis in the construction and testing of constructs
- Development of behaviour and victimization indexes
- Development and verification of a violence scorecard for use in the South African youth context

### **5.1 Factor analysis methods**

Exploratory and confirmatory factor analysis methods were used to test groups of questionnaire items that were theorized to form singular, valid, and consistent latent constructs. The maximum likelihood exploratory factor analysis (EFA) method was used as a starting point as it provides a statistical measure for the goodness-of-fit of the extracted factor(s) and is considered to be the most stringent method of analysis (Field, 2009, p.642). A goodness of fit at the  $p \leq 0.01$  level is evidence of a single factor that significantly explains the variation in the data. The percentage of variance explained describes the amount of overall variation in the combined questionnaire items that can be explained by the singular construct. In this analysis, I have chosen to test for the presence of a single, unifying construct that can be extracted from the grouped items, i.e. Parental Involvement, rather than test for the presence of multiple factors for each theorized construct i.e. Parental Involvement subdivided into separate scales for "parents' participation in school", "parents' interest in the study participants' personal life", "quality of support shown by parents", etc). In this way, the statistical testing for the presence of the theorized constructs is most straight-forward. The EFA is presented in the appendix, while the focus of this chapter is the confirmatory factor analysis (CFA) of those constructs identified in EFA.

Following the exploratory factor analysis stage, CFA was conducted using AMOS version 21, again employing the maximum likelihood method. A threshold level for comparative fit index (CFI) was set at 0.9, chi-squared:degrees of freedom ratio at less than 4.0, and root mean square error of approximation (RMSEA) level below 0.08, in line with the recommendations of Bentler and Bonnet (1980). I have opted for these less stringent thresholds to account for the real-world nature of the study and the respondents (varying ages, varying literacy and education levels, varying language comprehension, and varying degrees of disclosure). Covariances between individual items terms were used with discretion in instances where adequate fit could not otherwise be achieved and there was reason to believe correlation between individual items beyond that captured in the common latent construct was theoretically valid. Items were dropped when low standardized path coefficients brought

the fit statistics of the overall model below the acceptable threshold levels. CFA was first attempted with the wave 3 data, as some additional questionnaire items had been added in this wave and several response options (Likert response scales) adjusted, in addition to potential improvements in fieldwork practice. The wave 3 CFA solution was then tested with the wave 2 data, where the same questionnaire items were present. In several instances, it was necessary to construct and test a two-factor CFA solution where a 1-factor solution did not fit the data adequately, although prior EFA had indicated a potentially viable single construct.

Reliability testing was conducted to test how consistently the scales perform for each subject across all items of the scale (Field, 2009, p.674). Generally speaking, a Cronbach's alpha reliability above 0.7 is good, above 0.8 is very good, and approaching 0.9 is excellent. As the items tested are based on thoughts, attitudes, and perceptions and less (or no) scientific observations, we can expect a certain degree of reduced reliability, particularly among a range of young people with varying levels of education and literacy. In fact, in a sociological study, a reliability score approaching 0.95 or higher would be of concern, suggesting redundancy in the scale, that each item was essentially measuring the exact same thing. The Cronbach's alpha reliability necessarily improves with number of cases and with number of items comprising the construct (Field, 2009, pp.675-676) thus, it should be interpreted cautiously and in conjunction with the other measures.

When confirmatory factor analysis confirmed the presence of a latent construct, a mean score variable was produced (with the construct labelled in capital letters to differentiate the measured construct from the abstract concept).

### **5.1.1 Missing data**

Where cases contained 1-2 missing responses for any individual construct, revised means (eg. averaging 5, rather than 7 responses for a given construct) were calculated to preserve the case in data analyses. Such revisions were made for less than 5% of the cases and for no more than 2 constructs per case. Cases were deleted listwise from statistical analyses where more than 2 items were missing from any construct. Missing data were assumed to be missing completely at random as no patterns were observed.

## **5.2 Confirmatory factor analysis and latent construct development**

The following section presents the results of CFA<sup>38</sup>, reliability testing, descriptive statistics, and tests for skewness and kurtosis for the latent constructs, household deprivation (labelled Household

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<sup>38</sup> Exploratory Factor Analysis results and distribution graphs (histograms) are presented in the appendix.

Deprivation), violent home environment (labelled Violent Home), harsh and inconsistent parenting (labelled Harsh Parenting), low parental involvement (labelled Less Parental Involvement), deviant peer associations (labelled More Deviant Peers), positive attitude toward gangs (labelled Pro-Gangs Attitude), exposure to violence (labelled Violence Exposure), negative attitude toward school / low school attachment (labelled Negative School Attitude), negative attitude toward the future / low resiliency (labelled Negative Future Attitude), positive attitude toward the use of violence (labelled Pro-Violence Attitude), the primary maternal caregiver's assessment of the young male participant's risky/dangerous behaviour (labelled Maternal Assessment-Study participant's Problem Behaviour), and the composite 4-factor Violence Propensity Scorecard.

Several other related questionnaire items have been scored together (creating a composite score) but could not be successfully confirmed through CFA:

- Combined Substance Use (and potential abuse) is a combination of the frequency of alcohol use and reported use of various drugs (marijuana, tik/methamphetamine, inhalants such as glue or benzene, or other drugs) in the past 12 months plus the frequency of that drug use. Because reported levels of drug use are very low, several questionnaire items have insufficient variation for factor analysis. It is theorized that reporting more variety and frequency of drug use alongside frequency of alcohol use is an effective measure of collective substance abuse.
- Combined Victimization is a combination of reports of the study participant, or anyone in their household, experiencing a variety of contact crimes. The frequency of reports is low, leading to limited variation, again inhibiting factor analysis. As these are direct reports of incidences, it is not useful to explore the presence of an underlying factor.
- Combined Serious Multi-Category Violent Offending in the past 12 months is a summation of affirmative reports that study participants had carried a weapon, committed aggravated robbery, assault with a weapon, arson, forced sex, vehicular theft, or been involved in gang fights in the past 12 months and the Combined Frequencies of those Violent Offences in the past 12 and 24 months.

Seven of the 318 cases (2.2%) with wave 2 and wave 3 data were identified as multivariate outliers during earlier SEM testing and were removed before re-running the CFA and other analyses presented below. With these 7 cases removed, there were only 126 cases with wave 1 data, insufficient for proper CFA or inclusion in SEM, which requires a minimum of 200 cases. Due to this number-of-cases constraint, wave 1 data is not presented here nor utilized in subsequent multivariate modelling.

**5.2.1 Household Deprivation** was tested with the following items:

Questionnaire Item (response options: 0=never, 1=once or twice, 2=a few times,3=many times, 4=always)	path coefficient wave 2	Covariance Wave 2	path coefficient wave 3	Covariance Wave 3	
q2.24-In the last 12 months, how often have you or your household... Gone without enough food to eat?	.37	.26 with q2.25 .16 with q2.26	.73	.26 with q2.26 .14 with q2.25	
q2.25-In the last 12 months, how often have you or your household... Gone without medicine or medical treatment that you needed?	.17	.26 with q2.24 .28 with q2.26	.68	.14 with q2.24	
q2.26-In the last 12 months, how often have you or your household.... Gone without a cash income?	.46	.16 with q2.24 .28 with q2.25	.74	.26 with 2.24	
q2.29-In the last 12 months, how often have you or your household.... Gone without electricity in your home?	.78		.90		
q2.30-In the last 12 months, how often have you or your household.... Gone without enough fuel (electricity, propane, paraffin, wood, coal) to heat your home or cook with?	.79		.95		
CFA fit stats wave 2	Chi-sq= 8.71 d.f. 3	Chi-sq./d.f.= 2.90	p-value= .033	CFI= .980	RMSEA= .078
CFA fit stats wave 3	Chi-sq= 8.00 d.f. 4	Chi-sq./d.f.= 2.00	p-value= .092	CFI= .996	RMSEA= .057
Reliability testing (cronbach's alpha)	wave2=.69	Combined waves= .74		Wave3= .90	
Mean construct score (standard deviation)	0.75 (0.63)			0.91 (0.74)	
Skewness (standard error of skewness)	0.71 (0.14)			0.42 (0.14)	
Kurtosis (standard error of kurtosis)	0.13 (0.28)			-0.70 (0.28)	

Table 5.1. Questionnaire items, factor loadings, CFA fit stats, reliability testing and descriptives for the construct Household Deprivation.

CFA fit statistics confirmed a 5-item construct for Household Deprivation in waves 2 and 3 (table 5.1 above). Household Deprivation is somewhat skewed, particularly in wave 2, by the frequency of 0-deprivation responses. Aside from this sub-group, there is relative dispersion across the range of responses and no evidence of excessive non-normality. Reliability has not been reported for similar deprivation scales in the literature and improves substantially from wave 2 to wave 3.

In paired differences analysis, mean difference (-0.16) is significant ( $p=.003$ ) as the Household Deprivation score has significantly increased from wave 2 to wave 3. This could be reflective of truly increased deprivation among some study participants or increases in self-disclosure that are not consistent across the cohort.

**5.2.2 Violent Home Environment** was tested with the following items:

Questionnaire Item: Wave 2, In your lifetime. Wave 3, in the past 12 months. (response options wave 2: 1=not at all, 2=sometimes, 3=often. Response options wave3: 1=never, 2=once or twice, 3=sometimes, 4=all the time	path coefficient wave 2	Covariance Wave 2	path coefficient wave 3	Covariance Wave 3	
Q4.2 - People in my family often lose their temper with each other	.67		.76		
Q4.3 - People in my family argue a lot	.84		.95		
Q4.4 - Arguments in our household sometimes lead to violence	.28	.51 with q4.5	.62	.50 with q4.5	
Q4.5 - Fights and arguments in our household are sometimes influenced by the use of alcohol or drugs	.37	.51 with q4.4	.60	.50 with q4.4	
CFA fit stats wave 2	Chi-sq= 0.03 d.f. 1	Chi-sq./d.f.= 0.03	p-value= .875	CFI= 1.00	RMSEA= .000
CFA fit stats wave 3	Chi-sq= 0.03 d.f. 1	Chi-sq./d.f.= 0.03	p-value= .876	CFI= 1.00	RMSEA= .000
Reliability testing (Cronbach's alpha)	wave2=.68	Combined waves= .73		Wave3= .85	
Mean construct score (standard deviation)	1.31 (0.35)			1.71 (0.70)	
Skewness (standard error of skewness)	0.85 (0.14)			0.51 (0.14)	
Kurtosis (standard error of kurtosis)	-0.34 (0.28)			-1.05 (0.28)	

Table 5.2. Questionnaire items, factor loadings, CFA fit stats, reliability testing and descriptives for the construct Violent Home Environment

CFA fit statistics confirmed a 4-item construct for Violent Home Environment in waves 2 and 3 (table 5.2, above). The frequency of nil responses (scored as one for this construct) has skewed the distribution. Kurtosis may be a minor concern in wave 3.

The range of Likert-scale response options was increased to 4 in wave 3 with the intent of generating greater dispersion. This rebasing will affect the mean difference analysis (we would expect to see a mean increase as the median response of sometimes in wave 2 (scored as 2) is scored as 3 in wave 3. The increased reliability, from .68 in wave 2 to .85 in wave 3, suggests a potentially improved construct. Reliability for experiencing violence in the home environment was not reported in the literature (Thornberry, Krohn, Lizotte, Smith & Tobin, 2003; Ward et al, 2007).

Mean difference (-0.41, p=.000) is significant though some increase may be expected with the increased response range. The mean increase, without a corresponding positive paired sample correlation (also seen with Household Deprivation) suggests that Violent Home scores (incidence) increased irregularly (for some study participants and not others) or that self-disclosure has increased inconsistently. Reliability analysis combining all wave 2 and wave 3 Violent Home items yields a Cronbach's alpha of 0.73, an acceptable reliability score.

**5.2.3 Harsh Parenting** was tested with the following items:

Questionnaire Item (response options: 1=often, 2=sometimes, 3=hardly ever, 4=never)	path coefficient wave 2	Covariance Wave 2	path coefficient wave 3	Covariance Wave 3	
Q2.51 - How often are you in trouble with any of your parents/ caregivers?	.46		.52		
Q2.56 -How often do any of your parents/caregivers shout at you?	.39		.60	.18 with q2.60	
Q2.57 - How often do any of your parents/caregivers hit, slap, cane, punch, beat, or in any other way, physically hurt you?	.61		.58		
Q2.58 - How often do any of your parents/caregivers lock you into or out of the house?	.33	.33 with q2.59	.33	.50 with q2.59	
Q2.59 - How often do any of your parents/caregivers refuse to give you food (when there is food in the house)?	.35	.33 with q2.58	.34	.50 with q2.58	
Q2.60 - How often do your parents/caregivers punish you when you do not obey their rules or instructions?	.50		.51		
CFA fit stats wave 2	Chi-sq= 3.41 d.f. 8	Chi-sq./d.f.= 0.43	p-value= .906	CFI= 1.00	RMSEA= .000
CFA fit stats wave 3	Chi-sq= 18.59 d.f. 7	Chi-sq./d.f.= 2.66	p-value= .010	CFI= 0.962	RMSEA= .073
Reliability testing (Cronbach's alpha)		wave2=.61	Combined waves= .58		Wave3= .67
Mean construct score (standard deviation)		1.92 (0.48)			1.94 (0.49)
Skewness (standard error of skewness)		0.39 (0.14)			0.10 (0.14)
Kurtosis (standard error of kurtosis)		0.54 (0.28)			-0.38 (0.28)

Table 5.3. Questionnaire items, factor loadings, CFA fit stats, reliability testing and descriptives for the construct Harsh and Inconsistent Parenting

CFA fit statistics confirmed a 6-item construct for Harsh / Inconsistent Parenting in waves 2 and 3 (table 5.3, above). The modal response ‘sometimes’ (scored as 2) is prevalent in wave 2 with somewhat more dispersion in wave 3. Reliability increased marginally from wave 2 to wave 3 (from 0.61 to 0.67). Reliability scores for similar scales have not been found in the literature.

Mean difference (-0.20) is non-significant ( $p=.61$ ) meaning that Harsh Parenting scores have not changed significantly as a whole. In focus group discussion with female Khayelitsha parents, many expressed having given up on attempts to correct and discipline teenage sons who had begun getting into trouble. This could, therefore, be perceived by some study participants as less harsh parenting (parenting ‘withdrawal’). Reliability analysis combining all wave 2 and wave 3 Harsh Parenting items yields a Cronbach’s alpha of 0.58, a somewhat unsatisfactory reliability score (though reliability results were better for individual waves).

### 5.2.4 Less Parental Involvement was tested with the following items:

Questionnaire Item (response options: 1=often, 2=sometimes, 3=hardly ever, 4=never)	path coefficient wave 2	Covariance Wave 2	path coefficient wave 3	Covariance Wave 3	
Q2.47 - Do you feel that the rules in your family are clear?	.47		.58		
Q2.48 - Do you need permission from any of your parents/caregivers when you go out?	.37	.35 with q2.49	.43	.45 with q2.48	
Q2.49 - Do any of your parents/caregivers know where you are when you are not at home?	.46	.35 with q2.48	.77		
Q2.54 - How often do any of your parents/caregivers check or ask whether you have done your homework?	.26	.36 with q2.55	.31	.63 with q2.55	
Q2.55 - How often do any of your parents/caregivers attend school meetings?	.39	.36 with q2.54	.36	.63 with q2.54	
Q2.62 - My parents/caregivers give me good advice	.39		.70	.54 with q2.63	
Q2.63 - My parents/caregivers show their love for me	.52	.27 with q2.65	.77	.54 with q2.62	
Q2.64 - My parents/caregivers show their interest in my friends	.50		.49		
Q2.65 - My parents/caregivers make me feel good when I am with them	.44	.27 with q2.63	.77		
Q2.67 (wave 3 only) - My parent(s) show that they are proud of me			.79		
CFA fit stats wave 2	Chi-sq= 54.69 d.f. 24	Chi-sq./d.f.= 2.28	p-value= .000	CFI= .918	RMSEA= .045
CFA fit stats wave 3	Chi-sq= 130.12 d.f. 32	Chi-sq./d.f.= 4.07	p-value= .000	CFI= 0.923	RMSEA= .099
Reliability testing (Cronbach's alpha)	wave2=.67	Combined waves= .76	Wave3= .81		
Mean construct score (standard deviation)	1.40 (0.34)			1.61 (0.44)	
Skewness (standard error of skewness)	1.03 (0.14)			1.19 (0.14)	
Kurtosis (standard error of kurtosis)	0.94 (0.28)			1.58 (0.28)	
Mean scores after square root transformation	1.17 (0.14)			1.26 (0.16)	
Skewness after square root transformation	0.76 (0.14)			0.84 (0.14)	
Kurtosis after square root transformation	0.16 (0.28)			0.60 (0.28)	

Table 5.4. Questionnaire items, factor loadings, CFA fit stats, reliability testing and descriptives for the construct Less Parental Involvement

CFA fit statistics confirmed a 10-item construct for Less Parental Involvement in wave 2 though fit is poorer in wave 3 (table 5.4, above). Distribution is skewed left, towards more parental involvement, in both waves. Skewness may be a concern for both waves and kurtosis, a concern for wave 3. After square root transformation, skewness and kurtosis were brought within acceptable levels.

Ward et al (2007) reported a reliability of 0.77 for a 6-item scale of parental support administered to approximately 370 Cape Town youth. The wave 3 reliability of 0.81 compares favourably with Ward's measure. Less Parental Involvement mean score difference (-0.09) increased significantly ( $p=.000$ ) meaning that reported parental involvement decreased over waves. This could

be a trend consistent with study participant aging and increasing independence. Reliability analysis combining all wave 2 and wave 3 Less Parental Involvement items yields a Cronbach's alpha of 0.76, a good reliability score.

**5.2.5 Deviant Peer Associations or More Deviant Peers** was tested with the following items:

questionnaire item (response options: 0= never/none of my friends, 2=once or twice/1 or 2 of my friends, 3= often/3-4 friends, 4=Every day/5 or more friends)	path coefficient wave 2	Covariance Wave 2	path coefficient wave 3	Covariance Wave 3	
Q3.23 - Have any of your friends bought drugs in the past year?	.54	.48 with q3.26	.56	.74 with q3.26	
Q3.26- I do not want to know any details but do any of your friends regularly use or sell drugs?	.52	.48 with q3.23	.54	.74 with q3.23	
Q3.28.1- Have any of your friends dropped out of school?	.61	.25 with q3.28.3	.62	.42 with q3.28.3	
Q3.28.3- Have any of your friends skipped school a lot without permission?	.58	.25 with q3.28.1	.63	.42 with q3.28.1	
Q3.28.4- Do any of your friends smoke cigarettes on a pretty regular basis?	.78		.85		
Q3.28.5- Do any of your friends go out in the evening with their parents' permission?	.62		.70		
Q3.28.6_w3- Do any of your friends drink wine/alcohol fairly regularly?	.72		.74		
CFA fit stats wave 2	Chi-sq= 28.43 d.f. 12	Chi-sq./d.f.= 2.37	p-value= .005	CFI= .977	RMSEA= .066
CFA fit stats wave 3	Chi-sq= 12.36 d.f. 12	Chi-sq./d.f.= 1.03	p-value= .417	CFI= 1.00	RMSEA= .010
Reliability testing (Cronbach's alpha)	wave2= .83	Combined waves= .84		Wave3= .87	
Mean construct score (standard deviation)	1.07 (0.94)			1.25 (0.98)	
Skewness (standard error of skewness)	0.78 (0.14)			0.36 (0.14)	
Kurtosis (standard error of kurtosis)	-0.19 (0.28)			-0.81 (0.28)	

Table 5.5. Questionnaire items, factor loadings, CFA fit stats, reliability testing and descriptives for the construct Deviant Peer Associations.

CFA fit statistics confirmed a 7-item construct for Deviant Peer Associations in waves 2 and 3 (table 5.5, above). Distributions are fairly similar across both waves, skewed left toward less deviant peer associations with a relatively long tail of few study participants with high rates of deviant peer association. In the Multisite Violence Prevention Project (2004) in the U.S.A, a 10-item peer deviance scale yielded a reliability of 0.85 with a much larger sample size. The Ward et al (2007) study found a reliability of 0.84 for an 8-item scale among Cape Town youth. Thus, the reliability scores of 0.83 in wave 2 and 0.87 in wave 3 of this study compare favourably.

Correlation between waves of the Deviant Peer Associations measure is significant ( $r=.25$ ,  $p=.000$ ), suggesting the 'persistency' of the construct, that deviant friends in one year are likely to correlate with deviant friends in the next year.

Mean difference (-0.18,  $p=.006$ ) is significant, indicating that scores have increased with some degree of consistency between waves, suggesting that deviant peer influence increases as subjects age.

Reliability analysis combining all wave 2 and wave 3 Peer Deviance items yields a Cronbach’s alpha of 0.84, a good reliability score.

**5.2.6 Positive Attitude toward Gangs wave 3** was tested with the following items:

questionnaire item (response options wave 2: 0=not true for me, 3=somewhat true for me, 4=very true for me. Response option wave 3: 0=strongly disagree, 1=disagree, 3=agree, 4=strongly agree)		path coefficient wave 2	Covariance Wave 2	path coefficient wave 3	Covariance Wave 3
Q8.1 - I think you are safer, and have protection, if you join a gang		.53	.18 with q8.2	.70	
Q8.2 - I will probably join a gang		.83	.18 with q8.1	.64	
Q8.3 - Some of my friends at school belong to gangs		.31	.25 with q8.10	.63	.35 with q8.10
Q8.4 - I think it’s cool to be in a gang		.60		.81	
Q8.9 - I belong to a gang		.37		.34	.20 with q8.10
Q8.10 w3- People think I’m a gangster		.33	.25 with q8.3	.42	.20 with q8.9
CFA fit stats wave 2	Chi-sq= 8.46 d.f. 7	Chi-sq./d.f.= 1.21	p-value= .294	CFI= 0.995	RMSEA= .026
CFA fit stats wave 3	Chi-sq= 14.66 d.f. 7	Chi-sq./d.f.= 2.09	p-value= .041	CFI= 0.984	RMSEA= .059
Reliability testing (Cronbach’s alpha)		wave2= .62	Combined waves= .69		Wave3= .77
Mean construct score (standard deviation)		0.31 (0.56)		0.74 (0.60)	
Skewness (standard error of skewness)		2.80 (0.14)		1.07 (0.14)	
Kurtosis (standard error of kurtosis)		10.60 (0.28)		2.55 (0.28)	
Mean score after square root transformation		0.31 (0.46)		0.75 (0.42)	
Skewness after square root transformation		1.13 (0.14)		-0.42 (0.14)	
Kurtosis after square root transformation		0.18 (0.28)		-0.41 (0.28)	

Table 5.6. Questionnaire items, factor loadings, CFA fit stats, reliability testing and descriptives for the construct Positive Attitude Toward Gangs

CFA fit statistics confirmed a 6-item construct for Positive Attitude Toward Gangs in waves 2 and 3 (table 5.6, above). In Wave 2, distribution was very narrow, with a high modal response of 0=*not true for me*. Inclusion of 4 Likert-scale response options in wave 3 (up from a 3-response option scale in wave 2), perhaps complemented by more subject disclosure, seems to have resulted in more dispersion, though the modal response remains 1=*disagree* (though with far less frequency). Reliability of the scale also improved substantially from 0.62 in wave 2 to 0.77 in wave 3. Experience with scales with only 3 response options suggests that this inherently leads to poor reliability, as compared with using a 4-item Likert scale. In a 9-item Attitudes Toward Gangs scale, Nadel et al (1996) measured a reliability of 0.74. Inherent in much gang culture is a ‘code of silence’ requiring that participants do not talk about their involvement nor the gang’s activities. This code of silence was also revealed in focus groups with Khayelitsha youth, and even among those trusting enough to reveal their own gang affiliation. Thus, achieving a reliability of 0.77 with some variation of scores on a pro-gang attitude scale seems significant.

Mean difference (-0.44, p= .000) is significant with scores significantly higher in wave 3. This is partly anticipated with the increased response range from 3 to 4, even with the corrected (equivalent) upper-end of the scoring range in wave 2 (scoring “Agree” as a 4-point value in wave 2). However, the

significant reduction of nil scores, from 205 in wave 2 to only 49 in wave 3, suggests that there is either an increase in disclosure (as evidenced by the positive pairwise correlation between waves,  $r=.14$ ,  $p=.013$ ) or in the “true” incidence of favourable gang attitudes.

Reliability analysis combining all wave 2 and wave 3 Pro-Gangs Attitude items yields a Cronbach’s alpha of 0.69, an acceptable reliability score.

**5.2.7 Negative Attitude toward School/Low School Attachment** was tested with the following items:

questionnaire item response options: 4=strongly disagree, 3=disagree, 2=agree, 1=strongly agree	path coefficient wave 2	Covariance Wave 2	path coefficient wave 3	Covariance Wave 3
Q6.5 - You like(d) school a lot	.47	.19 with q6.6	.76	.40 with q6.6
Q6.6- School is (was) boring	.34	.19 with q6.5 .28 with q6.7	.65	.40 with q6.5
Q6.7- You usually finish(ed) your homework	.49	.28 with q6.6	.64	
Q6.10- You try (tried) really hard at school	.58		.52	
Q6.12- Getting good grades is (was) very important to you	.71		.81	
Q6.12.1- It is (was) very important to me to be considered a clever student by my teacher(s)	.72		.64	
Q6.12.2- Teachers at my school are (were) willing to help students	.60	.19 with q6.12.3	.56	.39 with q6.12.3
Q6.12.3- Most of my teachers notice(d) when I am (was) doing a good job and let me know about it	.59	.19 with q6.12.2	.67	.39 with q6.12.2
CFA fit stats wave 2	Chi-sq= 35.08 d.f. 17	Chi-sq./d.f.= 2.06	p-value= .006	CFI= 0.970 RMSEA= .059
CFA fit stats wave 3	Chi-sq= 41.17 d.f. 18	Chi-sq./d.f.= 2.29	p-value= .001	CFI= 0.976 RMSEA= .064
Reliability testing (Cronbach’s alpha)	wave2= .79	Combined waves= .79		Wave3= .87
Mean construct score (standard deviation)	1.58 (0.40)			1.79 (0.46)
Skewness (standard error of skewness)	0.30 (0.14)			0.44 (0.14)
Kurtosis (standard error of kurtosis)	-0.49 (0.28)			0.08 (0.28)

Table 5.7. Questionnaire items, factor loadings, CFA fit stats, reliability testing and descriptives for the construct Negative Attitude toward School

CFA fit statistics confirmed a 5-item construct for Negative School Attitude/Attachment in waves 2 and 3 (table 5.7, above). Ward et al (2007) reported a reliability of 0.69 for an 8-item school attitude scale administered to 370 Cape Town youth. In the Rochester Youth Development Study, Thornberry et al (1991) found an internal consistency of 0.81 for a 10-item Commitment to School scale. In the present study, reliability increased from 0.79 in wave 2 to 0.87 in wave 3 for this 8-item scale.

Means comparison shows a significant increase in Negative School Attitude in wave 3 ( $-0.21$ ,  $p=.000$ ), suggesting potentially increased disclosure. Reliability analysis combining all wave 2 and wave 3 Negative School Attitude items yields a Cronbach’s alpha of 0.79, a very good reliability score.

### 5.2.8 Negative Attitude toward the Future/Low Resiliency was tested with the following items:

questionnaire item response options: 4=strongly disagree, 3=disagree, 2=agree, 1=strongly agree	path coefficient wave 2	Covariance Wave 2	path coefficient wave 3	Covariance Wave 3	
Factor 1 – Resilience – path coefficient	.99		.83		
Q17.1- I have specific goals in my life I want to achieve.	.60	.44 with q17.2	.68	.21 with q17.2	
Q17.2- I have a good idea of where I am going in my life.	.65	.44 with q17.1	.77	.21 with q17.1	
Q17.3- My own efforts and actions are what will determine my future.	.63		.74		
Q17.4- I feel that I would be able to cope with difficult situations that may present themselves in the future.	.62		.70		
Q17.6- I am good at deciding whether a risk is worth taking.	.47		.55	.23 with q17.7	
Q17.7- I am able to survive on my own if I have to.	.26		.49	.23 with q17.6	
Factor 2: Social Acceptance / Future Orientation– path coefficient	.84		.83		
Q17.13- I am as good a person as I want to be.	.53		.64		
Q17.13.1- I will study further after school	.59		.63		
Q17.13.2- I will find a job I will enjoy	.61	.12 with q17.13.3	.77	.60 with q17.13.3	
Q17.13.3- I will have a happy life	.63	.12 with q17.13.2	.78	.60 with q17.13.2	
Q17.13.4- You will succeed in doing what is most important for you	.76		.86		
CFA fit stats wave 2	Chi-sq= 11.96 d.f. 41	Chi-sq./d.f.= 2.73	p-value= .000	CFI= 0.924	RMSEA= .075
CFA fit stats wave 3	Chi-sq= 123.74 d.f. 40	Chi-sq./d.f.= 3.09	p-value= .000	CFI= 0.949	RMSEA= .082
Reliability testing (Cronbach’s alpha)	wave2= .81	Combined waves= .80		Wave3= .89	
Mean construct score (standard deviation)	1.49 (0.36)			1.72 (0.43)	
Skewness (standard error of skewness)	0.81 (0.14)			0.40 (0.14)	
Kurtosis (standard error of kurtosis)	0.83 (0.28)			-0.25 (0.28)	

Table 5.8. Questionnaire items, factor loadings, CFA fit stats, reliability testing and descriptives for the construct Negative Attitude towards the Future.

A single-factor solution with adequate fit statistics was not possible for Negative Future Attitude. However, CFA fit statistics confirmed an 11-item 2-factor solution for Negative Future Attitude / Low Resilience in waves 2 and 3 (table 5.8, above). This two-factor solution, comprised of a Resilience component and a Social Acceptance/Future Orientation component, displays marginally acceptable fit statistics with normal distributions. Ward et al (2007) found a reliability of 0.81 for a 5 items scale of future orientation. In this study, the reliability increased from 0.81 in wave 2 to 0.89 in wave 3.

Negative Future Attitude in wave 3 is significantly greater than in wave 2 (-0.23,  $p = .000$ ). As seen with other constructs, this could be a result of increased disclosure or the possibility that, as study participants age out of school and, mostly (but not consistently) into unemployment, their view of the future becomes less positive. Reliability analysis combining all wave 2 and wave 3 Negative Future Attitude items yields a Cronbach’s alpha of 0.80, a very good reliability score.

**5.2.9 Positive Attitude toward the use of Violence** was tested with the following items:

questionnaire item response options: 0=strongly disagree, 1=disagree, 3=agree, 4=strongly agree	path coefficient wave 2	Covariance Wave 2	path coefficient wave 3	Covariance Wave 3	
Factor 1: Hegemonic attitude to violence– path coefficient	.95		1.05		
Q10.3- It is sometimes okay for people to be discriminated against or physically harassed because of their nationality.	.58		.82		
Q10.4- A guy shows he really loves his girlfriend if he gets in fights with other guys about her.	.49		.54		
Q10.6- People from other races, sometimes deserve to be discriminated against or physically harassed.	.60		.76		
Q10.9- It is sometimes okay for people to be discriminated against or physically harassed because of their sexual orientation.	.68		.70		
Factor 2: Reactive Violence– path coefficient	.69		.60		
Q10.8- If people do things to make me really mad, they deserve to be beaten up.	.64		.70		
Q10.21- If you mess with me/my friends, you will get hurt	.54		.74		
CFA fit stats wave 2	Chi-sq= 21.11 d.f. 8	Chi-sq./d.f.= 2.64	p-value= .007	CFI= 0.95	RMSEA= .073
CFA fit stats wave 3	Chi-sq= 16.71 d.f. 8	Chi-sq./d.f.= 2.09	p-value= .033	CFI= 0.985	RMSEA= .059
Reliability testing (Cronbach’s alpha)	wave2= .69	Combined waves= .68	Wave3= .77		
Mean construct score (standard deviation)	0.91 (0.62)			0.83 (0.49)	
Skewness (standard error of skewness)	0.91 (0.14)			0.06 (0.14)	
Kurtosis (standard error of kurtosis)	1.39 (0.28)			-0.17 (0.28)	

Table 5.9. Questionnaire items, factor loading, CFA fit stats, reliability testing and descriptives for the construct Pro-Violence Attitude

A single-factor solution with adequate fit statistics was not possible for Pro-Violence Attitude. CFA fit statistics confirmed a 6-item, 2-factor solution for Positive Attitude Towards the Use of Violence in waves 2 and 3 (table 5.9, above). This 6-item, two-factor solution, comprised of a 4-item Hegemonic Violence component and a 2-item Reactive Violence component, yields acceptable fit statistics with no covariances between items, and relatively normal distributions, although kurtosis is a potential issue for the wave 2 construct.

The internal consistency found in other attitude toward violence scales is somewhat poor. In U.S. studies, the Houston Community Demonstration Project (1993) found a reliability of 0.67 for a 6 items scale with middle school students; the Multisite Violence Prevention Project (2004), a reliability of 0.72 for a 12-item scale, also with middle school students; and, Prothrow-Stith (1987), 0.70 for a 7-item scale on impulse control administered to 12-16 year-old African-American males. From the breadth of scales of attitudes toward violence and their inclusion in youth studies, it is clear that there is a need for such measures in the analysis of youth violence. However, the low internal consistencies (let alone any evidence of test-retest reliability) in the aforementioned studies speak to the challenge of

measuring attitudes favourable to the use of violence and triangulating this measure with real acts of violence, with either a prospective or retrospective approach.

In this study, a number of new pro-violence items were tested with each wave in an attempt to improve construct reliability, though, ultimately, only the 6 items common to both waves were confirmed. Reliability of the Pro-Violence measure improved from 0.69 in wave 2 to 0.77 in wave 3. Mean difference is not significant at the  $p < .05$  level (0.08,  $p = .065$ ) and slightly higher in wave 2 suggesting that increased study participant age nor other fieldwork changes resulted in an overall increase in pro-violence attitude. Reliability analysis combining all wave 2 and wave 3 Pro-Violence Attitude items yields a Cronbach's alpha of 0.68, an acceptable reliability score. Given the relatively poor fit statistics and reliability deficiencies, there is concern that use of Pro-Violence Attitude as the primary dependent variable in this study would prove challenging to uncover meaningful relationships. Thus, there is need to explore a violence composite index that has theoretical underpinnings as well as a strong quantitative basis through CFA.

**5.2.10 Maternal Assessment of child's dangerous behaviour** was tested with the following items:

questionnaire item	path coefficient wave 2	Covariance Wave 2	path coefficient wave 3	Covariance Wave 3	
“How often do the following attributes describe your son?” (response options: 1= almost always, 2=often, 3=sometimes, 4=seldom, 5=never)					
Factor 1: Home conduct. path coefficient	1.09		1.00		
Q18.1- Is considerate of other people's feelings?	.31	.15 with q18.2	.62	.42 with q18.2	
Q18.2- Is generally obedient, usually does what you request?	.31	.15 with q18.1	.76	.42 with q18.1	
Q18.4- Has a hot temper?	.53	.40 with q18.5	.32	.40 with q18.5	
Q18.5- Is very moody and easily upset?	.53	.40 with q18.4	.30	.40 with q18.4	
Q18.8- Fights with his siblings or other members of the household?	.48		.40		
Factor 2: Trouble outside of home. path coefficient	.73		.69		
Q18.9- Gets into trouble at school, work and/or in the community?	.53		.40		
Q18.12- How often do you fight with your son about what he does when he is out (not at home)? (Response options: often/sometimes/hardly ever/never)	.31	.48 with q18.13	.61	.57 with q18.13	
Q18.13- How often do you fight with your son about what time he comes home when he has been out?	.43	.48 with q18.12	.71	.57 with q18.12	
Q18.14- How often do you fight with your son about having bad or dangerous friends?	.76		.60		
CFA fit stats wave 2	Chi-sq= 35.58 d.f. 23	Chi-sq./d.f.= 1.55	p-value= .046	CFI= 0.969	RMSEA= .042
CFA fit stats wave 3	Chi-sq= 82.61 d.f. 23	Chi-sq./d.f.= 3.59	p-value= .000	CFI= 0.92	RMSEA= .091
Reliability testing (Cronbach's alpha)	wave2= .70	Combined waves= .73		Wave3= .75	
Mean construct score (standard deviation)	2.06 (0.63)			2.08 (0.66)	
Skewness (standard error of skewness)	0.36 (0.14)			0.37 (0.14)	
Kurtosis (standard error of kurtosis)	-0.22 (0.28)			-0.42 (0.28)	

Table 5.10. Questionnaire items, factor loadings, CFA fit stats, reliability testing and descriptives for the construct Maternal Assessment of Subject's Dangerous/Risky Behaviour.

In the Maternal Assessment (table 5.10, above), items Q18.12, Q18.13, and Q18.14 were on a scale of 1-4 vs. a scale of 1-5 for items Q18.1-Q18.9. To balance the scoring, items Q18.12-Q18.14 were recoded to: *often*=5, *sometimes*=4, *hardly ever*=2, *never*=1 in order to preserve responses at the extremes.

CFA fit statistics confirmed a 9-item, 2-factor solution for the Maternal Assessment of Subject's Risky Behaviour in wave 2 although fit statistics are somewhat poor in wave 3 (table 5.10, above). As the Maternal Assessment is primarily used for triangulation with other key violence-related outcome measures, and not as a standalone dependent variable, the fit is deemed acceptable.

Both distributions are skewed towards less problem behaviour but still show a broad and normal distribution. No reliability analysis of similar scales have been found, in South African or international studies. Parent assessments are more frequently used in studies of younger subjects when an external assessment of conduct disorder is sought.

There is no significant difference between means (-0.02,  $p=.662$ ) for the maternal report of the study participant's problem behaviour. Reliability analysis combining all wave 2 and wave 3 Maternal Assessment of Participant's Risky Behaviour items yields a Cronbach's alpha of 0.75, a good reliability score.

**5.2.11 Violence Exposure** was tested with the following items:

questionnaire item (response options: 0=never in my life, 1=once or twice, 2=a few times, 3=many times)	path coefficient wave 2	Covariance Wave 2	path coefficient wave 3	Covariance Wave 3	
Q4.7 - I have heard guns being shot (while in my home or in my neighbourhood).	.65		.64		
Q4.8 - I have seen somebody arrested	.70		.78		
Q4.9 - I have seen drug deals	.51		.43		
Q4.10 - I have seen someone being beaten up	.70		.80		
Q4.11 - I have seen somebody being stabbed or shot	.68	.25 with q4.12	.73	.39 with q4.12	
Q4.12 - I have seen someone pull a gun or knife on another person	.69	.25 with q4.11	.67	.39 with q4.11	
Q4.13 - I have seen gangs in my neighbourhood	.63		.62		
CFA fit stats wave 2	Chi-sq= 25.93 d.f. 13	Chi-sq./d.f.= 1.99	p-value= .017	CFI= 0.981	RMSEA= .057
CFA fit stats wave 3	Chi-sq= 20.90 d.f. 13	Chi-sq./d.f.= 1.61	p-value= .075	CFI= 0.991	RMSEA= .044
Reliability testing (Cronbach's alpha)	wave2= .84	Combined waves= .80		Wave3= .85	
Mean construct score (standard deviation)	2.48 (0.73)			1.72 (0.71)	
Skewness (standard error of skewness)	0.03 (0.14)			-0.15 (0.14)	
Kurtosis (standard error of kurtosis)	-0.78 (0.28)			-1.05 (0.28)	

Table 5.11. Questionnaire items, factor loadings, CFA fit stats, reliability testing and descriptives for the construct Violence Exposure.

CFA confirmed a 7-item single factor solution for Violence Exposure in both waves 2 and 3 (table 5.11, above). Distribution is fairly normal in wave 2 but becomes skewed toward higher levels in wave 3 and shows slight kurtosis. Reliability was consistently high at 0.84 in wave 2 and 0.85 in

wave 3. This reliability is in line with the 0.84 reliability of a 12-item exposure to community violence scale administered to 12-16 year-old African Americans by Richters and Martinez (1990).

Mean reported Violence Exposure has significantly decreased from wave 2 to wave 3 (0.76,  $p=.000$ ), in contrast to the significant increases in victimization (and reported crime). This may be the result of randomized decreases in exposure to violent incidences (which would not accord with the increased SAPS crime reports). Or, more likely, there is a degree of non-response, a normalization/acceptance of violence (and, thus a tendency to under-report), and a potential testing effect.

### 5.2.12 Additional constructs developed

Several constructs combining self-reported behaviours or incidents do not lend themselves to CFA due to high-levels of nil reports and skewed distributions.

**Substance use/Abuse** is a combination of regular alcohol use and multiple and frequent drug use. Regular alcohol use was derived from the question: *How often in the last 12 months have you used alcohol?* Monthly use was coded as 1, Weekly use coded as 2, daily use coded as 3, and the rest, coded as 0.

Multiple drug use combined affirmative responses (coded as 1) to using any of the following drugs in the past 12 months: *marijuana, sniffed glue or other inhalants to get high, tik* (methamphetamine), *any other drugs (eg. Mandrax/white pipes, Nyaope)*. For each affirmative response, the follow-up question was: *How often in the last 12 months have you used [the indicated substance]?* Monthly use was coded as 1, Weekly use coded as 2, daily use coded as 3, and the rest, coded as 0. Combined scores can range from 0 (no substance use) to 15 (daily alcohol use+daily dagga use+ daily inhalants use+ daily tik use+ daily any other drug use). Due to high levels of nil reports, factor analysis and reliability testing is not possible. As this construct combines similar self-reported behaviours, and not items intended to measure a latent construct, factor analysis is not required.

Combined Substance Use/Abuse	Wave 2	Wave 3
Mean construct score (standard deviation)	0.85 (1.91)	0.89 (1.72)
Skewness (standard error of skewness)	3.44 (0.14)	2.49 (0.14)
Kurtosis (standard error of kurtosis)	14.82 (0.28)	6.36 (0.28)
Mean score after square root transformation	0.46 (0.80)	0.51 (0.80)
Skewness after square root transformation	1.64 (0.14)	1.30 (0.14)
Kurtosis after square root transformation	1.95 (0.28)	0.51 (0.28)

Table 5.12. Descriptives for the construct Combined Substance Use/Abuse.

For Combined Substance Use/Abuse (table 5.12, above), distributions are very similar between waves and highly skewed to 0-reports. Square root transformation reduced kurtosis to below an absolute value of 1.0 for wave 3 and skewness to an absolute value of 1.30, still a potential concern.

The wave 2 square root transformation reduced skewness to 1.64 and kurtosis to 1.95, still mildly skewed and kurtotic. Given the nature of the construct, drug and alcohol use disclosure primarily among a sample of minors, a highly skewed response is not surprising.

Mean difference is non-significant (-0.04,  $p=.48$ ) though reports have slightly increased in wave 3. The prevalence of alcohol use is far greater than the reported use of other drugs. In all cases where dagga and or tik use is reported, monthly, weekly or daily alcohol use is also reported suggesting that alcohol may function as a gateway substance. While sniffing glue was reportedly common within focus group discussions with Khayelitsha youth, there were no affirmative reports of sniffing glue or other fumes to get high among study participants in wave 3.

**Combined Victimization past 12 months** is a combination of affirmative reports of *you or anyone else in your household in the past 12 months*:

- *q7.2\_w3-being assaulted (attacked, beaten up by someone);*
- *q7.2.11\_w3-been threatened with a weapon*
- *q7.2.21\_w3-been stabbed or shot with a weapon;*
- *q7.3\_w3-been robbed;*
- *q7.4\_w3-home burgled;*
- *q7.5\_w3-theft of vehicle or bicycle;*
- *q7.7\_w3-been raped or sexually assaulted;*
- *q7.9\_w3-been murdered.*

Combined Victimization Past 12 Months is constructed as a composite scores ranging between 0 (no victimization ever) and 8 (victimization in every category).

Combined Victimization	Wave 2	Wave 3
Mean construct score (standard deviation)	0.86 (1.28)	1.64 (1.45)
Skewness (standard error of skewness)	1.88 (0.14)	0.80 (0.14)
Kurtosis (standard error of kurtosis)	3.61 (0.28)	0.11 (0.28)

Table 5.13. Descriptives for the construct Combined Victimization.

Skewness and kurtosis indicated non-normality in the wave 2 Victimization construct (table 5.13, above).

Mean reported victimization has increased significantly from wave 2 to wave 3 (-0.78,  $p=.000$ ). This may be indicative of greater trust and disclosure from study participants or actual increases in crime and victimization in the area. Based on Khayelitsha police precinct crime statistics (SAPS, 2013), there was a significant increase in reported contact crimes. However, the relationship between reported and unreported crimes is unknown.

**Combined Multi-Category Serious Violent Offending past 12 months** is a combination of affirmative reports of engaging in the following acts in the past 12 months:

- *q14.2.1-carrying a gun, knife or weapon for protection;*
- *q14.3.1-using force threats or a weapon to steal money or something else from somebody or said that you would hurt somebody if they did not do what you told them to;*
- *q14.5.1-got into or broke into a house/building to try to steal something;*
- *q14.6.1-set fire or tried to set fire to something on purpose;*
- *q14.10.1-forced anyone to engage in sexual activity with you when they did not want to;*
- *q14.15.1-used a weapon to threaten or injure someone else;*
- *q14.18.1-been involved in any gang fights.*

Scores can range between 0 (no offending in the past 12 months) and 7 (offending in every category).

Combined Multi-Category Serious/Violent Offending past 12 months	Wave 2	Wave 3
Mean construct score (standard deviation)	0.14 (0.48)	0.27 (0.68)
Skewness (standard error of skewness)	4.53 (0.14)	3.91 (0.14)
Kurtosis (standard error of kurtosis)	24.50 (0.28)	21.87 (0.28)

Table 5.14. Descriptives for the construct Combined Multi-Category Serious/Violent Offending past 12 months.

The distributions for Combined Multi-Category Serious/Violent Offending Past 12 Months are non-normal, highly skewed to 0-reports but this is expected for measures of violent offending among a general population sample (table 5.14, above).

Combined offending in the past 12 months is significantly higher in wave 3 (-0.14,  $p=.003$ ), suggesting that disclosure and/or prevalence (of the most sensitive information, on violent offending) has indeed increased. Given that the mean score has doubled from wave 2 to wave 3, it seems improbable that actual rates of offending have increased by 200% across this Khayelitsha demographic in one year. I would conclude, therefore, that, overall, study participants have disclosed more sensitive information in wave 3 than wave 2 (or wave 1).

**Combined Incidences - Serious Violent Offending past 12 months** is a combination of frequency measures for affirmative reports of engaging in the aforementioned violent offending acts in the past 12 months (see Combined Serious Violent Offending past 12 months construct development). Response options for each affirmative response are: *1=once only, 2=two or three times, 3=four to five times, 4=six or more times*. Thus, scores for the combined incidence measure can range between 0 (no incidence of offending in the past 12 months) and 28 (six or more incidences of offending in all seven categories). This formulation allows for a measure of the overall incidence of self-reported violent offending as compared with the combined category offending measure which may be more sensitive to specialization (an offender focusing on one or two types of violent offending).

Combined Incidences of Serious/Violent Offending past 12 months	Wave 2	Wave 3
Mean construct score (standard deviation)	0.33 (1.27)	0.39 (1.15)
Skewness (standard error of skewness)	5.81 (0.14)	4.18 (0.14)
Kurtosis (standard error of kurtosis)	41.70 (0.28)	22.35 (0.28)

Table 5.15. Descriptives for the construct Combined Incidences of Serious/Violent Offending past 12 months.

The distributions for Combined Incidences - Serious/Violent Offending Past 12 Months are non-normal, highly skewed to 0-reports, as with the previous measure of offending (table 5.15, above). Correlation between waves is non-significant ( $r = -.056$ ,  $p = .327$ ).

In an effort to capture the maximum amount of self-disclosed offending over the two waves of the study, I have created two additional variables that combine multi-category and incidence of offending over both waves 2 and 3 combined.

**Total Multi-Category Offending Ever** captures any affirmative response (in wave 2 or wave 3) to having ever committed any of the 7 offences. Scores can still range from 0 (no offending in any category ever) to 7 (offending in every category). Duplicate affirmative reports (to the same question in both waves) are not double-counted.

Multi-Category Combined Serious/Violent Offending Ever	Wave 2 and 3 combined
Mean construct score (standard deviation)	0.48 (0.90)
Skewness (standard error of skewness)	2.36 (0.14)
Kurtosis (standard error of kurtosis)	5.92 (0.28)

Table 5.16. Descriptives for the construct Multi-Category Combined Serious/Violent Offending Ever.

When pairwise correlation analysis is run between Multi-Category Offending Ever as ONLY measured in wave 3 and Total Multi-Category Offending Ever Waves 2 or 3 there is a significant mean increase, through capturing affirmative scores from wave 2 in addition to wave 3 ( $0.08$ ,  $p = .013$ ). This finding suggests that disclosure is not always consistent as a study participant should have reported ever engaging in the same offending in wave 3 that they had previously disclosed in wave 2. Thus, use of these self-report measures must be exercised cautiously as the incidence of self-reporting may not be consistent nor reflect actual prevalence (Krohn et al, 2010).

**Total Incidence-Multi-Category Offending Past 24 Months** (table 5.17, below) captures the frequency responses to any affirmative response (in both wave 2 and wave 3) of having committed any of the 7 offences in the previous 12 months. This measure therefore captures unique incidences of violent offending without repetition (just as within each individual wave measurement). Scores can range from 0 (no offending in any category in the past 24 months) to 56 (offending 6 or more times in every category in the previous 12 months in BOTH wave 2 and wave 3). Therefore, this measure

provides the maximum amount of information and variation on self-disclosed violent offending.

Total Incidence Multi-Category Combined Serious/Violent Offending-Past 24 Months	Wave 2 and 3 combined
Mean construct score (standard deviation)	0.71 (1.67)
Skewness (standard error of skewness)	3.40 (0.14)
Kurtosis (standard error of kurtosis)	14.86 (0.28)

Table 5.17. Descriptives for the construct Total Incidence Multi-Category Combined Serious/Violent Offending-Past 24 Months.

### 5.3 Factor analysis conclusion

Construct validity and reliability was less-than-desirable in Khayelitsha Wave 1 (in appendix) with the questionnaire administered in Xhosa, though for some sensitive constructs, not significantly different from reliability measures found in other studies, both in South Africa (Ward et al, 2007) and abroad (Dahlberg et al, 2005). Due to the wave 1 validity and reliability limitations, coupled with the fact that only 130 study participants were captured in all three waves, CFA was not conducted with wave 1 data.

During the course of the fieldwork, items with poor factor loadings were removed following wave 1 and new items added, particularly to the Parental Involvement, Peer Deviance, Pro-Gangs, Negative School Attitude, Negative Future Attitude, and Pro-Violence Attitude sections in an effort to improve the validity of essential constructs. The decision was also taken to only use an English version of the questionnaire.<sup>39</sup>

As a result, validity and reliability improved for every construct from wave 1 to wave 2 and again from wave 2 to wave 3. This suggests that cross-sectional analysis of wave 2 and wave 3 data should provide useful insights with less “interference”, in the form of measurement error, than that present in wave 1.

In conclusion, confirmatory factor analysis and reliability testing validated all constructs explored in Khayelitsha wave 2 and wave 3, the most demographically-balanced cohort (by age and type of dwelling), after making critical adjustments to the questionnaire tool, field teams and supervision, and interview protocols. Attitude Toward Gangs and Pro-Violence Attitude may still suffer from a lack of disclosure due to the “code of silence”.

### 5.4 Violence-risk assessment and Violence Propensity Score development

Mills (2005), an expert in clinical violence risk assessment, reported that “there is a growing demand now for clinicians to measure and report change in violence risk [that] will, from an applied

<sup>39</sup> All versions of the questionnaire are presented in the appendix.

perspective, be the most important thing we need to learn in the next 10 years... To date, however, there has been relatively little published on how best to measure and incorporate these changeable factors into the risk assessment process.” (Mills, 2005, p.238). With this goal in mind and, based on the less-than-desirable CFA results for the key intended dependent variable, Positive Attitude Toward Violence, I have used CFA to test a 4-factor solution, incorporating Pro-Violence Attitude, Deviant Peers, Pro-Gangs Attitude, and self-reported fighting in the past year, as a battery of questions that collectively, can function as a “scorecard” for the potential for engagement in group/interpersonal violence and associated criminality. This index, or scorecard, is intended both to serve as a composite outcome variable in this study and to allow non-statistical audiences, primarily youth development practitioners in the South African context, with a short questionnaire tool and scoring system that can be quickly administered with few attendant ethical issues (no serious disclosure questions). It is hoped this will allow for more assessment of correlates of youth violence in South Africa using standardized measures that could be compared across communities, across interventions, and over time.

While violence attitude scales are prevalent in the youth violence study literature (at least that from the United States), the efficacy of those scales is still in doubt. For example, in development of the Measures of Criminal Attitudes and Associates (MCAA) scale (Mills, Kroner, & Forth, 2002), the authors found correlations of 0.40 with reported convictions and 0.52 with reported incarcerations. Among the MCAA subscales, criminal associates had the highest correlations with convictions (0.52) and incarcerations (0.59). Correlations with the attitudes toward violence subscale were the lowest among the four subscales (0.05 with convictions, 0.17 with incarcerations). This Mills et al (2002) study is one of the few that reports correlations between attitude toward violence scales and actual behaviour.

Grinberg et al (2004) tested a 53-item Risk Assessment Index (RAI), as a subset of the 120-item Life Challenges Questionnaire-Teen Form (LCQ-TF), on a sample of approx. 400 11-18 year-old subjects, 99 of which were institutionalized in an adolescent detention facility and the remainder, attendees of an urban, private religious high school. Questions within the index covered gang membership, parental involvement, violence in the home, school attachment, deviant peer associations, abuse and trauma, leisure activity, psychological/emotional issues, fighting, assault, and use of weapons. The RAI showed an alpha reliability of 0.87. No exploratory or confirmatory factor analysis results were reported.

Grinberg et al (2004) found a significant difference in risk scores between the convicted offender group and the school students on the RAI ( $B=.31, p<.001$ ), the strongest ‘predictor’ in their multivariate regression analysis. The only other significant predictors were male gender ( $B=.13, p<.05$ ), African American ( $B=.14, p<.05$ ), and Hispanic ( $B=.16, p<.05$ ), with white/Caucasian as the

reference group. The blind assumption that the risk score precedes the acts that led to the arrest, conviction, and detention, rather than the reverse (that experience in detention may lead to higher scores on the risk assessment) suggests one major flaw in this study. Sadly, there are very few studies in the extant literature which have attempted to assess a similar violence-risk index and none that have tested such an index with longitudinal data to demonstrate risk-stability (or change) or the chronologically-ordered predictive ability of such an index.

Walker (2005) developed the 56-item Maudsley Violence Questionnaire (MVQ) and tested with 785 16-19 year-old students in London, England. Walker found two factors, a 'machismo' factor with 42 items, and an 'acceptance of violence' factor with 14 items. The machismo factor related to use of violence as part of being strong and masculine and in response to threat and attack. This 'machismo' factor was also present in females. Both the machismo scale ( $B=0.50$ ) and the MVQ, overall, were highly correlated with self-reported violent behaviours, as measured at the same time as the MVQ. Shortcomings to the MVQ are that no CFA was conducted or reported, the MVQ length seems unnecessarily long, and there is no evidence of longitudinal prediction (MVQ in time 1 predicting violent offending in time 2). The correlations that the author offers as 'predictive evidence' are, indeed, only cross-sectional correlations self-reported by subjects at the same point in time as they complete the MVQ. As was also seen in this study, there appears to a tendency for subjects who are disclosing violent behaviours to also score highly on violence-potential assessments, at the same moment of measurement. However, there is far less evidence that higher violence-potential scores, or even disclosure of violent offending, will predict future high violence-potential or offending-disclosure.

The Attitudes Towards Violence Scale for adolescents (Funk et al, 1999) found two factors, 'culture of violence' and 'reactive violence' with a general youth sample (1,266 junior and high schools students in a medium-sized Midwestern US city) but was not confirmed in CFA, nor against any delinquent/violent behaviour reports. According to Funk et al (1999), "a review of relevant literature did not identify an empirically based scale specifically designed to measure attitudes toward violence in adolescents." The authors expressed the intention to conduct a follow-up study to assess the effects of a violence prevention programme administered in the school but no further study has been published.

In a meta-review of 28 studies utilizing 9 different violence risk assessment tools (not solely youth-focused), Yang et al (2010) found that 8 of the tools only offered moderate prediction-efficacy of future violence and one, poor predictive efficacy. In another meta-review, Fazel et al (2012) reviewed 73 studies across 16 countries and found, overall, that risk assessment tools tended to identify low risk (of future violence) individuals with high accuracy but were inconsistent in their predictive efficacy for future violent offenders. As most of these tools are applied to (and their studies drawn from) criminal treatment and management fields, such poor predictive efficacy is problematic. It follows that the

decision to release a prisoner who will repeat (a false negative) or to deny parole to a convict who will not repeat (a false positive) cannot be effectively supported by a risk assessment.

This essentially means that there is no violence-risk scale in the international extant literature that has been developed and tested with an adolescent/young adult general population, incorporating confirmatory factor analysis and (later) evidence of predictive efficacy. Nor has a study been found that explores intervention effects through changes in the violence-risk-related scale. This would seemingly leave an enormous gap in this field of enquiry. Studies on the causes and correlates of violence abound yet tools to measure/predict violence-propensity and quantitatively assess any intervention effects are non-existent. Further, CFA results for adolescent risk factor research (for outcomes of serious interpersonal violence) are not found at all in the extant literature.

Study design (prospective vs. retrospective, among confirmed offenders) may partially explain the lack of more evidence of the relationship (or lack thereof) between violence attitude and reported violent behaviour. Yet, another possibility is that subscales that show poor internal validity and poor external validity (correlation with behaviour), like attitudes toward violence, are simply not reported in published studies.

To address these gaps in research (and in practice in the South African context), I begin by presenting the 4-factor solution as tested initially with wave 3 data (figure 5.18, below and for wave 2, figure 5.19, below). This formulation of 20 items allows for 7 items measuring peer deviance and criminal associates, 6 items measuring attitudes toward gangs, 6 items measuring pro-violence/instrumental aggression attitude and one item on self-reported physical fighting. The 7 peer deviance items are then scored 0 through 4 and totalled (for a possible 28 points). The 6 pro-gangs items are scored 0 through 4 and totalled (for a possible 24 points). The 6 pro-violence items are scored 0 through 4 and totalled (for a possible 24 points). The item, *How many physical fights have you been in within the past year?*, is scored as 0= none, 5=one fight only, 10=two or three fights, 15=four or five fights, 25=six or more fights. Combining all four subscales, a total score of 101 is possible, effectively a 100-point scale where each point is equivalent to a percentage point.

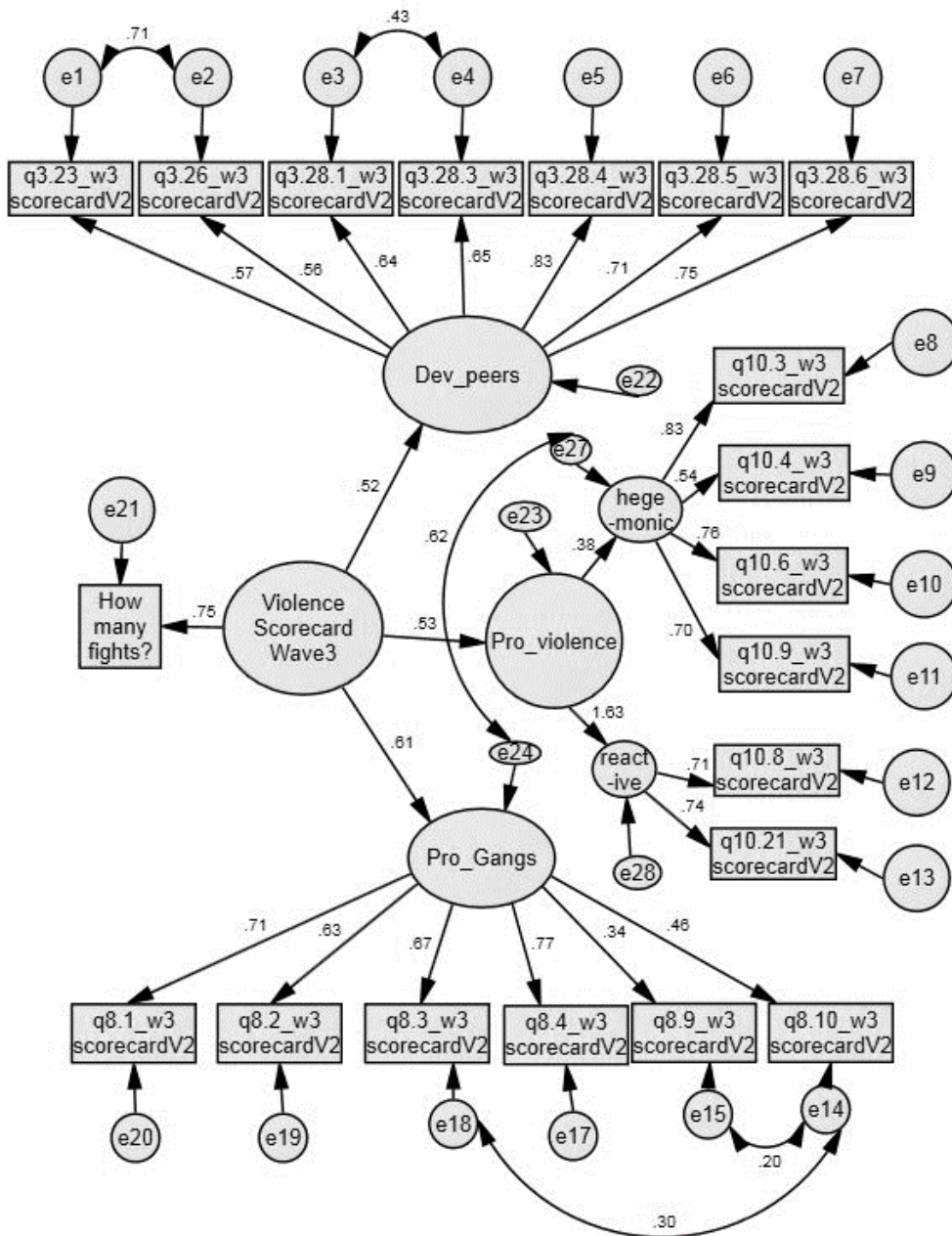


Figure 5.18. CFA 4-factor measurement model for Violence Propensity Score Wave 3 (factor 1: Deviant and Criminal Associates, factor 2: Pro-Violence Attitude with hegemonic and reactive subscales, factor 3: Pro-Gangs Attitude, factor 4: How many physical fights have you been in the past year). Note: individual questionnaire items are defined in tables 5.5, 5.6, and 5.9, above.

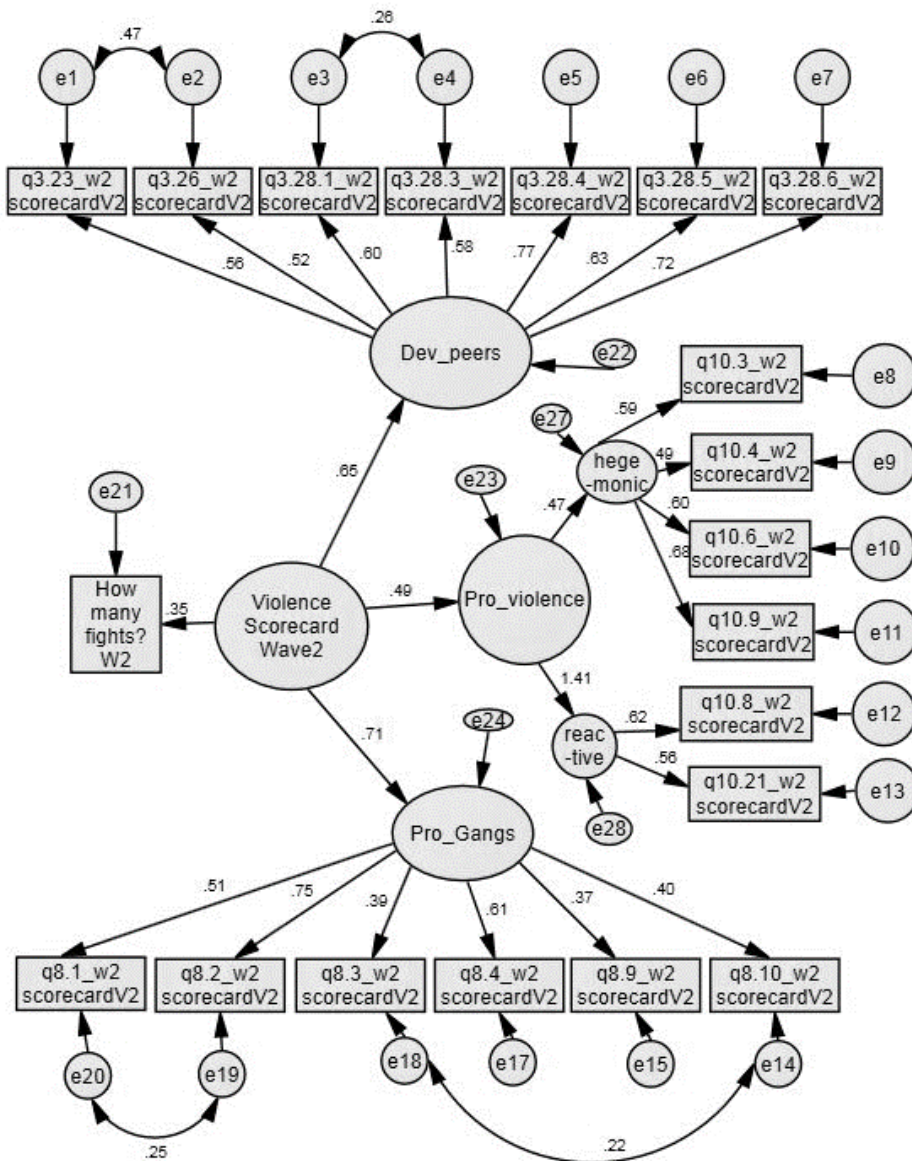


Figure 5.19. CFA 4-factor measurement model for Violence Propensity Score Wave 2 (factor 1: Deviant and Criminal Associates and factor 2: Pro-Violence Attitude with hegemonic and reactive subscales, factor 3: Pro-Gangs Attitude, factor 4: How many physical fights have you been in the past year). Note: individual questionnaire items are defined in tables 5.5, 5.6, and 5.9, above.

CFA fit stats wave 2	Chi-sq= 265.34 d.f. 161	Chi-sq./d.f.= 1.65	p-value= .000	CFI= 0.93	RMSEA= .046
CFA fit stats wave 3	Chi-sq= 319.11 d.f. 160	Chi-sq./d.f.= 1.99	p-value= .000	CFI= 0.94	RMSEA= .057
Reliability testing (Cronbach's alpha)			wave2= .66	Combined waves= .75	Wave3= .81
Mean construct score (standard deviation)			20.55 (13.65)		21.19 (13.10)
Skewness (standard error of skewness)			1.34 (0.14)		0.72 (0.14)
Kurtosis (standard error of kurtosis)			2.75 (0.28)		0.41 (0.28)
Mean score after square root transformation			4.28 (1.51)		4.34 (1.55)
Skewness after square root transformation			0.11 (0.14)		-0.34 (0.14)
Kurtosis after square root transformation			0.52 (0.28)		0.22 (0.28)

Table 5.20. Factor loadings, CFA fit stats, reliability testing and descriptives for the construct Violence Propensity Score.

CFA fit statistics confirm a 20-item 4-factor solution for the Violence Propensity Score in waves 2 and 3 (table 5.20, above). This four-factor solution is comprised of the Peer Deviance sub-

scale, the 2-factor Pro-Violence subscale, the Pro-Gangs subscale, and the single item, ‘How many fights have you been in in the past year?’

Factor loadings and covariations are presented in the measurement models (figures 5.18 and 5.19, above) and thus not reported here (table 5.20) in table form. Violence Scorecard Wave 2 exhibited a non-normal distribution, both skewed and kurtotic. Square root transformation resulted in normal distributions for scores in both waves. There is no significant difference between means (-0.06,  $p=.583$ ) supporting the overall stability of the average Violence-Propensity Score. Reliability analysis combining all wave 2 and wave 3 Violence Scorecard items yields a Cronbach’s alpha of 0.75, a very good reliability score. Results suggest that the Violence Propensity Score is psychometrically sound and temporally stable.

Next, I explored triangulation between the three Violence Propensity Score (VPS) subscales and the key wave 3 violence-related measures (those not related to Peer Deviance, Pro-Gangs, or Pro-Violence) (table 5.21, below).

		VPS w3 deviant assoc	VPS w3 pro violence	VPS w3 pro gangs	VPS How many fights w3	Multi-category Offend past12 mos w3	Combnd Substance Use w3 Sq root	Matrnl Prblm Behav w3	Violence exposure count 12mos w3
VPS part 1- w3 deviant assoc	Corr	1	.208**	.382**	.389**	.441**	.587**	.319**	.344**
	Sig		.000	.000	.000	.000	.000	.000	.000
	N	311	311	311	311	311	311	300	309
VPS part 2 -w3 pro violence	Corr	.208**	1	.492**	.410**	.254**	.203**	.261**	-.034
	Sig	.000		.000	.000	.000	.000	.000	.554
VPS part 3 -w3 pro gangs	Corr	.382**	.492**	1	.416**	.329**	.260**	.284**	.133*
	Sig	.000	.000		.000	.000	.000	.000	.020
How many fights in the past year w3-VPS part 4	Corr	.389**	.410**	.416**	1	.300**	.284**	.216**	.154**
	Sig	.000	.000	.000		.000	.000	.000	.007

Table 5.21. Pearson’s bivariate two-tailed correlations between wave 3 Violence Propensity Score components and wave 3 violence-related measures.

Correlations are positive and strong among the 4 Violence Propensity Score components and between these components and self-reported Offending, Substance Abuse, and the Maternal Assessment of Subject’s Risky Behaviour. These findings are important to demonstrate triangulation with actual (subject disclosed) reports of violent offending and substance use and the sole exogenous (not supplied by the subject themselves) indicator, the maternal assessment.

Next, I have built the combined Violence Propensity Score variables, adding the 4 scores, and tested for correlation with all wave 3 behavioural outcomes (table 5.22, below).

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).		Cmb multi-category Offend ever w3	Cmb frequency offending past 24 mos	Cmb Offend past 12mos w3	Comb Stbncce Use_w3	Matrnl Prblm Behav w3	Violence exposure 12mos w3	Comb victm w3	Subject failed school w3
Violence Propensity Score w3	Cor	.377**	.474**	.477**	.518**	.375**	.260**	.471**	.295**
	Sig	.000	.000	.000	.000	.000	.001	.000	.000
Violence Propensity Score w2	Cor	.397**	.340**	.035	.181**	.091	.074	.159**	.029
	Sig	.000	.000	.539	.001	.115	.192	.000	.614

Table 5.22. Pearson's bivariate two-tailed correlations between wave 3 Violence Propensity Score and wave 3 behaviour-related measures.

Here, we see correlations above 0.37 with multi-category offending ever, with frequency of Offending in the past 24 months and in the past year, with Substance Abuse, with Maternal Assessment, and with Combined Victimization (table 5.22 above). Correlations are also significant with Violence Exposure and having Failed a Grade or More of School as measured in wave 3. The Violence Scorecard Wave 2 is also significantly correlated with Substance Abuse and Victimization in Wave 3, suggesting the possibility of predictive power.

I then explored the wave 3 Violence Scorecard breakdown in combination with the 24 month total of self-reported offending incidences to establish suggested scoring criteria (tables 5.23 and 5.24, below) for non-statistical practitioners.

		Violence scorecard w3 Deviant assoc	Violence scorecard w3 pro gangs	Violence scorecard w3 pro violence	How many fights past year w3?	Combined Violence scorecard w3
Percentiles	25	2	1.2	2	0	11
	50	8	4	6	0	20
	75	14	6	6	5	29

Table 5.23. Percentile scores for Violence Propensity Score components and combined score, Wave 3.

	Violence scorecard w3 Score 0-10 (n=72)	Violence scorecard w3 Score 11-20 (n=92)	Violence scorecard w3 Score 21-30 (n=77)	Violence scorecard w3 Score 31-40 (n=43)	Violence scorecard w3 Score 41-up (n=27)
Combined frequencies of all serious/violent offending in past 24 mos Mean (s.d.)	0.18 (0.57)	0.34 (0.94)	0.94 (1.96)	0.88 (1.99)	2.52 (2.61)

Table 5.24. Mean scores for frequency of all serious/violent offending in past 24 months by Violence Propensity Score Wave 3 10-point score groupings.

A score of 20 is at the 50<sup>th</sup> percentile and roughly corresponds to a mean score of 1 for frequency of violent offending in the past 24 months, meaning there is a strong likelihood that a subject with a violence scorecard of 20 or higher has engaged in some violent offending. Given the challenges

of self-disclosure (of actual violent behaviours), there is no exact means to “score risk” with available data but I suggest the following as a starting point for assessment:

- A total score between 15-19 is a potential concern, 20-39 serious concern, and 40 and above, likely actively engaged in serious violent and criminal behaviours. In wave 3, there are 32 subjects (10%) with scores of 40 or higher with a top score of 70.
- Change scores can be easily constructed by subtracting the pre-test score from the post-test score and described as a percentage point change (positive as increased violence-risk, negative as decreased risk). Average change across a treatment (or comparison) group can also be easily tabulated and evaluated.

## 5.5 Conclusion

Confirmatory Factor Analysis procedure substantiated the process of construct development and internal validity and reliability testing. Following the discussion of fieldwork issues and improvements across waves in chapter 4, factor analysis revealed statistical data substantiating poor construct development in wave 1 scales, followed by significant improvements in wave 2 and wave 3. By wave 3, reliability measures rival comparable studies and correlation analyses yield numerous significant relationships between violence outcome variables and family, peer, and attitudinal measures (see appendix for full table of bivariate correlations).

Finally, I have presented the development and testing of a Violence Propensity Score, with demonstrated empirical, psychometric basis, that can be easily administered and evaluated by youth development practitioners. The Violence Propensity Score serves both to address measurement limitations in this study (as an effective proxy measure for violence-potential) as well as to respond to gaps in the extant literature. Lengthy review of the extant literature did not reveal any violence risk assessment tools that had been developed for a general youth population, been shown to exhibit measurement stability, and were confirmed using CFA. As no longitudinal, or pre-test / post-test studies have made use of violence-risk index change scores, the use of such an index to measure violence-engagement increase or desistance is also undeveloped. In the next chapter, I further explore modelling violent outcomes, making use of the constructs established and validated here.

## **Chapter 6: Prediction of violence potential and its relationship to violent behaviours**

Following the presentation and discussion of the development and validation of constructs in the previous chapter, this chapter will explore:

- Linear regression analysis to explore direct pathways to key outcome variables and age-specific dynamics in cross-sectional models
- Linear regression analysis to explore direct pathways to key outcome variables and age-specific dynamics in longitudinal models
- Testing of Structural Equation Models within longitudinal analyses.

In the previous chapter, I assembled empirically-tested risk constructs to form the essential index variables of the study and addressed normality issues. A 4-factor Violence Propensity Score was then developed and tested to serve as the key dependent variable for further study. The Violence Propensity Score, combining Deviant Peer, Pro-Violence, Pro-Gangs, and Fighting sub-scales partially rectified the shortcomings of under-reporting, which appeared to affect Pro-Gangs Attitude, self-reported Violent Offending, and (potentially) the reliability of Pro-Violence Attitude. Triangulation, conducted through bivariate correlations with all other violence/deviance risk measures, demonstrated strong association with self-reported and maternally-reported high-risk behaviours. Bivariate correlation analysis<sup>40</sup> was also performed on all additional constructs to test for association. In many cases, there were significant associations (in cross-sectional analyses) in the theorized direction (greater risk/more anti-social factors are positively correlated). I now turn to testing multivariate models for explanation of and correlation with the key violence-related outcome variables in cross-sectional and longitudinal analyses.

### **6.1 Cross-sectional multivariate regression analysis**

Multiple linear regression allows for multiple independent variables to be tested simultaneously for their independent association with the outcome/dependent variable and affords a focused analysis of significantly correlated variables, net of the effects of other measured factors. While only longitudinal panel data will allow for true statistical prediction of outcomes (by using independent variables measured in one wave to predict an outcome in a later wave), linear regression analysis of cross-sectional data can provide a straightforward model to test for enduring relationships among key variables within the context of a multivariate, “real-world” environment, where multiple factors

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<sup>40</sup> See bivariate correlations in the appendix

influence dependent variables. Further, it can be argued that family and demographic measures, even when recorded during the same wave of the study, in actuality precede those related to the young subject's behaviours and cognitions. Serious violent offending, with pre-meditation or intent, itself linked to cognition and attitudes, rarely emerges before adolescence (Moffit, 2003). By this time, an attitude toward school and one's future has already been formed (albeit still malleable). Thus, attitudes toward violence, and violent offending itself, would be the product of family, peer, and community socialization (in line with the ecological model).

Where more complex statistical methods, namely structural equation modelling, require a minimum of 200 cases, linear regression modelling is somewhat less stringent, provided there is a sufficient ratio of cases to independent variables. The regression method also allows for age-cohort modelling, exploring the potential for significant associations that may not otherwise emerge as significant and linear across the entire age range in this study.

### **6.1.1 Cross-sectional multivariate analysis-wave 2 Khayelitsha<sup>41</sup>**

Ideally, 15 to 25 cases per independent variable are required to ensure distribution normality and, in turn, generalizability of results to the representative population, in this case, young 12-24 year-old African males living in Site B, Khayelitsha. All linear regressions were run using the Enter method, simultaneously testing all hypothesized independent variables and retaining their standardized coefficients in the final output.

Population weighting is adjusted according to the Census 2011 age and gender demographics for City of Cape Town Wards 90 and 91. Site B, Khayelitsha encompasses most of Wards 90 and 91. Based on demographic profiles from the 2011 census, the 12-14 year-old male population of these wards is 2.19%, the 15-19 year-old male population is 4.45%, and the 20-24 year-old male population, 6.55%. Therefore, the corrected weighting in proportion to the share of the male population should result in: 12-14 year-olds: 16.6% of the total, 15-19 year-olds: 33.7 %, and 20-24 year-olds: 49.7%. Before re-weighting, the actual percentages in the wave 2 and wave 3 sample of n=311 (after removing cases of attrition and multivariate outliers) are: 12-14 year-olds: 11.2% of the total, 15-19 year-olds: 63.7 %, and 20-24 year-olds: 25.1%. Thus, the groups are re-weighted as follows: 12-14 year-olds: x 1.482, 15-19 year-olds: x 0.529, and 20-24 year-olds: x 1.980, achieving proportional representation in line with the aforementioned demographics. Generalization can only be made to the 12-24 year old male population of Khayelitsha. However, this means that there is an effective doubling of some cases and halving of others due to the imbalance of the sample. As re-weighting was not possible in later

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<sup>41</sup> Khayelitsha wave 1 linear regression modelling is not conducted due to limited construct validity and reliability

structural equation modelling and the weighting adjustments are somewhat extreme, un-weighted regression modelling was important for comparison.

A linear regression model was run for the first theorised key dependent variable, Pro-Violence Attitude with the theorised family/demographic independent variables, peer/social/attitudinal independent variables, and the intermediary outcome variables, school attitude, school performance, and future attitude/resiliency (table 6.1, below). Less Parental Involvement, Substance Use/Abuse, and Pro-Gangs Attitude were transformed with square roots to improve normality.

Multiple linear regression model for : Pro-Violence Attitude-Khayelitsha wave 2

Model 1 population-weighted Models 2-5 unweighted	population weighted N=311 Model 1	un-weighted N=311 Model 2	14-16 years N=102 Model 3	17-19 years N=122 Model 4	20-24 years N=78 Model 5
Variable	$\beta$	$\beta$	$\beta$	$\beta$	$\beta$
(Constant)	-.093	-.553	-1.43	-.184	=.196
Age	-.082	-.079			
Household Deprivation	-.057	-.054	-.055	-.042	-.054
Violent Home	-.019	.018	.069	.043	-.085
More Harsh Parenting	.098	.134*	.204*	.165	.048
Less Parent Involvement	.014	.104	.144	.213*	-.039
More Deviant Peers	-.011	-.024	.126	-.128	.001
Substance Abuse	.158*	.105	.155	.039	.162
Pro-gangs Attitude	.063	.082	.064	.114	.065
Negative School Attitude	.337**	.283**	.223	.241*	.431**
Failed school 1+ grade	.129*	.099	-.064	.179*	.163
Negative Future Attitude	.045	.038	-.014	.075	.050
$R^2$	0.23	0.21	0.31	0.25	0.31
$F$	8.32**	7.39**	4.12**	3.64**	3.00**

Table 6.1. Cross-sectional multiple linear regression models for the dependent variable, Pro-Violence Attitude. Standardized coefficients reported. No collinearity tolerance < 0.50, or VIF > 2.01.

Note: \*= $p \leq .05$ . \*\*= $p \leq .01$ . Weighting based on 12-24 year old male population demographics of Khayelitsha Wards 90 and 91, South Africa Census 2011.

For the full model (table 6.1), there are 311 cases and 11 independent variables, a ratio of 28 cases per independent variable. The full population-weighted model was statistically significant ( $F=8.32$ ,  $p < .001$ ) and explained 23% of the variance in the dependent variable. In the age cohort analyses, the case: independent variable ratios are 10 cases/variable for the 14-16 year-olds, 12 cases/variable for the 17-19 year-olds, and 8 cases/variable for the 20-24 year-olds, somewhat less than ideal.

In the full, population-weighted model, Substance Use/Abuse ( $\beta= 0.16$ ,  $p < 0.05$ ), school failure ( $\beta= 0.13$ ,  $p < 0.05$ ), and, most significantly, Negative School Attitude ( $\beta= 0.34$ ,  $p < 0.01$ ) emerge as significant correlates of Pro-Violence Attitude. In the full un-weighted model Harsh/Inconsistent Parenting emerges as significant ( $\beta= 0.13$ ,  $p < 0.05$ ), alongside Negative School Attitude ( $\beta= 0.28$ ,  $p <$

0.01), while Substance Use/Abuse and school failure drop below significance. These shifts begin to suggest some differences across age sub-groups within the cross-sectional wave 2 data.

To explore the possibility of age-specific/developmental stage correlates of Pro-Violence, 3 models were tested with narrower age-range cohorts, 14-16 year-olds, 17-19 year-olds, and 20-24 year-olds<sup>42</sup>. Harsh Parenting is a significant correlate of Pro-Violence for the 14-16 ( $\beta = 0.20$ ,  $p < 0.05$ ) and near-significant (at the  $p < .1$  level) for the 17-19 year-olds ( $\beta = 0.17$ ,  $p = 0.062$ ) but loses strength with the oldest, 20-24 year-old study participants ( $\beta = 0.05$ ,  $p > 0.05$ ), many of whom may no longer be as strongly subjected to their parents' behaviours. Less Parental Involvement is a strong correlate among 17-19 year-olds ( $\beta = 0.19$ ,  $p < 0.05$ ), less strong for the 14-16 year-olds ( $\beta = 0.14$ ,  $p = 0.15$ ) and non-significant for the oldest age cohort.

School performance, or school failure (measured as the higher of either the study participant's self-report or the maternal caregiver's report for the participant), is significant for the 17-19 year-old cohort ( $\beta = 0.18$ ,  $p < 0.05$ ) and near-significant (at the  $p < .1$  level) for the oldest cohort ( $\beta = 0.16$ ,  $p = 0.14$ ). This is an interesting finding because it may suggest that, prior to the years of high school and matric exams, boys in Khayelitsha are fairly 'unaffected' by poor school performance, viewing school failure as normative, socially acceptable, widespread (in the 3<sup>rd</sup> wave of the study, 54% of subjects reported having failed at least one grade of school), and, therefore, 'no big deal'. Potentially, once a subject has either dropped out of school or failed matric, and is facing mass-scale unemployment and lack of opportunities, latent attitudes favourable to aggression may be reinforced, with the thinking: 'I failed school, can't study further, there are no jobs, but I can join up with some other guys and start hustling (robbing) here and there'. Such an approach would be aligned with the theory of agency (Moser & McIlwaine, 2006; McDowell & Sharp, 1999) and be reinforced through 'future discounting' (Brezina et al, 2009).

Lastly, Negative School Attitude is the single independent variable with the highest standardized regression coefficient in every age-cohort model (though it is just below significance at the  $p < .05$  level in the 14-16 year-old cohort,  $\beta = 0.22$ ,  $p = 0.06$ ). I hypothesize that the school environment is the strongest *institutional* socializing domain for many young Khayelitsha boys who are living in crowded homes, many with absentee fathers<sup>43</sup>, maternal caregivers whose time and resources are stretched very thin (whether working or dependent on grants), and who are subject to a strong pull by the 'culture of the streets', namely deviant peer association, gangs, and the immediate escapes or rewards of drugs and petty crime. Local schools certainly have many issues of poor quality teaching,

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<sup>42</sup> There are three 12 year-old subjects and six 13 year-old subjects that have been dropped from this age-band analysis as there are too few cases at this early age of adolescence to justify inclusion in the same model along with 15 and 16 year-olds.

<sup>43</sup> 10% of subjects report receiving no financial or emotional support from their fathers in the past year, in addition to the 27% who report that their fathers are deceased

inadequate facilities, and struggle to induce normative behaviours. However, the challenge, ultimately, comes down to the individual to ‘buy into’ their school career as a significant, long-term investment for future rewards (more education roughly corresponding to more and better future employment options) rather than discounting this future by allowing a negative attitude toward school (‘school is boring and a waste of my time’) to erode academic performance, as the two become mutually reinforcing (Brezina et al, 2009). For these reasons, Negative School Attitude is later explored in more detail as an upstream outcome, theoretically preceding Pro-Violence Attitude and the Violence Propensity Score.

### 6.1.2 Multivariate analysis of Violence Propensity Score-Khayelitsha wave 2

In the next analysis, I have tested the Violence Propensity Score, as presented in the previous chapter. As discussed, it was hoped that the Violence Propensity Score will have more ‘traction’ as a dependent variable/proxy for violence potential than any of its subscales on their own, including Pro-Violence Attitude, as previously tested. Due to its non-normality in wave 2, the square-root transformation of the Violence Propensity Score was used as the dependent variable.

Multiple linear regression model for: Violence Propensity Score-Khayelitsha wave 2

Model 1 population-weighted	weighted	un-weighted	14-16 years	17-19 years	20-24 years
Models 2-5 unweighted	N=311	N=311	N=102	N=122	N=78
Variable	Model 1	Model 2	Model 3	Model 4	Model 5
	$\beta$	$\beta$	$\beta$	$\beta$	$\beta$
(Constant)	-0.339	-1.04	.165	-1.25	1.16
Age	.100*	.100			
Household Deprivation	.011	.085	.165	.118	-.052
Violent Home	.112*	.096	.037	.090	.169
More Harsh Parenting	.075	.065	.022	.080	.113
Less Parent Involvement	.116*	.156**	.165	.244**	.030
Substance Abuse	.383**	.301**	.310**	.160	.525**
Negative School Attitude	.203**	.182**	.150	.165	.293**
Failed school 1+ grade	.130**	.101*	.026	.132	.084
Negative Future Attitude	-.055	-.051	-.039	-.085	-.056
$R^2$	0.46	0.38	0.27	0.24	0.58
$F$	28.55**	20.16**	4.26**	4.47**	11.78**

Table 6.2. Cross-sectional multiple linear regression models for Violence Propensity Score wave 2. Standardized coefficients reported. No collinearity tolerance < 0.62, or VIF > 1.61. Note. \*= $p \leq .05$ . \*\*= $p \leq .01$ .

For the full model (table 6.2), there are 311 cases and 9 independent variables, a ratio of 35 cases per independent variable. The full population-weighted model was statistically significant ( $F=28.55$ ,  $p < .001$ ) and explained 46% of the variance in the dependent variable, Violence Scorecard Wave 2. In the age cohort analyses, the case: independent variable ratios are 13 cases/variable for the 14-16 year-olds, 15 cases/variable for the 17-19 year-olds, and 10 cases/variable for the 20-24 year-

olds. These ratios are an improvement from the previous model, with Pro-Violence as the dependent variable, and may help to substantiate significant independent variable correlations.

Here, Substance Use/Abuse now emerges as the most significant correlate of the Violence Scorecard ( $\beta = 0.38$ ,  $p < 0.01$ , in the full weighted model), highly significant among both the youngest ( $\beta = 0.31$ ,  $p < 0.01$ ) and the oldest age cohorts ( $\beta = 0.53$ ,  $p < 0.01$ ). The lack of significance (at the  $p < 0.05$  level) among the 17-19 year-old group ( $\beta = 0.16$ ,  $p = 0.07$ ) raises some questions about the degree of self-disclosure, particularly at a stage when subjects are quite aware that use of alcohol and drugs increases risk of violence (perpetration and victimization) and is normatively associated with undesirable behaviour (at least by their elders).

The Negative School Attitude coefficient increases in significance with each age cohort (14-16 year-olds:  $\beta = 0.15$ ,  $p > 0.05$ ; 17-19 year-olds:  $\beta = 0.17$ ,  $p = 0.09$ ; and 20-24 year-olds:  $\beta = 0.29$ ,  $p < 0.01$ ). This may suggest that early detachment from school leads to deviant associations, attitudes, and behaviours that, in turn, lead to greater detachment from school (and potentially irreparable damage to educational outcomes). However, School Failure is significant in the full model ( $\beta = 0.13$ ,  $p < 0.01$ ) but below significance in each of the age-cohort models.

Less Parental Involvement is significant in the full weighted model ( $\beta = 0.12$ ,  $p < 0.05$ ) and with the 17-19 year-old cohort ( $\beta = 0.24$ ,  $p < 0.01$ ), though only significant at the  $p < 0.1$  level with the 14-16 year-olds ( $\beta = 0.17$ ,  $p < 0.10$ ) and non-significant with the oldest cohort. This speaks to the potentially critical role of parental involvement into the later teenage years in an environment where young men are increasingly exposed to violence, risk and anti-social opportunities.

Both Age ( $\beta = 0.10$ ,  $p < 0.05$ ) and Violent Home Environment ( $\beta = 0.11$ ,  $p < 0.05$ ) are significant in the full weighted model but below significance in the un-weighted and cohort models. Otherwise, differential correlations between weighted and un-weighted full models appear negligible. Notably, Violent Home Environment increases in strength with each older cohort, suggesting a background of violence in the home may have a delayed effect on increasing a subject's violence potential, as has been found in other studies (see Seekings & Taylor, 2010).

### **6.1.3 Upstream modelling of Negative Attitude toward School-Khayelitsha wave 2**

As Poor School Attitude and Attachment is a relatively significant and stable correlate of more tolerance of violence (Pro-Violence Attitude and the Violence Propensity Score) within each age group in wave 2, it is useful to explore upstream multivariate correlates of the intermediary outcome of Negative School Attitude while omitting the final outcome variable(s).

Multiple Linear Regression Model for: Negative Attitude Toward School Khayelitsha wave 2

Variable	population weighted N=318	population weighted N=318	un- weighted N=318	14-16 year-olds. N=102	17-19 year-olds. N=122	20-24 year-olds. N=78
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$	Model 4 $\beta$	Model 5 $\beta$	Model 6 $\beta$
(Constant)	.255	.712	.724	.588	.887	.625
Age	-.005	-.038	-.022			
Household Deprivation	.132*	.117*	.078	.068	.027	.122
Violent Home	-.055	-.013	-.019	.023	-.052	-.038
More Harsh Parenting	-.021	.012	.041	.232*	-.028	-.098
Less Parent Involvement	.227**	.260**	.217**	.111	.165	.336**
More Deviant Peers	.110	.114	.121	.018	.110	.151
Substance Abuse	-.008	.051	.028	.073	.032	.056
Pro-gangs Attitude	.055	.076	.134*	.133	.220*	.017
Failed school 1+ grade	.047	.033	-.006	-.167	-.005	.085
Negative Future Attitude	.350**					
$R^2$	0.29	0.18	0.15	0.15	0.12	0.24
$F$	12.20**	7.35**	5.85**	2.05	2.00	2.67*

Table 6.3. Cross-sectional multiple linear regression models for the dependent variable, Negative School Attitude. Standardized coefficients reported. No collinearity tolerance < 0.50, or VIF > 1.99. Note. \*= $p \leq .05$ . \*\*= $p \leq .01$ .

In table 6.3, the first overall model ( $n=311$ ) was statistically significant ( $F=12.20$ ,  $p < .001$ ) and explained 29% of the variation in the dependent variable and allowed for a ratio of 31 cases/independent variable. In the age cohort analyses, the case: independent variable ratios are 13 cases/variable for the 14-16 year-olds, 15 cases/variable for the 17-19 year-olds, and 10 cases/variable for the 20-24 year-olds.

In the first, full weighted model, the most significant correlates are Negative Attitude Toward the Future/Low Resiliency ( $\beta = 0.35$ ,  $p < 0.01$ ), Less Parental Involvement ( $\beta = 0.23$ ,  $p < 0.01$ ), and Household Deprivation ( $\beta = 0.13$ ,  $p < 0.05$ ). Due to the magnitude of the correlation between Negative Future Attitude and Negative School Attitude and the fact that, conceptually, these two constructs are intimately linked, I removed Negative Future Attitude from the second model, as well as from the age-band analyses. School failure is also closely conceptually linked to school attitude but, as discussed earlier, may precede, or follow, a negative attitude and attachment toward schooling. Further, I proposed earlier that school failure may be more detrimental to school attitude as subjects age.

The second full, population-weighted model is statistically significant ( $F=7.35$ ,  $p < .001$ ) and explained 18% of the variation in the dependent variable (a substantial decrease following the removal of Negative Future Attitude) and allowed for a ratio of 35 cases/independent variable. Household Deprivation ( $\beta = 0.12$ ,  $p < 0.05$ ) (when Negative Future Attitude is omitted) and Less Parental Involvement ( $\beta = 0.26$ ,  $p < 0.01$ ) remain significant. Lack of parental involvement, in the life of a child, in general, and in the child's schooling, in particular, is widely held to negatively influence school

outcomes, as is suggested here. Household Deprivation is below significance in the un-weighted model and its significance in the weighted models appears to be accounted for mostly by the eldest age cohort.

In the age cohort analyses, among 14-16 year-olds, Harsh/Inconsistent Parenting ( $\beta= 0.23$ ,  $p<0.05$ ) is the only significant predictor. However, the model may suffer from subjects' less-considered or more temporal, fleeting attitude toward school at that age (the attitude is positive if something good happened very recently at school, more negative if something bad happened) versus older age groups who may be more capable of both taking a historical view of their schooling and more carefully considering their item responses for the duration of the interview.

Among 17-19 year-olds, Pro-Gangs Attitude ( $\beta= 0.22$ ,  $p<0.05$ ) is significant, followed by Less Parental Involvement ( $\beta= 0.17$ ,  $p< 0.10$ ) which is significant only at the  $p<.1$  level. At these ages, among boys in particular, there is likely decreasing direct influence of harsh and inconsistent parenting, especially from maternal caregivers who would no longer be capable of exerting physical force over most 17-19 year-old young men. Thus, we would expect subject-reported Harsh Parenting, as a construct, to cease to be of significant explanatory power ( $\beta= -0.03$ ,  $p>0.05$ , in this case). However, the cumulative influence of parental involvement, particularly if positively sustained over a subject's schooling career, should, theoretically, reinforce school attachment and success (the more your parent(-s) care about your school career, the more you are likely to care about your school career, up to a certain point).

In the oldest, 20-24 year-old cohort, Less Parental Involvement ( $\beta= 0.34$ ,  $p< 0.01$ ) is the only significant correlate, reinforcing the potentially critical influence of parental involvement throughout a subject's schooling career.

#### **6.1.4 Cross-sectional multivariate analysis-wave 3 Khayelitsha**

I turn now to cross-sectional analysis of wave 3 data. It was hoped that improvement in questionnaire items, interview protocols and the subsequent increased internal validity and reliability would result in cross-sectional models with greater explanatory power.

Multiple linear regression model for: Pro-Violence Attitude-Khayelitsha wave3

Variable	population weighted N=311	un-weighted N=311	14-16 year-olds. un-weighted N=102	17-19 year-olds. un-weighted N=122	20-24 year-olds. un-weighted N=78
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$	Model 4 $\beta$	Model 5 $\beta$
(Constant)	1.86	2.48	3.62	-0.704	0.781
Age	-.092	-.103			
Household Deprivation	.044	-.011	.009	-.195*	.150
Violent Home	.254**	.274**	.332**	.282**	.186
More Harsh Parenting	-.075	-.101	-.233*	-.030	.044
Less Parent Involvement	-.052	-.034	-.155	.080	-.113
More Deviant Peers	.033	.002	.271**	-.080	-.147
Substance Abuse	-.036	.014	-.127	.176	-.084
Pro-gangs Attitude	.323**	.286**	.303**	.197*	.363*
Negative School Attitude	.208**	.200**	.206	.149	.209
Failed school 1+ grade	.023	.008	.056	-.026	.032
Negative Future Attitude	.110	.103	.083	.079	.134
$R^2$	0.41	0.37	0.51	0.33	0.51
$F$	18.86**	15.64**	9.07**	5.44**	6.74**

Table 6.4. Cross-sectional multiple linear regression models for the dependent variable, Pro-Violence Attitude wave 3. Standardized coefficients reported. No collinearity tolerance < 0.26, or VIF > 3.81. Note. \*= $p \leq .05$ . \*\*= $p \leq .01$ .

The full population-weighted regression model (in table 6.4) for Pro-Violence Attitude in wave 3, was statistically significant ( $F=18.86$ ,  $p < 0.001$ ) and explained 41% of the variance in the dependent variable. In the age cohort analyses, the case: independent variable ratios are 10 cases/variable for the 14-16 year-olds, 12 cases/variable for the 17-19 year-olds, and 8 cases/variable for the 20-24 year-olds, again somewhat less than ideal.

In the full weighted model, Violent Home Environment ( $\beta= 0.25$ ,  $p < 0.01$ ), Pro-Gangs Attitude ( $\beta= 0.32$ ,  $p < 0.01$ ), and Negative School Attitude ( $\beta= 0.21$ ,  $p < 0.01$ ) are all significant correlates of Pro-Violence Attitude, net of other factors. These same relationships also hold in the un-weighted model, suggesting that, with wave 3 data, there may be less divergence between weighted and un-weighted models. As previously discussed, I theorize that the value of education and, in turn, attitude toward school, is increased among subjects who are older and/or no longer in school (and do not form their attitudes based primarily on proximal events in the immediate school environment). Even those who have engaged in violence and criminality can appreciate the potential that academic success could represent (evidenced, in part, by the numbers of people who study further while in incarceration).

Among the 14-16 year-old cohort, Violent Home Environment is highly significant ( $\beta= 0.33$ ,  $p < 0.01$ ), followed by Deviant Peers ( $\beta= 0.27$ ,  $p < 0.01$ ) and Pro-Gangs Attitude ( $\beta= 0.30$ ,  $p < 0.01$ ). Contrary to theory, Harsh/Inconsistent Parenting is negatively correlated with Pro-Violence Attitude ( $\beta= -0.23$ ,  $p < 0.05$ ) with this 14-16 year-old cohort alone. It is suspected that, with this younger

demographic, some elements of strict or involved parenting may be interpreted as ‘harsh’, although their influence may somewhat reduce attitudes favourable to violence. Additionally, I speculate that the younger cohort may still be “more afraid” to engage in or embrace violence because they are fearful of their parents’ response.

Violent Home Environment is also a significant positive correlate with 17-19 year-olds ( $\beta=0.28$ ,  $p<0.01$ ) and near-significant (at the  $p<.1$  level) with 20-24 year-olds ( $\beta=0.19$ ,  $p<0.09$ ) suggesting the presence of an enduring relationship between violence experienced in the home and subjects’ attitudes toward violence. Multi-collinearity, as such, is not a statistical concern in these models (no collinearity tolerance  $<0.26$ , or VIF  $>3.81$ ) suggesting that Harsh Parenting and Violent Home each have distinct correlations with Pro-Violence Attitude. Clearly the impact of seeing and learning violence in the home is a more significant correlate with the subject’s own violent attitudes than the harsh or inconsistent nature of the parenting they receive.

Pro-Gangs Attitude is a significant correlate in all 3 age cohorts (14-16 year-olds:  $\beta=0.30$ ,  $p<0.01$ ; 17-19 year-olds:  $\beta=0.20$ ,  $p<0.05$ ; 20-24 year-olds:  $\beta=0.36$ ,  $p<0.05$ ), in addition to the full models. There are close conceptual associations between Pro-Gangs Attitude and Pro-Violence Attitude; gangs often engage in violence and, if you want to be embraced by the gang, you need to be ready to use and embrace the use of violence (Topali, 2005). The significant emergence of this independent variable in this wave does suggest both improved measurement and, potentially, increased subject disclosure (partially breaking the ‘code of silence’). A more concerning potential explanation (if not solely the result of improved disclosure) is that the incidence and severity of gang violence in Khayelitsha has grown and more participants in this study have been drawn in to such violence. If Pro-Gangs Attitude is removed from this multivariate model, collinearity statistics are slightly improved and Negative School Attitude and Violent Home Environment increase in significance in all models (see table in appendix). However, inclusion of Pro-Gangs Attitude within the Violence Propensity Score is, perhaps, a more holistic modelling approach (rather than leaving Pro-Gangs out of the modelling, given its real-world relevance), creating a more complete measure of violence potential.

A final perplexing relationship emerged with Household Deprivation ( $\beta=-0.20$ ,  $p<0.05$ ) exhibiting a negative correlation with Pro-Violence among the 17-19 cohort only. One possible explanation is that subjects who have engaged in violence/criminality have reduced their deprivation, while reinforcing attitudes favourable to the use of violence (‘it pays to use violence and I’m in need’). While such a relationship could only be meaningfully tested with longitudinal data, multiple comments from focus group discussions suggested that the concept of deprivation (“no food on the table”) drives young people to engage in violence. Yet, when these ideas have been further explored, it appears that young violent offenders are not converting their acquired assets into food so much as into alcohol,

drugs, and stylish clothing and shoes (also see Jacobs et al, 2003). Thus, the notion of deprivation may be more a continuing 'justification' for, rather than a driver of, violent offending.

### 6.1.5 Multivariate analysis of Violence Propensity Score-Khayelitsha wave 3

As we have seen, there is a clear enduring relationship between attitudes towards gangs and violence. Given the relatively poor performance of Pro-Violence Attitude in CFA, it is hoped that the use of the Violence Propensity Score, confirmed (through factor analysis) primarily on the basis of wave 3 data, will show improvements in regression modelling.

Multiple linear regression model for: Violence Propensity Score-Khayelitsha wave 3

Variable	population weighted N=318	un-weighted N=318	14-16 year- olds. un-weighted N=102	17-19 year- olds. un-weighted N=122	20-24 year-olds. un-weighted N=78
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$	Model 4 $\beta$	Model 5 $\beta$
(Constant)	-30.39	-27.90	-15.82	-28.77	-25.87
Age	.060	.036			
Household Deprivation	-.025	-.056	.048	-.124	.038
Violent Home	.202**	.214**	.283**	.182*	.192
More Harsh Parenting	.074	.058	-.066	.061	.146
Less Parent Involvement	.246**	.259**	.230*	.298**	.200
Substance Abuse	.250**	.304**	.325**	.358**	.184
Negative School Attitude	.330**	.284**	.232*	.255**	.397**
Failed school 1+ grade	.093*	.046	.012	.001	.159
Negative Future Attitude	-.161**	-.136**	-.108	-.113	-.202
$R^2$	0.54	0.53	0.47	0.56	0.53
$F$	38.80**	37.03**	9.83**	17.95**	9.46**

Table 6.5. Cross-sectional multiple linear regression models for the dependent variable, Violence Propensity Score wave 3. Standardized coefficients reported. No collinearity tolerance < 0.45, or VIF > 2.24.

Note. \*= $p \leq .05$ . \*\*= $p \leq .01$ .

The full population-weighted model in table 6.5 is statistically significant ( $F=38.80$ ,  $p < 0.001$ ) and explained 54% of the variation in the dependent variable, Violence Propensity Score wave 3 and allowed for a ratio of 35 cases/independent variable. This is an improvement, both in terms of variance explained (54% vs. 41%) and F-values (38.80 vs. 18.86) from the previous model with Pro-Violence Attitude as the dependent variable (table 6.4). In the age cohort analyses, the case: independent variable ratios are 13 cases/variable for the 14-16 year-olds, 15 cases/variable for the 17-19 year-olds, and 10 cases/variable for the 20-24 year-olds, again yielding improvements from the Pro-Violence Attitude age cohort models. Differences between the weighted and un-weighted models do not appear severe.

As seen in wave 2 cross-sectional modelling, Substance Use/Abuse is again among the most significant correlates of the Violence Propensity Score ( $\beta = 0.25$ ,  $p < 0.01$ , in the full model), highly significant among the younger two age cohorts (14-16 year-olds:  $\beta = 0.33$ ,  $p < 0.01$ ; 17-19 year-olds:  $\beta = 0.36$ ,  $p < 0.01$ ), and significant at the  $p < .1$  level among the 20-24 year-olds ( $\beta = 0.18$ ,  $p < 0.07$ ). The connection between greater substance use or abuse and propensity for violence is well-documented (Seedat et al, 2009; Jewkes & Penn-Kekana, 2002). However, the reduction in its strength of correlation (with Violence Propensity Score wave 3) with the older age group has a potentially straightforward explanation: more subjects consume alcohol as they reach (and exceed) the minimum legal age of 18. These ‘new drinkers’ are potentially the ones that avoided deviant/violent associations, attitudes, and behaviours in their earlier developmental years and are now less violent than their peers who initiated alcohol and/or drug use at an earlier, more sensitive, developmental stage.

Negative School Attitude is the strongest ( $\beta = 0.33$ ,  $p < 0.01$ , in the full model) and most developmentally stable (14-16 year-olds:  $\beta = 0.23$ ,  $p < 0.01$ ; 17-19 year-olds:  $\beta = 0.26$ ,  $p < 0.01$ ; and 20-24 year-olds:  $\beta = 0.40$ ,  $p < 0.01$ ) correlate with the Violence Propensity Score, reinforcing the potential interplay between the delayed gratification of sustained school commitment and the ‘future discounting’ (Brezina, 2009) that is inherent in criminal, violent and gang associations. The increasing strength of the Negative School Attitude regression coefficient with age suggests a ‘fixing’ over time of these mutually-reinforcing attitudes and associations.

Less Parental Involvement is significant overall ( $\beta = 0.25$ ,  $p < 0.01$ , in the full model) and with both the 14-16 year-old ( $\beta = 0.23$ ,  $p < 0.05$ ) and 17-19 year-old ( $\beta = 0.30$ ,  $p < 0.01$ ) groups and significant at the  $p < .1$  level with 20-24 year-olds ( $\beta = 0.20$ ,  $p < 0.08$ ). As theorized, the effects of both current and cumulative parental involvement may tend to manifest in late adolescence and provide a buffer for engagement in violence and reinforced pro-social (school) attachment.

Violent Home Environment is significant in the overall model ( $\beta = 0.20$ ,  $p < 0.01$ ) and in the two younger cohorts (14-16 year-olds:  $\beta = 0.28$ ,  $p < 0.01$ ; 17-19 year-olds:  $\beta = 0.18$ ,  $p < 0.05$ , and significant at the  $p < .06$  level with the oldest age group ( $\beta = 0.19$ ,  $p < 0.06$ ). This suggest that exposure to violence in the home, particularly in adolescence, leads both to attitudes favourable to the use of violence but also to violent associations (through more deviant peers and gangs) and actions (engaging in physical fights).

Negative Future Attitude shows an unexpected inverse relationship with the Violence Scorecard that is significant in the full weighted model ( $\beta = -0.16$ ,  $p < 0.01$ ) and this relationship, though not statistically significant, appears to increase with age (14-16 year-olds:  $\beta = -0.11$ ,  $p < 0.01$ ; 17-19 year-olds:  $\beta = -0.11$ ,  $p < 0.34$ ; 20-24 year-olds:  $\beta = -0.20$ ,  $p < 0.11$ ). Given the poor performance of Negative Future Attitude in other models, I speculate that most of the ‘future discounting effect’ on violence

potential is actually being captured in Negative School Attitude and this residual correlation may be attributable to unfulfilled expectations that increase with age. If this relationship endures in longitudinal modelling, it will be important to understand further. However, if Negative Future Attitude proves to have a non-significant effect on violence potential in longitudinal modelling, it would reinforce the redundancy of this measure.

Lastly, School Failure is just significant in the full weighted model ( $\beta= 0.09$ ,  $p< 0.05$ ) and appears to be mostly influenced by the 20-24 year-olds ( $\beta= 0.16$ ,  $p< 0.09$ ) reinforcing the notion that poor school outcomes ultimately do influence violence potential.

### 6.1.6 Upstream modelling of Negative Attitude toward School-Khayelitsha wave 3

Given the stability of School Attitude as a correlate of violence-rejecting or reinforcing attitudes, associations, and behaviours, I have again tested a cross-sectional upstream multivariate model for Negative School Attitude in wave 3.

Multiple linear regression model for: Negative Attitude Toward School Khayelitsha wave 3

Variable	population weighted N=311	population weighted N=311	un-weighted N=311	14-16 year-olds. un-weighted N=102	17-19 year- olds. un-weighted N=122	20-24 year-olds. un-weighted N=78
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$	Model 4 $\beta$	Model 5 $\beta$	Model 6 $\beta$
(Constant)	0.810	1.10	1.09	0.958	0.539	0.816
Age	-.126**	-.151**	-.133**			
Household Deprivation	.062	.071	.047	.186*	-.118	.068
Violent Home	-.031	-.022	.016	.043	.029	-.089
More Harsh Parenting	-.161**	-.143**	-.136**	-.169	-.081	-.136
Less Parent Involvement	.168**	.250**	.278**	.213*	.328**	.160
More Deviant Peers	.008	-.083	-.078	-.188	.096	-.084
Substance Abuse	.174**	.261**	.221**	.188*	.114	.345**
Pro-gangs Attitude	.423**	.522**	.421**	.447**	.223*	.688**
Failed school 1+ grade	.085*	.093*	.128**	.173*	.189*	.045
Negative Future Attitude	.336**					
$R^2$	0.61	0.53	0.44	0.46	0.37	0.66
$F$	46.37**	37.15**	25.94**	9.73**	8.04**	16.64**

Table 6.6. Cross-sectional multiple linear regression models for the dependent variable, Negative School Attitude wave 3. Standardized coefficients reported. No collinearity tolerance < 0.46, or VIF > 2.18.

Note. \*= $p \leq .05$ . \*\*= $p \leq .01$ .

The first full, weighted model (table 6.6) is statistically significant ( $F=46.37$ ,  $p < 0.001$ ) and explained 61% of the variation in the dependent variable, Negative Attitude Toward School wave 3 and allowed for a ratio of 31 cases/independent variable. After dropping Negative Future Attitude from the full model (as was done in wave 2 analysis previously due to its strong statistical and theoretic correlation with school attitude), the weighted model is statistically significant ( $F=37.15$ ,  $p < 0.001$ )

and explained 53% of the variation in the dependent variable, Negative Attitude Toward School wave 3 and allowed for a ratio of 35 cases/independent variable. In the age cohort analyses, the case: independent variable ratios are 13 cases/variable for the 14-16 year-olds, 15 cases/variable for the 17-19 year-olds, and 10 cases/variable for the 20-24 year-olds.

There is a significant age effect ( $\beta = -0.15$ ,  $p < 0.01$ , in the second full model), more positive attitude toward school with age that is seen here for the first time, suggesting a greater appreciation for the value of schooling with age. More Harsh and Inconsistent Parenting ( $\beta = -0.14$ ,  $p < 0.01$ , in the second full model) has a significant negative correlation (correlated with more Positive Attitude toward School) in the full model but is non-significant in any of the age-group models (14-16 year-olds:  $\beta = -0.17$ ,  $p < 0.07$ ; 17-19 year-olds:  $\beta = -0.08$ ,  $p < 0.34$ ; and 20-24 year-olds:  $\beta = -0.14$ ,  $p < 0.13$ ). Less Parental Involvement is significantly correlated with more Negative Attitude toward School in the full weighted model ( $\beta = 0.25$ ,  $p < 0.01$ , in the second full model) and with the younger two cohorts (14-16 year-olds:  $\beta = 0.21$ ,  $p < 0.05$ ; 17-19 year-olds:  $\beta = 0.33$ ,  $p < 0.01$ ). The non-significance in the oldest cohort (20-24 year-olds:  $\beta = 0.16$ ,  $p > 0.09$ ) may be due to a 'natural' reduction in parental involvement as young men enter adulthood, regardless of prior parental involvement (and its effects) during earlier formative years.

Substance use/abuse is significant in the full model ( $\beta = 0.17$ ,  $p < 0.01$ , in model 2) but only significant in the youngest (14-16 year-olds:  $\beta = 0.19$ ,  $p < 0.05$ ) and oldest age-cohort model (20-24 year-olds:  $\beta = 0.35$ ,  $p < 0.01$ ), somewhat inconsistent with the more stable cohort relationship seen between substance use and the Violence Propensity Score in wave 2. The correlation with substance use/abuse in the younger cohorts, in particular, may be masked by the strength of the Pro-Gangs Attitude correlation ( $\beta = 0.52$ ,  $p < 0.01$  in population-weighted model 2), by far the largest independent variable coefficient in any of the wave 3 cross-sectional multivariate models presented here. From this finding, we may infer that there is a very damaging relationship between gang association and school attachment.

Lastly, in this 3<sup>rd</sup> wave, school failure is a significant correlate with Negative School Attitude in the full models ( $\beta = 0.09$ ,  $p < 0.05$ , in the second weighted model) and, most acutely, in the 17-19 year-old cohort ( $\beta = 0.19$ ,  $p < 0.05$ ) and the 14-16 year-olds ( $\beta = 0.17$ ,  $p < 0.05$ ) where more subjects who have recently dropped out of school or failed in the most recent (and critical) high school grades, are found. These are the stages where school performance, or school failure, really seems to be 'make or break' and those who have not succeeded are likely to develop neutralizing attitudes ('I failed but school was a waste of time and I didn't belong there, anyway').

## 6.2 Longitudinal multivariate regression analysis

In the previous sections, I explored the strength of correlation in cross-sectional modelling, where ‘explanatory (actually, correlational) strength’ is very high, although the theoretical basis for the ordering of predictors and outcomes is more questionable. We can theorize that family and parenting dynamics precede and influence early deviant associations and anti-social behaviours which, in turn, precede attitudes toward the future and the present (‘invest in schooling versus cash in on violence’), but the best evidence for such sequencing and, indeed, meaningful prediction for purposes of risk-diagnosis and intervention, must come through models making use of time-sequenced predictors or measures of change. Furthermore, long-term, sustained effects could only be determined through a long-term panel study (well into adulthood), although attrition and lurking variables (many potentially unmeasured independent influences on distal outcomes), can be especially problematic over time in such longitudinal prospective studies (Farrington, 1998).

### 6.2.1 Longitudinal prediction of Pro-Violence Attitude

#### Longitudinal multiple linear regression for: Pro-Violence Attitude-Khayelitsha wave 3

Variable	population weighted N=311	un-weighted N=311	14-16 year-olds. un-weighted N=102	17-19 year-olds. un-weighted N=122	20-24 year-olds. un-weighted N=78
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$	Model 4 $\beta$	Model 5 $\beta$
(Constant)	5.02	5.51	4.43	5.07	6.84
Age	.011	-.022			
Household Deprivation w2	.101	.086	.041	.128	.122
Violent Home w2	.166**	.065	-.018	-.085	.366**
More Harsh Parenting w2	-.056	-.022	-.040	.006	-.151
Less Parent Involvement w2	-.132	-.072	.013	-.031	-.253
More Deviant Peers w2	.035	.081	.153	.170	-.008
Substance Abuse w2	-.339**	-.271**	-.054	-.237*	-.423**
Pro-gangs Attitude w2	.165*	.115	-.066	.103	.089
Negative School Attitude w2	.102	.070	.019	.088	.154
Failed school 1+ grade w2	-.026	-.020	.102	-.115	-.063
Negative Future Attitude w2	-.017	-.017	-.020	-.010	-.056
Pro-Violence Attitude w2	.067	.085	.048	.116	.063
$R^2$	0.11	0.08	0.05	0.13	0.23
$F$	3.10**	2.06*	0.45	1.45	1.77

Table 6.7. Longitudinal multiple linear regression models for the dependent variable, Pro-Violence Attitude wave 3. Standardized coefficients reported. No collinearity tolerance < 0.50, or VIF > 2.00.

Note. \*= $p \leq .05$ . \*\*= $p \leq .01$ .

In the first longitudinal model (table 6.7), all wave 2 variables used in the cross-sectional modelling, including Pro-Violence wave 2, are inserted as independent variables in the prediction of Pro-Violence Attitude measured a year later, in wave 3. The full population-weighted model is

significant ( $F=3.10$ ,  $p < 0.001$ ) but explains only 11% of the variance in the dependent variable (compared with 23% and 41% variance explained in the wave 2 and wave 3 cross-sectional models, respectively). The full model comprises a ratio of 26 cases/independent variable. In the age cohort analyses, the case: independent variable ratios are 9 cases/variable for the 14-16 year-olds, 11 cases/variable for the 17-19 year-olds, and 8 cases/variable for the 20-24 year-olds, again, less than ideal. None of the regression model F-values in the age-group cohorts are significant (14-16 year-olds:  $F= 0.45$ ,  $p> 0.05$ ; 17-19 year-olds:  $F= 1.45$ ,  $p>0.05$ ; and 20-24 year-olds:  $F= 1.77$ ,  $p>0.05$ ) demonstrating that the statistical prediction in these models is poor, overall (despite several significant independent variables). Thus, caution should be used in interpreting the age-group results.

In the full, weighted model, Violent Home Environment in wave 2 explains more Pro-Violence in wave 3 ( $\beta= 0.17$ ,  $p< 0.01$ ). This effect appears to be solely attributed to the oldest 20-24 year-old cohort, where the only significant age-group effect of Violent Home is seen ( $\beta= 0.37$ ,  $p< 0.01$ ). This suggests that Violent Home Environment does demonstrate a lagged effect on attitudes toward violence and aggression, as was previously seen in cross-sectional modelling.

Pro-Gangs Attitude in wave 2 explains more Pro-Violence Attitude in wave 3 in the full weighted model ( $\beta= 0.17$ ,  $p< 0.05$ ), though effects are non-significant in the other models. Although still a relatively weak overall effect (and likely conditioned by the disclosure and validity constraints of the wave 2 Pro-Gangs measure), it does suggest that the effects of gang associations have longitudinal stability on violence-related attitudes.

While the above relationships are theorized (although still weak in their predictive power), Substance Use/Abuse in wave 2 has the most significant and perplexing relationship on Pro-Violence in wave 3, with more reported Substance Use in wave 2 explaining less Pro-Violence in wave 3 ( $\beta= -0.34$ ,  $p< 0.01$ , in the weighted model), with most effects seen in the older cohorts (17-19 year-olds:  $\beta= -0.24$ ,  $p<0.05$ ; and 20-24 year-olds:  $\beta= -0.42$ ,  $p<0.01$ ). Yet, in the wave 2 cross-sectional modelling, there was a significant positive correlation between Substance Use/Abuse wave 2 and Pro-Violence wave 2 ( $\beta= 0.16$ ,  $p< 0.05$ , in the weighted model) that appeared to hold for both the youngest and oldest age groups. A similarly strong positive correlation was seen with Substance Use/Abuse and the Violence Propensity Score in wave 2 (for the 14-16 and 20-24 year-old cohorts), suggesting that there were important relationships between substance use, deviant peer/criminal associations and fighting in the same time period. I speculate, therefore, that some subjects who engaged in both substance use and violence in wave 2 'found their way out' by wave 3, having realized that violence and criminality was not going to lead to a positive outcome. It is also possible that there are weaknesses in either the Substance Use/Abuse wave 2 measure (which was shown to suffer from non-normality and to have a significantly lower mean score, or rate of disclosure, than Substance Use/Abuse in wave 3) or in the

Pro-Violence Attitude Wave 3 dependent variable (which was outperformed by the Violence Propensity Score in wave 3 cross-sectional modelling).

### 6.2.2 Longitudinal modelling of Violence Propensity Score

Given the limitations seen in the longitudinal modelling of Pro-Violence Attitude Wave 3, I next test a longitudinal model for explanation of the Violence Propensity Score in wave 3. In this second longitudinal model, all wave 2 independent variables were modelled to explain the Violence Propensity Score in wave 3, allowing for testing of the explanatory power of all independent wave 2 Violence Propensity Score subscales (before testing with the complete wave 2 Violence Propensity Score).

Longitudinal multiple linear regression model : Violence Propensity Score-Khayelitsha wave 3

Variable	population weighted N=311	un-weighted N=311	14-16 year- olds. un-weighted N=102	17-19 year- olds. un-weighted N=122	20-24 year-olds. un-weighted N=78
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$	Model 4 $\beta$	Model 5 $\beta$
(Constant)	-4.40	-2.35	12.04	9.16	24.66
Age	.220**	.148*			
Household Deprivation w2	.085	.043	.034	.033	.088
Violent Home w2	.166**	.119	.099	.022	.227
More Harsh Parenting w2	-.101	-.084	-.015	-.122	-.175
Less Parent Involvement w2	-.014	.002	-.070	.059	-.043
More Deviant Peers w2	.097	.102	.089	.152	.160
Substance Abuse w2	-.262**	-.190**	.126	-.185	-.394
Pro-gangs Attitude w2	.097	.114	.096	.128	.087
Negative School Attitude w2	.086	.114	.137	.140	.060
Failed school 1+ grade w2	.001	.022	.071	.005	.029
Negative Future Attitude w2	.016	.000	.033	-.045	-.043
Pro-Violence Attitude w2	.013	.032	.056	.033	-.063
$R^2$	0.13	0.12	0.15	0.12	0.15
$F$	3.77**	3.24**	1.42	1.40	1.03

Table 6.8. Longitudinal multiple linear regression models for the dependent variable, Violence Propensity Score wave 3. Standardized coefficients reported. No collinearity tolerance < 0.50, or VIF > 2.00.

Note. \*= $p \leq .05$ . \*\*= $p \leq .01$ .

The full, weighted model (figure 6.8) is significant ( $F=3.77$ ,  $p < 0.001$ ) and explains 13% of the variation in the dependent variable, Violence Propensity Score wave 3 and allowed for a ratio of 26 cases/independent variable. In the age cohort analyses, the case: independent variable ratios are 9 cases/variable for the 14-16 year-olds, 11 cases/variable for the 17-19 year-olds, and 8 cases/variable for the 20-24 year-olds, again, less than ideal. None of the F-values in the age-group models are significant (14-16 year-olds:  $F= 1.42$ ,  $p > 0.05$ ; 17-19 year-olds:  $F= 1.40$ ,  $p > 0.05$ ; and 20-24 year-olds:  $F= 1.03$ ,  $p > 0.05$ ) evidencing the weak predictive efficacy, overall, of these smaller age-cohort models.

In the full, weighted model, age is positively associated with higher scores on the Violence Propensity Score wave 3 ( $\beta = 0.22$ ,  $p < 0.01$ ), confounding theories that most subjects age out of violence associations by their mid-20's (Moffit, 1993 and 2003). As seen in the Pro-Violence modelling, Violent Home Environment in wave 2 correlates with a higher Violence Propensity Score in wave 3 ( $\beta = 0.17$ ,  $p < 0.01$ , in the full weighted model), particularly among the oldest cohort (20-24 year-olds:  $\beta = 0.23$ ,  $p < 0.12$ ), reinforcing this lagged background (home environment) effect.

The strong negative relationship between wave 2 Substance Use/Abuse and the wave 3 Violence Propensity Score ( $\beta = -0.26$ ,  $p < 0.01$  in the full weighted model) was also seen in the prediction of wave 3 Pro-Violence. Beyond the previous explanation given, that some of those engaged in substance abuse in wave 2 may have aged out of violence by wave 3, the normative nature of substance use, in a context where nearly all boys and young men have easy access to cheap drugs and alcohol, may be obscuring the strength and direction of this relationship. It is also notable that the relationship between Substance Use/Abuse wave 2 and Violence Propensity Score Wave 3 goes from positive in the 14-16 year-old group ( $\beta = 0.13$ ,  $p < 0.29$ ) to increasingly negative in the older cohorts (17-19 year-olds:  $\beta = -0.19$ ,  $p < 0.07$ ; and 20-24 year-olds:  $\beta = -0.39$ ,  $p < 0.13$ ). Contrary to speculation, the Violence Propensity Score Wave 3 dependent variable did not capture a different relationship with Substance Use/Abuse wave 2 (than use of Pro-Violence wave 3 as the dependent variable). No other independent variables emerge as significant correlates.

In the next regression model (table 6.9, below), I have replaced the independent variables, Deviant Peers, Pro-Gangs Attitude, and Pro-Violence Attitude with the wave 2 Violence Propensity Score for explanation of the wave 3 Violence Propensity Score.

Longitudinal multiple linear regression model: Violence Propensity Score-Khayelitsha wave 3

Variable	population weighted N=311	un-weighted N=311	14-16 year- olds. un-weighted N=102	17-19 year- olds. un-weighted N=122	20-24 year-olds. un-weighted N=78
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$	Model 4 $\beta$	Model 5 $\beta$
(Constant)	-8.33	-7.48	7.41	3.23	19.24
Age	.233**	.162			
Household Deprivation w2	.076	.031	.040	.009	.088
Violent Home w2	.175**	.126*	.094	.038	.239
More Harsh Parenting w2	-.086	-.068	.010	-.111	-.167
Less Parent Involvement w2	.033	.014	-.044	.062	-.005
Substance Abuse w2	-.214**	-.153*	.175	-.163	-.364*
Negative School Attitude w2	.101	.146*	.159	.214	.018
Failed school 1+ grade w2	.021	.043	.074	.032	.036
Negative Future Attitude w2	.004	-.015	.028	-.095	-.002
Violence Scorecard w2	.055	.088	.059	.161	.082
$R^2$	0.12	0.10	0.13	0.10	0.13
$F$	4.05**	3.28*	1.52	1.44	1.08

Table 6.9. Longitudinal multiple linear regression models for the dependent variable, Violence Propensity Score wave 3. Standardized coefficients reported. No collinearity tolerance < 0.42, or VIF > 2.40. Note. \*= $p \leq .05$ . \*\*= $p \leq .01$ .

The full, weighted model (figure 6.9) is significant ( $F=4.05$ ,  $p < 0.01$ ) and explains 12% of the variation in the dependent variable, Violence Propensity Score wave 3 and allowed for a ratio of 31 cases/independent variable. In the age cohort analyses, the case: independent variable ratios are 11 cases/variable for the 14-16 year-olds, 14 cases/variable for the 17-19 year-olds, and 9 cases/variable for the 20-24 year-olds, again, less than ideal. None of the F-values in the age-group models are significant (14-16 year-olds:  $F= 1.52$ ,  $p > 0.05$ ; 17-19 year-olds:  $F= 1.44$ ,  $p > 0.05$ ; and 20-24 year-olds:  $F= 1.08$ ,  $p > 0.05$ ) again suggesting limited statistical explanation of these narrow cohort models.

The wave 2 Violence Propensity Score is not a significant correlate of the wave 3 Violence Propensity Score ( $\beta = 0.06$ ,  $p < 0.46$ , in the full weighted model), net of other factors. Age ( $\beta = 0.23$ ,  $p < 0.01$ ) and Violent Home Environment ( $\beta = 0.18$ ,  $p < 0.01$ ) are again significant correlates in the full population-weighted model. It appears the oldest 20-24 year-old age cohort contributes the most to this relationship between Violent Home Environment wave 2 and the Violence Propensity Score Wave 3 ( $\beta = 0.24$ ,  $p < 0.10$ ), as was previously seen. Again, the association between Substance Use/Abuse wave 2 and Violence Scorecard Wave 3 is significant overall ( $\beta = -0.21$ ,  $p < 0.13$ ) and goes from positive in the 14-16 year-old group ( $\beta = 0.18$ ,  $p > 0.05$ ) to increasingly negative in the older cohorts (17-19 year-olds:  $\beta = -0.16$ ,  $p < 0.10$ ; and 20-24 year-olds:  $\beta = -0.36$ ,  $p < 0.03$ ).

### 6.2.3 Upstream longitudinal modelling of Negative School Attitude

As was explored in the cross-sectional modelling, I have tested wave 2 variables for explanation of Negative Attitude Toward School/Low School Attachment in wave 3 (table 6.10, below).

Longitudinal multiple linear regression model: Negative School Attitude-Khayelitsha wave 3

Variable	population weighted N=311	un-Weighted N=311	14-16 year- olds. un-weighted N=102	17-19 year- olds. un-weighted N=122	20-24 year-olds. un-weighted N=78
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$	Model 4 $\beta$	Model 5 $\beta$
(Constant)	1.55	5.30	1.99	2.27	2.20
Age	.099	.078			
Household Deprivation w2	.143*	.076	-.079	.087	.263*
Violent Home w2	.105	.040	-.041	-.032	.114
More Harsh Parenting w2	-.097	-.081	-.011	-.133	-.079
Less Parent Involvement w2	-.053	-.065	-.096	-.068	-.008
More Deviant Peers w2	-.053	.012	.038	.128	.026
Substance Abuse w2	-.257**	-.154*	.201	-.118	-.417**
Pro-gangs Attitude w2	.154*	.085	-.059	.025	.244
Negative School Attitude w2	.032	.087	.180	.114	-.124
Failed school 1+ grade w2	-.081	-.031	.051	-.025	-.139
Negative Future Attitude w2	-.071	-.066	-.010	-.109	-.172
Pro-Violence Attitude w2	.106	.060	-.058	.101	.193
$R^2$	0.09	0.04	0.06	0.07	0.21
$F$	2.51**	1.12	.865	.739	1.60

Table 6.10. Longitudinal multiple linear regression models for the dependent variable, Negative School Attitude wave 3. Standardized coefficients reported. No collinearity tolerance < 0.48, or VIF > 2.10. Note. \*= $p \leq .05$ . \*\*= $p \leq .01$ .

The full, weighted model (figure 6.10, model 1) is significant ( $F=2.51$ ,  $p < 0.01$ ) and explains 9% of the variation in the dependent variable, Negative Attitude Toward School wave 3 and allowed for a ratio of 26 cases/independent variable. In the age cohort analyses, the case: independent variable ratios are 9 cases/variable for the 14-16 year-olds, 11 cases/variable for the 17-19 year-olds, and 7 cases/variable for the 20-24 year-olds, less than ideal. None of the F-values for the age-group models are significant (14-16 year-olds:  $F= 0.87$ ,  $p > 0.05$ ; 17-19 year-olds:  $F= 0.74$ ,  $p > 0.05$ ; and 20-24 year-olds:  $F= 1.60$ ,  $p > 0.05$ ).

In the full weighted model only, Household Deprivation in wave 2 ( $\beta = 0.14$ ,  $p < 0.05$ ) explains more Negative School Attitude in wave 3 (mostly accounted for by the 20-24 year-old cohort,  $\beta = 0.26$ ,  $p < 0.05$ ) as does Pro-Gangs Attitude in the population-weighted model only ( $\beta = 0.15$ ,  $p < 0.05$ ), again primarily accounted for by the 20-24 year-old cohort ( $\beta = 0.24$ ,  $p = 0.07$ ). Substance Abuse is again (as with the wave 3 violence outcomes) negatively correlated with Negative Attitude toward School in wave 3 ( $\beta = -0.26$ ,  $p < 0.01$ , in the weighted model), changing direction and increasing in strength with

age (14-16 year-olds:  $\beta = 0.20$ ,  $p < 0.12$ ; 17-19 year-olds:  $\beta = -0.12$ ,  $p < 0.25$ ; and 20-24 year-olds:  $\beta = -0.42$ ,  $p < 0.01$ ).

#### **6.2.4 Longitudinal regression summary**

In the longitudinal regression analyses, relatively few independent variables emerged as significant correlates (Age, Household Deprivation, Violent Home Environment, Pro-Gangs Attitude, and Substance Use/Abuse). And, very few of these correlates were significant within the narrower (lower n) age cohorts, with the exceptions of Violent Home wave 2 on less Pro-Violence Attitude wave 3 for 20-24 year-olds only, Household Deprivation wave 2 on Negative School Attitude wave 3 for the 20-24 year-old cohort only, and the surprising negative correlate of Substance Use/Abuse wave 2 on Pro-Violence Attitude wave 3 (for 17-24 year-olds), on Violence Propensity Score wave 3 (for 20-24 year-olds), and on Negative School Attitude wave 3 (for 20-24 year olds). The absence of additional significant correlates and the overall low predictive efficacy of the longitudinal modelling (r-squared values for full weighted models less than 0.14) hint at the longitudinal explanation limitations within this study and have been observed in other studies within the general field of prospective criminology (Farrington, 2006). Thus, it is hoped that an alternative statistical analysis technique (structural equation modelling) will allow for a clearer delineation of pathways to greater violence potential or desistance. Other researchers have employed techniques such as dynamic cascade models (Dodge et al, 2008) and latent growth curve analysis (Farrel et al, 2005) to delineate such pathways to violence and aggression, yet these methods require more than 2 waves of panel data.

#### **6.3 Structural Equation Modelling**

The best statistical method for testing a theory based on multiple outcomes and multiple pathways is through building and testing a structural equation model (SEM). It can provide a series of model fit statistics to assess the fit of the model to the data and generate a visual representation of the factors, pathways, and standardized coefficients that comprise the measurement model. SEM, conducted here using AMOS version 21 can also provide indicators for multivariate normality which is critical to address in order to meet the assumption of normality necessary for generalizing effects to a larger population. One drawback of SEM is that the method does not allow for sample re-weighting. As seen in the previous regression models, there were some emerging differences between age cohorts (cohort sizes and the results of re-weighting) that resulted in differing regression coefficients between the full weighted and full un-weighted models. However, these variations (between weighted and un-weighted full models) did not appear extreme.

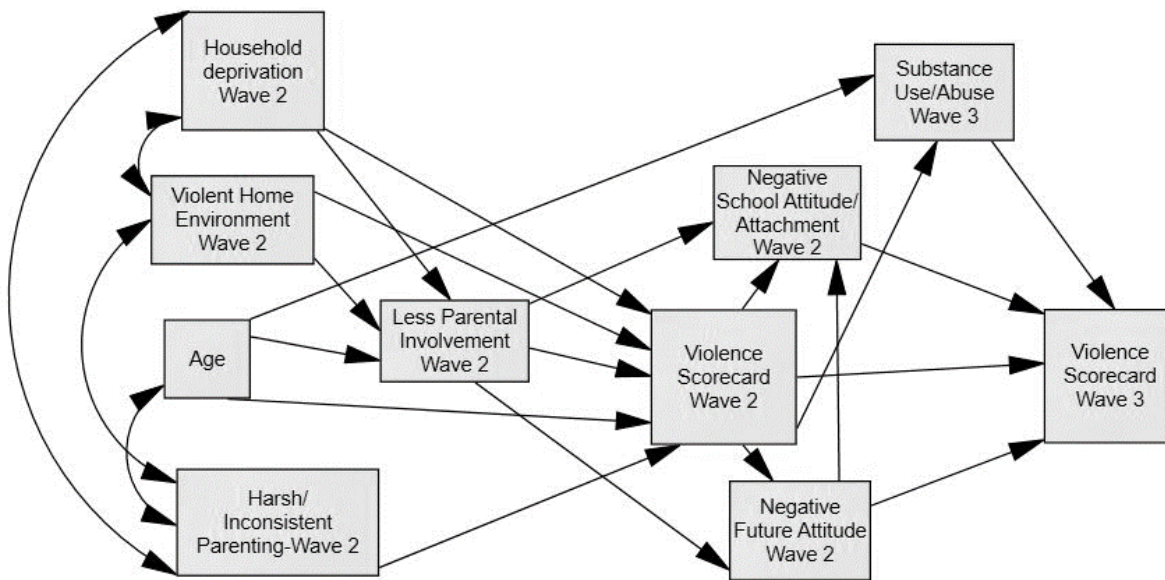


Figure 6.11. Theoretical model predicting violence potential in wave 3.

The theoretical model, first presented in Chapter 2, appears here (figure 6.11, above) to re-orient the reader. Based on evaluation of the regression results, Negative Future Attitude was not found to consistently contribute any significant additional explained variance to the violence outcome measures beyond that captured within Negative School Attitude, which is, conceptually, very closely aligned with Future Attitude. Further, in bivariate correlation analysis Negative School Attitude and Negative Future Attitude are highly correlated ( $r = .48, p < .001$ , in wave 2 and  $r = .54, p < .001$ , in wave 3). Thus, Negative Future Attitude was removed before testing the measurement models, adding to a simplified, more parsimonious modelling of pathways and effects. Thirty-five cases were dropped before conducting SEM analysis to rectify an implausible relationship between the Violence-Propensity Score wave 2 and Negative School Attitude wave 2 for those study participants who had completed secondary schooling or were otherwise no longer eligible and were not in any form of post-secondary education. For these individuals the Violence Propensity Score elements (deviant peer associations, attitudes toward gangs and violence, and physical fighting) as measured over the preceding 12 months could truly not contribute to a contemporaneous measure of school attitude that would then contribute to wave 3 outcomes. This resulted in a sample size of  $n = 276$  for SEM vs.  $N = 311$  for regression analysis (where such ordering issues were parcelled out age-cohort modelling).

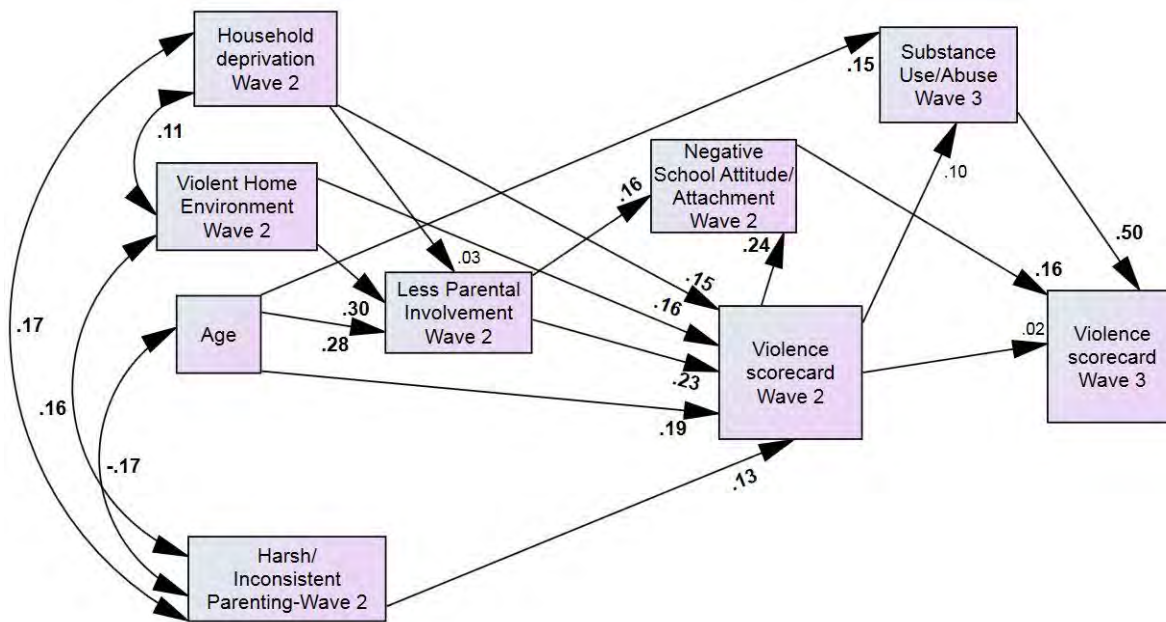


Figure 6.12. Structural Equation Model using longitudinal data. Standardized coefficients reported. Fit statistics: Chi-square= 21.55. d.f.= 17. X<sup>2</sup>/df ratio= 1.27. p= 0.203. CFI= 0.98. RMSEA= 0.031. N= 276. Hoelster's (p=.05) = 353. Multivariate normality = 3.95 (critical ratio: 2.33). Note: Coefficients in bold indicate p ≤ .05 (two-tailed). No error terms are correlated.

In the first measurement model (figure 6.12 above) fit statistics indicated an excellent fit to the data: Comparative Fit Index (CFI)=0.98 (above 0.90 is regarded as a good fit, above 0.95 as excellent), Root Mean Square Error of Approximation (RMSEA)=0.031 (below 0.03 is an excellent fit), Hoelster's test at p=0.05 is 353 (above 200 is acceptable, above 300 preferable), Chi-square=21.55 with 17 degrees of freedom, resulting in X<sup>2</sup>/df ratio=1.27 (less than 4 is good, less than 2 is excellent).

Among the demographic variables, Household Deprivation covaries with Violent Home Environment ( $\beta = 0.11$ ,  $p=0.075$ ) and with Harsh/Inconsistent Parenting ( $\beta = 0.17$ ,  $p < 0.01$ ), suggesting their inter-relationships. Violent Home Environment covaries with Harsh/Inconsistent Parenting ( $\beta = 0.16$ ,  $p < 0.01$ ). And, Age negatively covaries with Harsh/Inconsistent Parenting ( $\beta = -0.17$ ,  $p < 0.01$ ), meaning that older study participants report less harsh parenting, likely driven, in part, by less active parenting, overall, among late teenage/early 20's subjects.

Less Parental Involvement is, in turn, strongly associated with a more Violent Home Environment ( $\beta = 0.30$ ,  $p < 0.01$ ) and conditioned by Age ( $\beta = 0.28$ ,  $p < 0.01$ ), with older subjects much less likely to report high levels of parental involvement. Household Deprivation is theorized to influence Parental Involvement but this direct relationship is not significant ( $\beta = 0.03$ ,  $p= 0.64$ ).

Next, the Violence Propensity Score, as measured in wave 2, is driven by Household Deprivation ( $\beta = 0.15$ ,  $p < 0.01$ ), Violent Home Environment ( $\beta = 0.16$ ,  $p < 0.01$ ), Harsh/Inconsistent Parenting ( $\beta = 0.13$ ,  $p= 0.02$ ), Less Parental Involvement ( $\beta = 0.23$ ,  $p < 0.01$ ), and conditioned by Age ( $\beta = 0.19$ ,  $p < 0.01$ ), with older subjects reporting higher Violence Scores in wave 2. Thus, all theorized

demographic constructs were shown to directly and significantly correlate with the Violence Scorecard, as measured in the same wave 2.

Negative School Attitude and Low School Attachment in wave 2 is, in turn, driven by Less Parental Involvement ( $\beta = 0.16$ ,  $p < 0.01$ ) and the Violence Propensity Score wave 2 ( $\beta = 0.24$ ,  $p < 0.01$ ). The pathway from Violence Scorecard Wave 2 to Negative School Attitude/Attachment wave 2 was specified (as previously discussed) because school attitudes are assumed to be more short-term and current than the violence-propensity measure and its constituent elements.<sup>44</sup> These measures could arguably co-vary but this is not considered an appropriate model specification (to co-vary constructs in the middle of a model). The strong relationships, seen here among wave 2 measurements (essentially, cross-sectional correlations), are not surprising and were also reflected in the cross-sectional regression modelling.

However, the right side of the model incorporates wave 3 outcomes, driven by wave 2 measures. Here, Substance Use/Abuse wave 3 is driven by the Violence Propensity Score Wave 2 ( $\beta = 0.10$ ,  $p = 0.095$ ) and conditioned by Age ( $\beta = 0.15$ ,  $p = 0.016$ ), as older subjects are more likely to have exposure and access to alcohol. The relationship between the wave 2 measurement of the Violence Propensity Score and self-reported Substance Use/Abuse as measured a year later is potentially important (though only significant at the  $p < .10$  level) as it delineates a pathway between earlier aggression, deviant peer associations and violence-supporting attitudes and subsequent high-risk behaviour (more frequent use of drugs and alcohol). In their longitudinal latent growth curve analysis, Farrell et al (2005) also found evidence that early aggression predicted a subsequent increase in drug use.

Finally, the Violence Propensity Score Wave 3 is directly explained by Negative School Attitude and Attachment in wave 2 ( $\beta = 0.16$ ,  $p < 0.01$ ) and is strongly conditioned by Substance Use/Abuse in wave 3 ( $\beta = 0.50$ ,  $p < 0.01$ ). The wave 2 Violence Propensity Score measure is theorized to influence the Violence Propensity Score in wave 3 but this direct effect is negligible ( $\beta = 0.02$ ,  $p = 0.77$ ). However, the indirect effect of the Violence Propensity Score in wave 2, as mediated by Negative School Attitude and Substance Abuse results in a total effect that is significant at the  $p < .1$  level ( $\beta = 0.11$ ,  $p < 0.10$ ). Age also exhibits an indirect effect on Violence Propensity Score wave 3, significant at the  $p < .1$  level ( $\beta = 0.11$ ,  $p < 0.10$ ), while Household Deprivation, Violent Home, Harsh Parenting, and Less Parental Involvement exhibit non-significant indirect effects. Thus, what emerges is a potential pathway through which an unstable home environment, influenced by deprivation and

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<sup>44</sup> It is important to again note here that 35 cases were dropped from the SEM analysis for participants who were no longer in any form of schooling (including tertiary) or of school-eligible age in wave 2. Thus, for all cases, a contemporaneous relationship between current school attitude and violence-propensity would be plausible.

violence among family members, affects the quality and consistency of parenting perceived by a young male subject. In turn, early deviant associations and attitudes toward violence and gangs are cultivated. These influences may have a deleterious effect on schooling and, with this, a subject's orientation toward the future and the present value of investment (of schooling efforts) for delayed gratification (better future employment/higher education prospects). This violence potential and weak school attachment manifests in greater substance abuse as measured a year later and, within the domain of substance use, much greater exposure to and acceptance of instrumental violence and criminal associations.

This pathway bears similarity to that tested by Dodge et al (2008) through their dynamic cascade model predicting adolescent violence over a 12-year study. Dodge et al (2008) found that deprivation influenced harsh/inconsistent parenting which predicted early social and cognitive setbacks for the young subject, along with problem behaviour. This problem behaviour led to poor school performance and further parental withdrawal. In this void, deviant peer associations increased and contributed to a greater likelihood for adolescent violence.

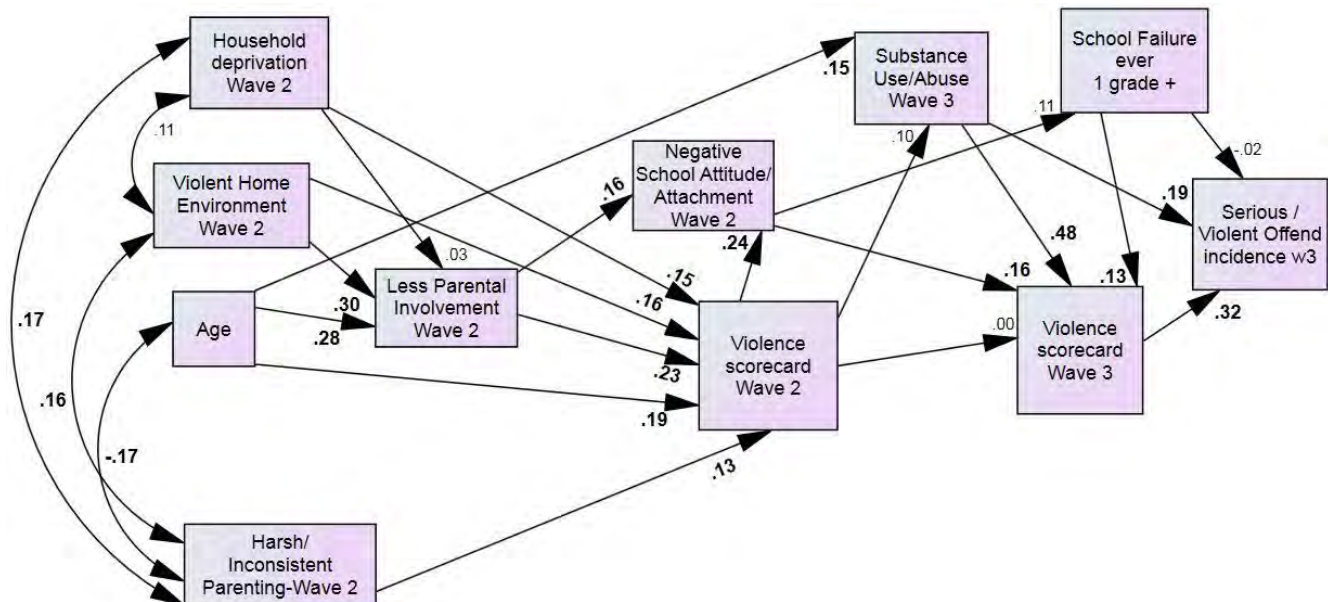


Figure 6.13. Structural Equation Model using longitudinal data. Standardized coefficients reported. Fit statistics: Chi-square= 61.50. d.f.= 31.  $X^2/df$  ratio= 1.98.  $p= 0.001$ . CFI= 0.92. RMSEA= 0.060.  $N= 276$ . Hoelter's ( $p=.05$ ) = 202. Multivariate normality = 28.71 (critical ratio: 14.10). Note. Coefficients in bold indicate  $p \leq .05$  (two-tailed). No error terms are correlated.

In this next SEM (figure 6.13, above), the additional outcomes of Failing a Grade or More of School and the total number of self-reported incidences of Serious/Violent Offending (across the 7 categories) in wave 3 were included. It should be noted that Incidence of Serious/Violent Offending Wave 3 is highly skewed (4.62, c.r.= 31.34) and kurtotic (30.10, c.r. 102.08). Thus, overall fit statistics are negatively affected, yet still indicate a marginally acceptable fit to the data: CFI=0.92,

RMSEA=0.063, Hoelter's test at  $p=0.05$  is 202, Chi-square=61.50 with 31 degrees of freedom, resulting in  $X^2/df$  ratio=1.98.

Pathway coefficients leading to Violence Propensity Score Wave 3 are not meaningfully altered from the previous model (and, thus, are not reported again, here). A history of School Failure is influenced by Negative School Attitude/Low Attachment in wave 2 ( $\beta = 0.11$ ,  $p=0.08$ ) and, in turn, directly correlates with higher Violence Propensity Score Wave 3 ( $\beta = 0.13$ ,  $p<0.05$ ). This further delineates a pathway to violence through school detachment, school failure and future discounting (Brezina et al, 2009).

Incidence of Serious/Violent Offending in Wave 3 is strongly associated with the Violence Propensity Score Wave 3 ( $\beta = 0.32$ ,  $p<0.01$ ) and Substance Abuse Wave 3 ( $\beta = 0.19$ ,  $p<0.01$ ). School Failure association with Offending is theorized but negligible, as measured. Violence Propensity Score Wave 2 ( $\beta = 0.05$ ) and Negative School Attitude Wave 2 ( $\beta = 0.05$ ) both exhibit small indirect effects on the offending outcome mediated by Substance Use and the Violence Propensity Score wave 3. Given the clear limitations of this offending measure, we see evidence that the Violence Propensity Score wave 3 may be an effective proxy measure for violent offending and that the link between substance use and offending is substantiated in multivariate modelling.

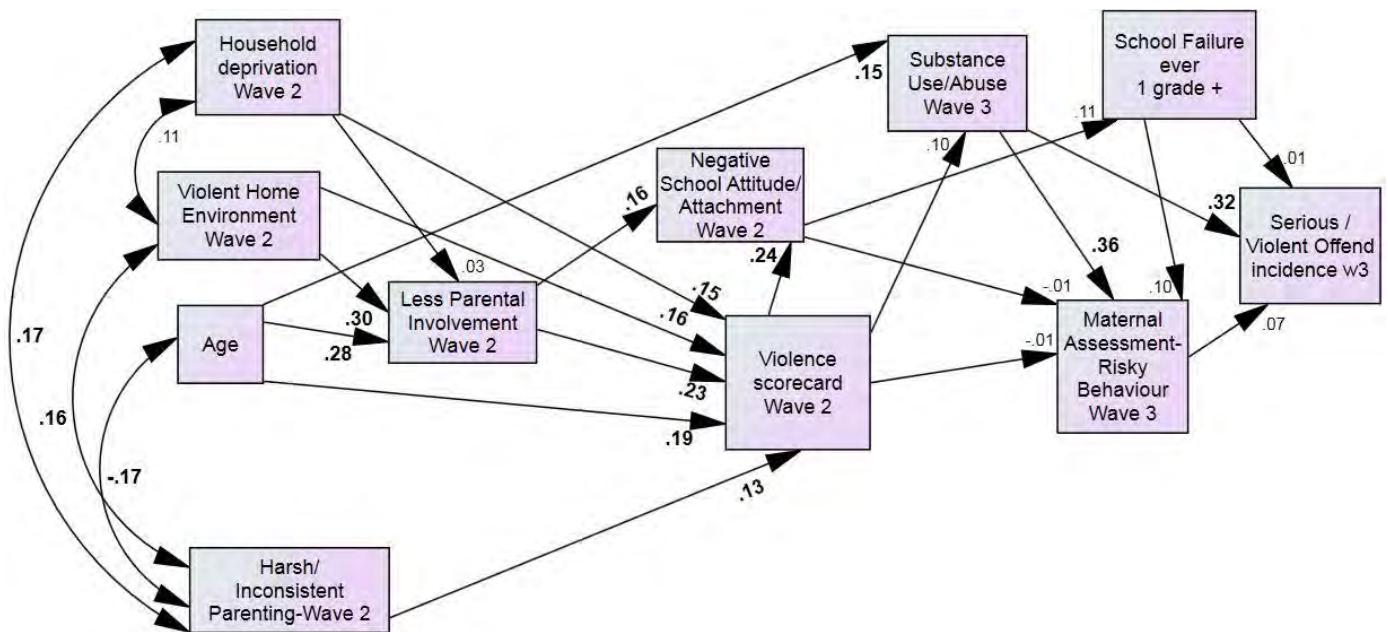


Figure 6.14. Structural Equation Model using longitudinal data. Standardized coefficients reported. Fit statistics: Chi-square= 58.28. d.f= 31.  $X^2/df$  ratio= 1.88.  $p=0.002$ . CFI= 0.90. RMSEA= 0.057. N= 276. Hoelter's ( $p=.05$ ) = 213. Note. Coefficients in bold indicate  $p \leq .05$  (two-tailed). No error terms are correlated.

In this last SEM model (figure 6.14, above) the Maternal Assessment of the study participant's Problematic and Risky Behaviour in Wave 3 was inserted in place of the Violence Propensity Score

Wave 3 to test for the strength of triangulation between the participant's self-reported Violence Propensity Score and Serious/Violent Offending and the primary maternal caregiver's assessment. Similar model fit statistics and correlations with the School Failure and self-reported offending outcomes would offer some evidence of accurate subject disclosure in the Violence Propensity Score. Significantly higher fit statistics in this Maternal model would suggest that subjects may be under-reporting, especially in the case of the School Failure variable which combines subject and maternal reports.

Due to 11 cases with missing data for the Maternal Assessment, multivariate normality could not be obtained. The overall model again indicated a marginally acceptable fit to the data: CFI=0.90, RMSEA=0.057, Hoelter's test at  $p=0.05$  is 213, Chi-square=58.28 with 31 degrees of freedom, resulting in  $X^2/df$  ratio=1.88. Fit improvement from the previous model with Violence Propensity Score Wave 3 was insignificant.

Here, the influences of Violence Propensity Score Wave 2 and Negative School Attitude Wave 2 were negligible on the Maternal Assessment in Wave 3. However, there remains a significant association between Substance Use/Abuse wave 3 and the Maternal Assessment ( $\beta = 0.36$ ,  $p < 0.01$ ) and a marginally significant correlation between School Failure and the Maternal Assessment ( $\beta = 0.10$ ,  $p=0.08$ ). The Maternal Assessment is, likewise, marginally associated with subject-reported offending in wave 3 ( $\beta = 0.07$ ,  $p=0.23$ ). I postulate that the maternal caregiver does not know (or may be unwilling to report) the extent of risky behaviour that her child is involved in. However, drug and alcohol use are more easily detected by caregivers when the study participants come home (than engagement in violence and criminality). The stronger linkages seen between the Violence Propensity Score Wave 3 and Substance Use, School Failure, and Offending would again suggest that the Violence Propensity Score is a superior proxy indicator of violence potential (than the Maternal Assessment, in this case).

## **6.4 Analysis of change**

The lack of 3 waves of data resulted in limited possibilities to analyse change in risk factors for violence. In an attempt to understand the potential for analysis of change in the available data, I have presented a correlation table where I constructed dummy variables for high and low School Attitude/Attachment risk. The School Attitude risk factor is based upon a score equal or higher than the 75<sup>th</sup> percentile in the distribution (a score of 1.875 or higher). The School Attitude protective factor is based upon a score equal or lower than the 25<sup>th</sup> percentile in the distribution (a score of 1.25 or lower). This trichotomization method (and the 25<sup>th</sup> and 75<sup>th</sup> percentile cut-points) was used extensively

in the recent Center for Disease Control’s Expert Panel on Protective Factors for Youth Violence (Hall et al, 2012).

Bivariate correlations between Violence Scorecards and Negative School Attitude risk and protective factors.		Violence Propensity ScoreChange wave 3 – wave 2	Violence Propensity Score_W2	Violence Propensity Score_W3
Correlation is significant at the 0.01 level (2-tailed).**				
Correlation is significant at the 0.05 level (2-tailed).*				
Neg School w2 risk factor =1 if greater than/equal to 1.875	Pearson Correlation	-.087	.297**	.194**
	Sig. (2-tailed)	.128	.000	.001
Neg School w2 protection factor =1 if less than/equal to 1.25	Pearson Correlation	.053	-.192**	-.129*
	Sig. (2-tailed)	.350	.001	.023

Table 6.15. Pearson’s 2-tailed bivariate correlations between Negative School Attitude wave 2 Risk Factor / Positive School Attitude wave 2 Protective Factor and Violence Scorecards wave 2 and 3 and Change in Violence Scorecard.

In table 6.15 (above), we see that the Negative School wave 2 risk factor is highly correlated with the wave 2 Violence Propensity Score ( $r=.30$ ,  $p<.001$ ) and less highly correlated with the wave 3 Violence Propensity Score ( $r=.19$ ,  $p<.001$ ). The same applies for the Positive School wave 2 protective factor which is highly correlated with less Violence Propensity Score wave 2 ( $r= -.19$ ,  $p<.002$ ) and less highly correlated with the wave 3 Violence Propensity Score ( $r= -.13$ ,  $p=.023$ ). Among both of these groups, this suggests a regression to the mean, rather than a risk or protective factor signalling the potential for behavioural change (in the Violence Propensity Score). Further, the change in the Violence Propensity Score (created by subtracting the wave 2 score from the wave 3 score, meaning that a positive score would indicate increasing violence potential) is not significantly correlated with either the Negative School risk factor or the Positive School protective factor. While there is evidence of a pathway to higher violence potential through Negative School Attitude and the influence of Deviant Peers, as mediated by Substance Use, the evidence for behavioural change is less clear.

## 6.5 Conclusion

The multiple linear regression and structural equation models presented and discussed in this chapter affirm a relationship between family-level background factors, early risky behaviours and associations, school attitude/attachment, substance abuse, and later violence-potential. Linkages between subject-reported violence-risk, as assessed in the Violence Propensity Score, and self-reported violent offending and maternal assessment of subject risk substantiate the use of the Violence Propensity Score as a key outcome measure. An exploration of Violence Propensity Score changes and School Attitude/Attachment risk and protective factors explored the possibility of a risk or protective factor as a marker for change. Findings on analysis of change from the data were inconclusive, both limited by only two waves of data, and an apparent regression-to-the-mean trend. A deeper discussion

on pathways to violence is undertaken in the next chapter following the presentation of two case studies. Lastly, a discussion on the conclusive findings and importance of this study, with reference to the extant literature, is presented in the final chapter (see Chapter 10).

## **Chapter 7: Case studies – most significant changes in the Violence Propensity Score**

In the previous chapter, I provided a detailed quantitative analysis of the correlates of violence-potential and self-reported violence, as measured in this study. As this study is ultimately about attempting to understand the lives of real young people, it is useful here to illustrate some of the factors potentially influencing changes in violent behaviour and attitudes through two case studies where study participants have undergone significant change, and an unstructured interview with a young offender.

Based on the practice of ‘Qualitizing’ data (Tashkkori and Teddlie, 1998; Sandelowski, 2000), I have constructed 4 case studies from the structured questionnaire (including both closed-response and several open-ended questions) in an effort to draw more information from the data and assist interpretation. In qualitizing data, Tashkkori and Teddlie (1998) suggest that instrument scoring should be used to profile participants creating “verbal portraits... around target phenomena” (Sandelowski, 2000, p. 253). In line with the Most Significant Change Theory for programme evaluation (Davies & Dart, 2005), I have adapted an approach using the change in Violence Propensity Score from wave 2 to wave 3 as the marker for significant change. Cases with the 5 highest negative changes (violence propensity reductions) were evaluated qualitatively to identify stories that were, in some ways, illustrative. All data (except the two telephonic follow-up interviews that were attained for the case studies in chapter 9) were derived directly from responses to open and closed questions in the structured field interviews and were qualitized to bring forth a narrative case study from a structured interview (Tashkkori and Teddlie, 1998; Sandelowski, 2000). While some editorial control was exercised in order to craft and interpret these narratives, all statements reflect information provided by the study participant or his maternal caregiver within the frame of the interviews. All quotes come directly from the interviewees in their responses to open-ended questions.

Attempts were made to reconnect with each of these 4 subjects in November 2015 to explore changes in their developmental (and criminal) trajectories. Telephone numbers for Kelo and Lundi were no longer in use and they could not be traced.

### **7.1 Case study - Kelo**

Kelo lives in Site B, Khayelitsha, turned 16 in the third year of the study, and has been in the panel study for two years. There are 4 people in his household, one of them now working and one person also receives a government grant (two people were reported to be employed in wave 2). They live in a free standing house and have piped water, electricity, a television, cell phone, and refrigerator. He has not experienced serious deprivation in the past year but has gone without enough fuel to cook or heat with once or twice.

Both his mother and father are alive and he often receives support from each of them. No member of his family has been to prison. There is no history of violence or alcohol abuse in his family. Kelo's mother says he is now seldom considerate, obedient or helpful around the house. According to her, he often has a hot temper and is moody, sometimes fights with siblings, and sometimes gets into trouble in the community. They often fight about when he comes home at night, what he does when he's out, and him having bad friends. In wave 2, her assessment of his behaviour at home was very positive; they only fought sometimes about what he did when not at home but never about having bad friends.

Kelo has lived in the same neighbourhood all his life and agrees that he likes it but does not believe people there are willing to help if one is in need nor does he identify any role models in his neighbourhood or people he can talk to. In wave 2, he said that he knew a mechanical engineer who was his role model.

He says his neighbourhood has lots of crime, lots of fights, and feels like a war zone most of the time yet he still feels somewhat safe there and does not feel scared of anything (an apparent contradiction, yet many study participants seem to differentiate between sense of safety and fright/feeling scared). In wave 2, he said he was afraid of fighting and of getting a girl pregnant. In the past year, he claims he has heard gunshots 3 times, seen someone beaten up twice, seen someone stabbed or shot 3 times (and twice before, in wave 2), and had been chased by a gang once. He also reports being robbed, threatened with a weapon, and stabbed in the past year. He reported no history of victimization in wave 2.

Kelo says that more than 5 of his friends drink alcohol, regularly use drugs and smoke cigarettes. One or two of his friends have also dropped out of school but none have been arrested, to his knowledge. He doesn't mind people using drugs around him, knows people who make a living from robbery, and has 5 or more friends who carry weapons. In wave 2, none of his friends were using drugs, none had dropped out of school or were carrying weapons or engaged in crime; only one or two were beginning to sneak out at night and were drinking; none had been arrested nor did he know anyone who made a living from crime. Kelo admits in wave 3 to being in a gang "to be backed up [his words]" (though his attitude was against gangs in wave 2).

In wave 2, Kelo reportedly played sports, went to a church youth group, and to the library on a weekly basis. He participated in Amandla in wave 2, stating, at the time, that he wanted "to be an example to other kids". Now, he says "I don't have time for soccer anymore". Kelo does not report participation in any social activities in wave 3. The only community facilities he now makes use of are shebeens, visiting them on a weekly basis, claiming to have spent R100 on alcohol in the past week. He also smokes marijuana every day (though this only costs R20 per week) but has never used tik. He

reported never having used alcohol nor any other drugs in wave 2. He currently feels he is in good physical shape and does not feel anxiety but sometimes feels that life is not worth living and does not really care about his health.

Kelo dropped out of school last year before reaching 12<sup>th</sup> grade. He says he did not really feel he belonged at school, finding it boring and failing to do his homework, but felt that he did try hard. He reports never having failed a grade before he dropped out. His teachers were helpful but did not praise him. He was threatened and hit once or twice by schoolmates in his last year at school. His parents sometimes checked his school work and often attended school meetings.

Kelo is not working nor looking for work. He now spends much of his time (16-20 hours each per week) meeting friends and using his cell phone, and 11-15 hours per week watching TV. He goes out 3-4 nights of the week and comes home late, though it varies too much to say when. His parents do not know where he goes and often shout at him, beat him and sometimes lock him out of the house at night. In wave 2, he was also going out 3-4 times per week and was home by 10pm; then, his parents sometimes shouted at him but did not beat him.

Kelo does not believe that he can survive on his own and does not know where he is going in his life but still has goals for the future (to gain employment). He often thinks of himself as a bad person though he is content with his popularity among young people his own age. Though he does believe he will find a job he will enjoy, he feels his opportunities are very limited, he no longer hopes to study further, and does not agree that he will lead a happy life. When asked what he hopes for the future, he says he does not think about it (any longer). In wave 2, he was much more hopeful about the future, believing he had many opportunities and stating his goal was to go to school (tertiary).

Kelo says that he has been in 2 or 3 fights in the past year and tends to condone the use of violence, agreeing that he gets angry easily, gets in more fights than the average person, has threatened people he knows and strongly agrees that if you mess with him or his friends, you will get hurt and that, if someone disrespects him, he must fight them to get his pride back. In wave 2, he rejected the use of violence but did state that he got angry easily and was hard to get along with most of the time and had also been in 2 or 3 fights.

In wave 3, Kelo discloses a great deal of his criminal/violent offending in the past year, admitting to robbing people with weapons, using a weapon to injure someone, and being involved in a gang fight. In 2013, he only admitted to hitting someone else who disrespected him, stating later that he had changed this behaviour because he didn't want to get hurt. Kelo's Violence Propensity Score was 14 in wave 2 and jumped up to 66 in wave 3, the biggest Violence Propensity Score increase of any of the study participants and the second highest Violence Propensity Score overall in wave 3.

## 7.2 Case study - Lundi

Lundi has been in the study for 3 years, and turned 19 in April, 2014. He dropped out of school last year before reaching 12<sup>th</sup> grade and is looking for work (without any other form of vocational training). There are 3 people in his household, none of them working (one person was reported to be employed in wave 2) and one person receives a government grant. They live in a shack in a backyard and have access to flush toilets and electricity but have no piped hot water, nor a refrigerator. He has reportedly experienced deprivation, going without enough food, medicine, fuel for cooking/heating, and cash a few times each in the last year.

Lundi's mother is alive and he receives some support from her but claims that he is closest to his grandmother and that she knows the most about him. His father is deceased and a member of his family is currently in prison. There is a history of violence in his family with people arguing a lot, sometimes losing their temper and becoming violent; alcohol is sometimes involved in wave 3 (though never disclosed in earlier reports).

He has lived in the same neighbourhood all his life and likes it but does not believe people there are willing to help if one is in need. If he needs to talk to someone, he says he will turn to his church, a social worker, or an Amandla coach, who he also feels are role models. He says his neighbourhood has lots of crime, lots of fights, and feels like a war zone most of the time, making him feel unsafe, as he's scared of crime because there are bad people in the area. He is now most scared of gangs, fighting, and murder (in that descending order). In wave 2, he felt the area was safer but was most scared (at the time) of being mugged, getting raped, and getting AIDS. In the past year, he claims he has heard gunshots 3 times, seen someone beaten up 6 times, seen someone stabbed or shot 4 times (same in wave 2), and been chased by a gang twice (which had never happened to him up until the wave 2 interview).

Lundi's friends and the people he lives around regularly use drugs. More than 5 of his friends have also dropped out of school and several have been arrested. He doesn't mind people using drugs around him and has 3 or 4 friends who carry weapons and make a living from robbery. In wave 2, none of his friends were using drugs or drinking a lot; only one or two had dropped out of school and were beginning to sneak out at night; none had been arrested nor did he know anyone who made a living from crime.

Each week, Lundi states the he plays sports, goes to church and sings in the choir, and attends a drama group but spends much of his time watching TV, playing video games, and using his cell phone. Lundi goes out most nights of the week and comes home late, after midnight, visiting the shebeen (tavern) almost every day and claims to have spent R100 on alcohol in the past week. He also smokes marijuana every day (spending R60 per week) and, he admits to using tik (methamphetamine) once or

twice, having also spent R60 on the drug in the past 7 days. His mother and grandmother do not know where he goes when he is out and sometimes lock him out of the house at night. In wave 2, he was only going out once or twice per week and was home by 10pm and was only punished with house chores. At the time, his mother was checking his school work, attending school meetings, and actively participating. He reported never having used alcohol, nor any other drugs in wave 2. In wave 2, he reportedly played sports nearly every day and went to the library and the shebeen each about once a week. He says his favourite (pro-) social activity is Amandla Edu-Football, claiming that he attends twice a week because it gives him “social status” and “self-esteem” and “keeps him out of rejection” (both unusual responses). (According to Amandla records, he did not register or attend at all during 2014/wave 3, though he did participate in 2013/wave 2.)

Lundi strongly believes that he can survive on his own and has goals for the future though he is not sure he will achieve them. He often thinks of himself as a bad person but is content with his popularity among young people his own age. He wants very much to study further, get a job he will enjoy, and lead a happy life but he believes his opportunities are very limited and does not know what specific future he wants or how he’ll get there. In wave 2, he was much more hopeful about the future stating his goal was to pass all his studies and get a well-paying job to help his family.

Lundi did not really feel he belonged at school, finding it boring, failing to do his homework, and strongly agreeing that he did not really try hard. He reports being absent many times in 2013/wave 2 (stating he was afraid of being mugged or meeting gangsters on his way to/from school) and reports having failed several grades before he dropped out. His teachers were not very helpful and did not praise him.

He was also injured with a weapon and threatened in his last year at school and states (separately) that he was stabbed while his family was robbed in the last year. After being robbed, he says he took after the perpetrators and stabbed them. He reported no history of victimization in wave 2. Lundi admits in wave 3 to being in a gang (though his attitude was against gangs in wave 2), claiming that he was forced to join for protection when he was attending school in another area.

Lundi says that he has been in 4 or 5 fights in the past year but has mixed feelings toward the use of violence. While he rejects discriminating or using violence against people of other races, nationalities, or sexual orientation and believes there are other ways to deal with being mad besides fighting, he strongly believes that there are times when a person doesn’t have any choice but to fight and that it is ok to use violence “when defending oneself” (his words). He agrees that he’s now hard to get along with most of the time and that if you mess with him or his friends, you will get hurt.

In the past month, he has experienced panic attacks and has felt that his problems are too big to deal with (also stating this in wave 2) and that life isn't worth living, though he agrees that he's in good shape, physically, and cares about his health.

Lundi discloses a great deal of his criminal/violent offending in wave 3, admitting to robbing a Somali-owned shop with a weapon, fighting while drunk, stealing a car, fighting with a weapon 4 or 5 times in the past year, and being involved in several gang fights against another section gang. Yet, he states that his behaviour has changed (as in, he is no longer engaged in this violence/crime). Lundi's grandmother says he is inconsiderate, disobedient, never obeys family rules, is never helpful around the house, often fights with siblings, and sometimes gets into trouble in the community. They often fight about when he comes home at night, what he does when he's out, and his bad friends. She says his behaviour has changed in the past year in that he is now always indoors whereas before he always said he was going out to play soccer. In wave 2, there were only occasional arguments about what he did when he was out but he was otherwise well-behaved, according to his grandmother.

Lundi's Violence Propensity Score was 20 in wave 2 (a potential warning sign) and increased by 50 points in wave 3 to 70, the second largest Violence Propensity Score increase of any subject and the highest Violence Propensity Score overall in wave 3.

### **7.3 Ayanda's story**

Although it was not possible to secure additional open-ended interviews with Kelo or Lundi to elicit their perspectives on their violence escalations, Ayanda, a 19 year-old at the time, was one of several Khayelitsha subjects who agreed to a candid, unstructured interview on his involvement in violence. On his entry into criminality and violence, Ayanda says:

“Growing up in a society like this, it's hard at times, when you're experiencing poverty and different crimes. So, like you grow up in a society where it's full of criminals, crime, and violence. You experience crime every time. Like people getting drunk and fighting, gangsterism, robbery, shootings, murders, hijacking. So when you're growing up, you see all these things, you think it's cool. Then you see the people doing this stuff, robbing the Somali shops or robbing other big shops and getting money, you think, 'ok, no man, it's cool'. The older ones, while you are at school and still young, you see them, you think maybe it's the right thing to do. Then you see them going with older people, getting money. Then you think, yeah, man I want to be like them. Then you jump the fence also, you start smoking, drinking, doing all those sort of stuffs. Then you start robbing, too. You drop out of school. Before you drop out of school you start [anti-social behaviour] at the school, like robbing children, not following the rules at school, breaking the law. Then you get punished. Then, like they understand you but you think, 'no man, they're just talking', because you're enjoying what you're doing. So, now you drop out of school, go out, do all these violence things, smoke drugs, join gangsterism, you fight. And [in]

gangsterism, they use weapons, all different weapons like knives, pangas, breadknives, axes. And, the gangsterism start, maybe they rob you, they rob your friend. So, you're like in this group thing and you think, 'no man, it can't be me, I must take my friend and go to that section to collect my things'. Then, when you get there, they start doing the funny things. So, now you think, 'no man, ok we're a group, they're a group, if they don't want to give us our things the right way, we must fight for it'. So the gangsterism starts like that, or maybe for a girlfriend. The other one; a girlfriend is having an affair with another guy. So now, you get angry at your girlfriend."

Ayanda confirms an early and seemingly rapid entry into serious violence and criminality, having seen such violence all around him as a child and envying those who were benefiting from criminality. This pathway seemed to offer immediate rewards that were otherwise unattainable.

On the seduction of violent crime and easy money, Ayanda says:

"Okay, I started joining these criminal activities, like I thought it was cool at times, started smoking, didn't have money. Okay, when you're broke, it's not nice to be broke, you don't even have 5 rand in your pocket, at times you want to smoke or you are hungry, there's no food in the fridge, in the table, in the cupboard. So, like, you start going out. So, I started going out and hustle outside, but I didn't hustle the right way, I hustled the wrong way, I was a wrong-doer. I started doing things, man, things that any human being don't have to do. So, I started robbing, taking valuable good[s] from people, housebreaking, any crime that can bring me money, I started doing that. But now, as the time passed by, I started realizing, no man it's not cool to do those stuff cause at times, you are still young, you don't know what you're doing. So, like, I didn't know what I was doing, but I was doing it, and it was fun because I was getting money, buying anything I want to buy. Maybe I could take plus/minus, in the Kasi [township] area, it's probably R2500, or R1000, or R800. Just fast money. So, maybe the real price, its R4000, 4point [R4,500], or R5000, but here in the Kasi area, its maybe R1000 or R800 because you want the money now, now. Then like you can do the things you want to do with the money. Then, the money starts fading away, you start doing another money. And the phone, maybe it's R600 something, you sell it here for R150 or R200, that's how I get the money. But, I start realizing, no man, it's not good for me."

Ayanda explains how easy it was as a child to both be exposed to violence and then to experiment, himself. Suddenly, violent crime leads to (relatively) easy money, money that would be well beyond the means of a 'normal' disadvantaged boy in Khayelitsha. While poverty, or lack of enough food, is mentioned as a driver, the alleviation of hunger does not seem to be the immediate priority when the money comes in. You want to drink, buy drugs, buy nice things and be popular, stay high, live fast, and not think about the future (Jacobs et al 2003).

Several subjects I interviewed stated that they did not regret their violent/criminal behaviour, even though they were now 'reformed' and no longer involved in gangs, violence, or criminality.

When asked if he regretted his actions, Ayanda says:

"I wouldn't say I regret anything in my life. I don't regret anything. But I regret in life, ok, not to be successful. But the things I did, I wouldn't say I regret them."

As this was a repeated sentiment (among other interviewees), I suspected that there might be a 'cultural gap' in understanding the concept of regret. However, in conversation with non-offenders from similar populations, there was agreement that regret for harmful actions was normative.

After probing Ayanda further on whether or not he could potentially return to violent crime, he said:

"Now, it's not the same as last time, cause now I can go to sleep with a full stomach, so like I don't need to go rob people and at times I have my own money, maybe my mother gives me money or I make money for myself, but not the way it used to be. So, like now, it's impossible to me. I wouldn't say it's fully impossible, it's still possible but now it's impossible for me to go back in crime, maybe some time maybe, you never know, but it wouldn't be my, like intentions to do that. Ok, but maybe something would come up, you never know."

Here, Ayanda begins with a conviction that he has changed and would not return to offending and, yet, seems to quickly imagine a scenario where he might feel pushed to return to his criminal behaviours. It suggests how strong the 'pull of the streets' may indeed be and echoes the findings of Jacobs et al (2003) from interviews with carjackers: "In effect, the carjackers were locked into a self-enclosed system of behaviour in which the cash-intensive activities promoted by street culture continually threatened to exhaust the financial resources required to sustain them, and thereby sowed the seeds for further offending" (Jacobs et al, 2003, p.680).

Ayanda discusses his use of violence with relative ease and detachment, suggesting his use of rationalizations:

"There are a couple of people, I stabbed them, like brutal, so like, and left them. There wasn't a time like I stabbed someone and watched him fight for his life, like in a boxing match. But, I would stab someone cause any mission, your worst enemy is eye and tongue. So like, when you do something, you don't want to be seen and you don't want that thing to be talked about. So, like, I did something, stab someone, stab him then leave him there, fighting for his life. So, like next time, I don't hear about that, what happened. So, that's why I said, I don't think I've murdered someone, maybe I did. Ok, I've held a gun, shot people, leave them there. But, some people I've shot, they were distanced. Maybe someone is coming there, I see him, I don't want him to see me, so I shoot him through distance, he goes down, then I go away. That's why man, cause I don't know where I hit that person, but I saw him going down, I

didn't have the chance to go there and look because the sound, mos [you know], people will come quickly so they will see who did this."

On robbing people with a gun and the instrumental use of violence, or the threat thereof:

"It's easy, because some people get frightened when they see a gun. And, when you have a gun, maybe you don't even breach the gun, you have the gun this side, the magazine this side, when you're robbing they see it's a full magazine. In front of them, you put the magazine, then they see, it's a real thing, it's easy for them to give you everything they got. But, with a gun, I didn't rob people with earphones. Maybe households. Maybe you go there by Samora, there's a place there called... I forgot its name, man. But there, it's a suburb. So, maybe, when I'm in Samora, we go visit there, get in the house, we don't hurt anyone, but we do take stuff, valuable stuff. And, if someone doesn't give us what we want, we tell them we don't want to hurt anyone. We show them with the first born, or with the last born, like a small child, yah, put him in the microwave oven, then switch it on. Then he will probably give us what we want. Or, maybe, take a knife, put it in his wife here [neck], and we ask him to give us what we want. They don't give, Ok we cut a little here so they like see the blood so that they like see that we mean business. We don't want to hurt anyone but we want our stuff, their stuff, cause, when we have it, it's our stuff, although we don't have the papers. So, we take that, and go away. That's how I got money, at times. But, not every time. Cause, when I go out, I make sure that I win, so that I don't go back. Maybe win, and be in my area for at least a week, not doing crime, spending the money, sitting, chilling, buying groceries.

Ayanda's sense of detachment from his use of extreme violence prompted me to ask if, at times, he felt removed from his body, like a fly on the wall watching himself, to which he responded:

"It's like you see, ok, you're doing this but you're enjoying it, you can't stop. Like, someone is controlling you to do those stuff, like someone sitting at home with a joystick, like playing you. You see, mos, in the video games, you're like sitting at home, playing with this player, killing people. It's like something like that. You go when you feel like you want to go. You know maybe you just do the mission and just fade away, quickly as possible."

As we concluded our interview, I wanted Ayanda to elaborate on how he felt he had changed, and what he wanted to do with himself. Here he expresses normative thoughts about working with children and building community:

"OK, as I've said, I'm a changed person now. Going back to those things, looking back, it's the new me now. I left the old me behind, I dealt with those things, so like, now, I'm a new person. I can be with children now, show love, give love to them, in the community, give love, show love. So like, in the community now, I'm like no longer that person, although they didn't see me as that kind of person

because I didn't rob in my community, mos, or do kinds of silly stuff in my community. So, like, anyone in the community that knows me, older people, or like small children, they don't know me of those kind of stuff. The only people that know about those stuff, it's me, my god, and the people I did these stuff with. So, now like I consider myself as a good and a changed person now, much greater than before. So, like, I can sit with a group of children, doing all kind of exciting stuff to make them happy, to feel free. And, I want to give back to the community so that they can see, no, they have a bright future, they have so much opportunities. Not that we did not have opportunities, we did, but we played with our time. So like, now I want them to don't feel bad for themselves, to always accept who they are, and make sure that they be something in life, and never feel bad of how they see things, always acknowledge that something great will happen, or good will happen.”

## 7.4 Discussion

I begin this discussion by presenting several anecdotes and insights from a Xhosa-speaking journalist, Phaerie Sephali (Sephali, 2014), who conducted interviews with young Khayelitsha gang-members, achieving access and some significant disclosure from her subjects without the language barrier that non Xhosa-speakers (myself included) have encountered. She relates similar drivers (for joining gangs and dropping out of school), uncertainty about the reasons for engaging in lethal violence and the origins of the gangs they belong to, and also found seemingly rapid descents into violence and criminality:

“Vura and Vato gangs are mostly youth between the ages of 13 -24 years old. Most of them attend high school if not they have been expelled from school due to their behaviours or dropped out of school because of not being safe in school or substance abuse... When the different groups were asked...none of them were able to say when these fights started and what the history behind the name and groups Vura and Vato is. But all they know is that they are enemies. They said they have different reasons why they fight and everyday there is a new reason.” (Sephali,2014, p. 2)

On early exposure to and fascination with violence, Sephali recalls a vivid conversation with a 5 year old in Khayelitsha:

“A five year old boy and his friends from Town 2 excitedly explained to me how he saw a young gang member he knew being beaten by his enemies. He describes how the gang member's private parts was cut off by his enemies while he was still alive and people were watching. I asked the boy what he thought of the gangs in his area. He replied in his small Xhosa voice and said [in translation]: ‘I like the guys, when they fight I watch them and I am not scared of them. When we play with my friends we like to take sticks and also pretend we are fighting.’” (Sephali,2014, p. 6)

On the role of substance abuse, Sephali writes:

“Another huge influence in the young gangster’s life is tik. Not all the gangsters drink alcohol but most of them smoke tik. Apparently tik gives the edge to do anything and at the same time they feel calm after smoking... One claims that not being high gives him a headache and he thinks too much about things that he is not suppose to think about. For instance he explained that he thinks about the people he had wronged or wounded. He says that the thoughts are not good because they make him go crazy so he rather get high on tik but he gets the money through robbing people. “ tik takes away problems and makes you forget about things” (Sephali,2014, p. 7).

On the possible reasons for engaging in gangsterism, crime, and violence, Sephali speculates that prosperous criminals impress youth (boys and girls, alike) through their fast and excessive lifestyle:

“Through my observation they had goals but they did not have positive motivations to achieve those goals. They lacked positive role models; for instance most of those who used to be in a gang when they were teenagers are now robbing banks, money cars [cash-in-transit vehicles], do house breaking, or are in jail. These so called role models live a lifestyle of ubusshotana and they go out to clubs and spend thousands on entertainment. This money they get from robbery or selling drugs. So the young people who are currently in gangs get motivated by these people and they believe in order to be successful you have to be a criminal. A 15 year old girl said that she does not see the point of investing in school when she can just have a good life through dating amarhuzu, another name for the older gangsters who survive by being a criminal. (Sephali,2014, p. 9).

Sephali’s insights reinforce notions that violence is a currency in Khayelitsha that many young people have begun to trade in directly, feed off indirectly (in the case of girlfriend’s), and fashion aspirations around (in the case of children witnessing and re-enacting the violence they see). Sephali speculates the pathways to this violence are through drug addiction and graduation from youth gang fighting to more economically driven violent crime.

Among our case study subjects, Kelo’s and Lundi’s pathways to violence seem to diverge and converge, while Ayanda’s story is more graphic but somewhat limited in its reference to risk factors and onset. Kelo seems to have come from a more stable home, living in a permanent house with a mother and father and little deprivation. Lundi grew up without his father, in an informal shack, and has experienced some deprivation and history of violence in the home. Ayanda made reference to not having food but his exposure to violence and to prosperous criminal role models seems more salient. Lundi seems to have been mixing with deviant peers and engaging in alcohol use for several years; Kelo seems to have transformed from one wave to the next. Both of them had positive attitudes toward school and their futures before dropping out of school and engaging in gang activity. Ayanda also made reference to getting into trouble in school before dropping out. Lundi says he was forced to join

the gang; Kelo says he joined for protection. Ayanda did not appear to be forced into gang membership and described how the gang enabled more violent behaviour. Significantly, Kelo's and Lundi's attitudes toward violence, their justifications or neutralizations, change dramatically along with their self-reported violence. It is difficult to discern if the attitude favourable to violence precedes the violent behaviour or is altered *ex post facto* to justify the action. It is clear, however, that both Kelo and Lundi knew (and presumably still know) that violence and criminality is wrong yet they have each been drawn into group behaviours that support violence, criminality, alcohol and drug use, and reject long-term investments in schooling. In Ayanda's case, while he claims to have desisted from violence and wishes to help and work with young kids, he feels no regret for his actions and somehow seems to 'leave the door open' to future offending, should circumstances require. Ayanda also speaks with detachment on his use of extreme violence, likening it to playing video games.

All three subjects dropped out of school and significantly increased their reported drug and alcohol use. Thus, parallels are apparent with the SEM pathways to increased violence potential (Violence Propensity Score increases) through poor school attitude (or performance) and greater substance use. And yet, it is not entirely clear why or how Kelo and Lundi's Violence Propensity Scores have increased so significantly. One explanation is the tendency to agree or disagree somewhat uniformly throughout the Violence Propensity Score items. As subjects tended to disagree with most pro-violence and pro-gang items and report low levels of peer deviance, their resultant scores were quite low. As other subjects tended to report some pro-violence and pro-gang attitudes and some peer deviance, their scores became significantly higher. Such is the nature of a battery of related items reflecting socially undesirable behaviours and attitudes.

Additionally, the Fighting sub-scale has a possible value of 25 points, if a subject reports being in 6 or more physical fights in the past year. In Lundi's case, he went from no reported fights in wave 2 to four or five reported fights in wave 3, causing a Scorecard increase of 15 for that sub-scale, alone. Additionally, his Deviant Peers subscale increased from 8 in wave 2 to 26 in wave 3 (of a possible 28 points for the subscale), his Pro-Gangs sub-scale from a 4 in wave 2 to 18 in wave 3 (of a possible 24 points), while his Pro-Violence sub-scale increased moderately from 8 in wave 2 to 11 in wave 3. Thus, for Lundi, his engagement in gangs and fighting caused the jump in Violence Propensity Score.

For Kelo, he reported 2 or 3 fights (a 10-point value) in both wave 2 and wave 3, resulting in no net increase. However, his Deviant Peer sub-scale increased from 6 in wave 2 to 25 in wave 3 (only 3 points shy of the maximum score for that section) while his Pro-Gangs subscale was an absolute 0 in wave 2 and increased to 20 (of a possible 24) in wave 3, and his Pro-Violence subscale from an absolute 0 in wave 2 to 12 in wave 3. Thus, for Kelo, the biggest shifts were seen in his deviant

peer/criminal associations and his emerging approval of gang associations (in line with his gang affiliation) and a greater use of neutralizations for using violence.

While Ayanda was not a panel study subject and thus no results of structured interviews can be compared, he suggests that at the onset of his offending he 'didn't know better' and was influenced by older peers. As time passed, he 'realized his behaviour was wrong' or possibly began to 'age out' of adolescent-limited offending.

In the Pittsburgh (USA) longitudinal youth violence study, Loeber et al (1993) identified three common pathways to violence:

- An overt pathway from minor acts of aggression (bullying, annoying peers) to physical fighting, and on to violent offending in the form of contact crimes, such as rape and robbery.
- A covert pathway initiated through acts like lying and stealing, escalating to house or business robbery.
- An authority conflict pathway beginning with stubborn behaviour toward adults escalating to defiance and disobedience, and avoidance of authority such as skipping school, staying out late into the night, and running away from home. (Loeber & Farrington, 1994)

While these paths are not exclusive and individuals may develop behaviours through multiple pathways simultaneously or cross over, a sizable number of subjects in the Pittsburgh study showed characteristics of one pathway to violence only. In the case of Kelo, the characteristics suggest a clear covert pathway with rather sudden onset of delinquency, at least sudden within the 12-month follow-up time frame (it is possible that a 6-month, mid-term follow-up may have revealed a progression in risk). His mother reported that he was well-behaved in every aspect in wave 2 suggesting that there were few outwards signs visible to her of his emerging engagement in increasing levels of violent crime (with the exception of sometimes staying out late) and even today it seems she is not fully aware of the kind of trouble he, himself, reports getting into. Lundi's pathway seems somewhat less clear-cut: he clearly displays aggression and oppositional defiance in the home (seemingly the overt and authority-conflict pathways) but describes engaging in more social activities than Kelo, suggesting a degree of peer approval dependence or, potentially even a psychopathic disorder. It is more difficult to discern the degree to which Lundi feels guilty and repentant over his violent behaviours. His grandmother's description of him spending most of his time indoors now suggest that he may be avoiding people that he has done harm to and is not able or willing to resolve the conflict and change his behaviours. In Ayanda's story, there are elements of the overt pathway (gang fights, aggravated robbery), covert pathway (shooting subjects without being seen), and authority conflict (offending at school, defying school authorities and dropping out). His rich narrative (although likely incomplete) suggests that the

pathways to (and from) offending are not clear cut and, once offending has begun, expansion (of criminal and violent activities) is quite possible in an environment where the rate of detection (arrest, prosecution, etc.) is so low.

The crucial question that remains for Kelo, Lundi, Ayanda and for the next chapter of this study, is whether or not there are effective interventions that can interrupt such violent trajectories and buffer against ‘the pull of the streets’.

## **Chapter 8: Violence-reduction intervention effects-significance and durability**

Following the testing of violence-related outcomes in chapter 6 and the descriptive case studies presented in chapter 7, this chapter will explore intervention effects through:

- Bivariate correlation analysis of association between structured leisure intervention and key construct measures
- Linear regression analysis to explore structured leisure intervention correlations with key outcome variables and age-specific dynamics in longitudinal models
- Testing of Structural Equation Models with longitudinal data including alternative interventions.
- Analyses of police crime data for Khayelitsha and the Amandla intervention catchment area and comparison of trends
- Discussion of findings and review of the Amandla Edu-Football intervention as delivered

### **8.1 Introduction**

In chapter 6, I modelled the pathways to violence-supporting attitudes, to Violence Propensity Score increases, and to the outcomes of school failure and Serious/ Violent Offending. We saw an indication that ‘gateway’ behaviours (skipping school, staying out late, fighting with parents and siblings), ‘gateway’ substance use (alcohol, socializing in shebeens, dagga/marijuana use), and ‘gateway’ deviant associations tend to cluster together and strongly influence attitudes supportive of gang affiliation and instrumental aggression, as well as self-reported violent and criminal behaviours.

In this culminating analysis chapter, I have brought together the constructs developed in chapter 5 and the pathway modelling presented in chapter 6 to explore if the primary violence intervention under investigation, Amandla Edu-Football, demonstrated a significant and sustained impact on the key violence outcome measures. I have also explored whether the most ubiquitous alternative structured leisure activity available to these young Khayelitsha residents, attending religious services, exhibits similar effects. A recent study from El Salvador, the first of its kind in a developing-country context, found that spirituality exhibited an indirect effect on reduced involvement in delinquent behaviour, mediated by social development factors (Salas-Wright et al, 2013). Finally, I have explored in detail Khayelitsha crime data to test if the Amandla intervention catchment area experienced changes in crime patterns as compared with the rest of Khayelitsha and with a comparable, nearby sport-based development programme and crime intervention.

## 8.2 Structured leisure activity/intervention measures

In this study, Religion Attendance is a self-reported measure that is entirely distinct from the more ubiquitous *sports participation outside of Amandla* that many subjects report but which cannot be conclusively dissociated from Amandla participation (when subjects report that they play sports outside of Amandla and visit sports grounds on a daily or weekly basis, this cannot be fully differentiated from participation at Amandla). The Religion Attendance variable is constructed from the item: *how often do you attend church, mosque, or other place of worship?*; 1=less than monthly, 2=monthly, 3=weekly, 4=almost every day. This item is self-reported and there is no external means of verification.

However, I only test the response given in wave 2 against all other factors measured in wave 3.

Amandla intervention dosage (frequency of participation) in wave 2 was self-reported by subjects (who were confirmed to have registered with Amandla in 2013), with the following response options (to the question, [if you have ever participated in Amandla Edu-Football activities], *how often did you/do you currently participate in Amandla Edu-Football activities at the Ikhusi Primary School?*): 1=less than monthly, 2=once per month, 3=once per week, 4=twice per week, 5=more than twice per week. In wave 3, complete attendance records were kept by Amandla staff for all participants and the dosage is recorded as a percentage of the total possible attendance for that subject's age group. Amandla has theorized that intervention effects will be strongest among participants who have maintained at least a 75% rate of attendance over the course of a 9-month programme cycle, thus completing the life skills curriculum (for those 15 years and under).

An alternative Amandla dosage variable uses the same wave 3 percentage as defined above multiplied by a dummy variable of 1 for subjects under 19 years of age in wave 3 and 0 for those over 19. As the Amandla life skills programme has only been formally delivered to participants 15 or younger, I theorize that only Amandla participants who were 15 or younger at some point in the year 2012 could have been participants in the life skills programming (135 study participants were Amandla participants under 15 during at least 1 year of the study period, 2012-2014). Thus, the emergence of differing effects within this subgroup (from the full group of participants) would suggest the possibility that there is a separate effect of the Amandla life skills programme beyond that of playing in the Amandla fair play football league or the Amandla night crime prevention league.

## 8.3 Bivariate correlations with intervention measures

To begin the analysis, I have presented a table of bivariate correlations between these structured leisure/intervention measures, Amandla self-reported attendance in wave 2, Amandla-recorded attendance in wave 3, A dummy variable for Amandla subjects that sustained 75% or higher attendance

over the course of 2014, Amandla rate of attendance in wave 3 x how long x 1 if under 19 (0 if not), and Religious Participation in Waves 2 and 3. For ease of reading, I have only included key outcome variables and those contributing factors that show some significant correlations.

** . Correlation is significant at the 0.01 level (2-tailed). * . Correlation is significant at the 0.05 level (2-tailed).		Amandla self-reported freq. attend wave 2	Amandla % attend wave 3	Dummy variable Amandla attend 75% or higher wave 3	Amandla % attend wave 3 X Under-19 only	Religion attend wave 2	Religion attend wave 3
Amandla self-reported freq. attend wave 2	Corr	1	.264**	.175**	.224**	.197**	.020
	Sig		.000	.002	.000	.000	.732
	N	311	310	311	311	311	311
Amandla % attend wave 3	Corr	.264**	1	.727**	.879**	-.031	-.070
	Sig	.000		.000	.000	.589	.219
Dummy variable Amandla attend 75% or higher wave 3	Corr	.175**	.727**	1	.665**	-.068	-.085
	Sig	.002	.000		.000	.232	.133
Amandla % attend wave 3 X Under-19 only	Corr	.224**	.879**	.665**	1	-.046	-.085
	Sig	.000	.000	.000		.415	.136
Household_deprivation_wave_2	Corr	-.011	-.058	-.075	-.080	.054	-.022
	Sig	.850	.307	.187	.158	.344	.703
Household_deprivation_wave_3	Corr	.070	-.019	-.041	-.052	.036	-.297**
	Sig	.221	.735	.470	.363	.526	.000
Violent_Home_wave_2	Corr	.060	-.061	-.108	-.060	-.047	.030
	Sig	.294	.287	.056	.290	.407	.601
Violent_Home_wave_3	Corr	.000	-.063	-.033	-.076	.005	-.192**
	Sig	.997	.271	.559	.182	.927	.001
More_Harsh_Parenting_wave_2	Corr	.064	-.010	-.031	.012	.111	.078
	Sig	.262	.862	.589	.840	.051	.173
More_Harsh_Parenting_wave_3	Corr	.090	-.031	-.091	-.054	.055	-.155**
	Sig	.114	.589	.110	.339	.333	.006
Sq_Root_Less_Parental_Involv_wave_2	Corr	-.130*	-.137*	-.102	-.195**	-.131*	-.044
	Sig	.022	.016	.074	.001	.020	.440
Sq_root_Less_Parental_wave_3	Corr	-.021	-.203**	-.170**	-.225**	-.129*	-.093
	Sig	.707	.000	.003	.000	.023	.100
Neg_school_attitude_wave_2	Corr	-.214**	-.081	-.082	-.094	-.170**	-.028
	Sig	.000	.156	.150	.098	.003	.626
Neg_school_attitude_wave_3	Corr	.022	-.029	.019	-.001	-.056	-.286**
	Sig	.704	.609	.745	.986	.330	.000
school_failure_higher_report_any wave2 or wave3	Corr	-.037	-.040	.043	-.079	-.032	-.120*
	Sig	.517	.484	.451	.163	.579	.035
Neg_Future_attitude_wave_2	Corr	-.079	-.002	.035	-.046	-.168**	-.017
	Sig	.165	.974	.538	.421	.003	.768
Neg_Future_Att_wave_3	Corr	.076	.000	-.002	.020	.073	-.291**
	Sig	.178	.999	.966	.727	.199	.000
Subst_Use_sq_root_wave_2	Corr	-.095	-.097	-.043	-.140*	-.079	.006
	Sig	.094	.090	.452	.013	.166	.918
Substance_Use_sq_root_wave_3	Corr	.004	-.040	-.078	-.066	-.080	-.201**
	Sig	.940	.480	.170	.243	.159	.000

Table 8.1. Bivariate correlations between structure leisure intervention measures and key study construct and outcome measures. Highlighted correlations are significant at  $p < 0.05$  two-tailed. Note: \*= $p \leq .05$ . \*\*= $p \leq .01$ .

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).		Amandla self-reported freq. attend wave 2	Amandla % attend wave 3	Dummy variable Amandla attend 75% or higher wave 3	Amandla % attend wave 3 X Under-19 only	Religion attend Wave 2	Religion attend Wave 3
Cmb_incidence_offending_wave 2	Corr	-.056	-.102	-.073	-.113*	-.040	.076
	Sig	.328	.074	.200	.047	.478	.184
Cmb_incidence_offending_wave 3	Corr	.015	-.052	-.063	-.070	-.096	.025
	Sig	.787	.364	.270	.221	.090	.665
Cmb_Offend_past12mos_wave 3	Corr	-.015	-.061	-.041	-.079	-.154**	-.014
	Sig	.799	.283	.468	.166	.006	.804
Maternal_wave 2	Corr	.051	-.053	-.103	-.044	.057	-.063
	Sig	.379	.356	.074	.447	.327	.272
Maternal_wave 3	Corr	.053	-.036	-.016	-.073	.070	-.325**
	Sig	.363	.538	.789	.207	.226	.000
SQ_Root_Violence_Scorecard_wave 2	Corr	-.023	-.149**	-.091	-.188**	-.037	-.030
	Sig	.685	.009	.109	.001	.518	.602
Violence_Scorecard_wave 2_deviant_assoc	Corr	-.049	-.119*	-.074	-.178**	-.071	.009
	Sig	.390	.037	.191	.002	.212	.869
Violence_Scorecard_wave 2_Pro_violence	Corr	-.143*	-.084	-.049	-.091	-.036	-.051
	Sig	.011	.142	.389	.109	.521	.370
Violence_Scorecard_wave 2_Pro_gangs	Corr	-.033	-.069	-.053	-.101	.013	-.008
	Sig	.564	.223	.348	.075	.822	.884
Violence_Scorecard_wave 2_Fighting	Corr	.060	-.097	-.052	-.089	-.021	.001
	Sig	.291	.087	.365	.118	.706	.984
SQ_Root_Violence_Scorecard_wave 3	Corr	.009	-.105	-.082	-.115*	-.134*	-.126*
	Sig	.879	.064	.148	.042	.018	.026
Violence_Scorecard_wave 3_deviant_assoc	Corr	-.026	-.147**	-.119*	-.177**	-.115*	-.136*
	Sig	.644	.010	.036	.002	.043	.016
Violence_Scorecard_wave 3_Pro_violence	Corr	.090	-.009	-.029	.000	.023	-.134*
	Sig	.114	.881	.610	.993	.687	.018
Violence_Scorecard_wave 3_Pro_gangs	Corr	-.023	-.104	-.115*	-.101	-.080	-.134*
	Sig	.691	.066	.042	.075	.161	.018
Violence_Scorecard_wave 3_Fighting	Corr	.027	-.026	-.042	-.020	-.145*	.058
	Sig	.639	.644	.461	.726	.010	.308
Violence_Scorecard_Change	Corr	-.039	-.027	.017	-.045	.054	.081
	Sig	.495	.639	.768	.425	.345	.157
Violence_exposure_wave 2	Corr	.119*	.014	.001	-.045	.152**	.026
	Sig	.036	.810	.991	.428	.007	.653
Violence_exposure_wave 3	Corr	-.058	-.146*	-.153**	-.128*	-.113*	.098
	Sig	.311	.010	.007	.024	.046	.085
Cmb_victim_past12mos_wave 2	Corr	.124*	.033	.022	-.017	.157**	.025
	Sig	.029	.560	.703	.768	.006	.662
Comb_victim_wave 3	Corr	-.082	-.154**	-.133*	-.139*	-.013	-.108
	Sig	.151	.007	.019	.014	.823	.058

Table 8.1 (continued). Bivariate correlations between structure leisure intervention measures and key study construct and outcome measures. Highlighted correlations are significant at  $p < 0.05$  two-tailed. Note: \*= $p \leq .05$ . \*\*= $p \leq .01$ .

As shown in table 8.1, above, there is a significant association between self-reported attendance to Amandla and attendance to a place of worship (Religion attend) in wave 2 ( $r = .197$ ,  $p < .000$ ). Yet, in wave 3, there is a negative relationship between Amandla attendance at the 75% or higher level and Religion attend ( $r = -.085$ ,  $p = .13$ ).

Amandla attendance (self-reported) in wave 2 is associated with more Parental Involvement, more positive School Attitude, less Pro-Violence Attitude, yet more Violence Exposure and more Victimization, all in the same wave 2. There are no significant associations between Amandla attendance in wave 2 and any of the wave 3 measures.

Amandla attendance in wave 3 (as a percentage from Amandla records) is associated with more Parental Involvement in both waves 2 and 3, with a lower total Violence Propensity Score in wave 2 (due to a lower Deviant Peer Association sub-scale in both wave 2 and wave 3) and less Violence Exposure and Victimization in wave 3. Among under-19-year-old Amandla participants and those attending Amandla at a 75% or higher attendance rate, the strength of the afore-mentioned correlations is not significantly different.

Religion attendance in wave 2 is associated with more Parental Involvement in both waves 2 and 3, more positive Future Attitude in wave 2 only, less self-reported Serious/Violent Offending in wave 3 only, along with a lower Violence Propensity Score in Wave 3 (due to less reported Deviant Peer Associations and less self-reported Fighting), yet more Victimization in Wave 2. Religion attendance in wave 2 is also associated with more Violence Exposure in Wave 2, yet less Violence Exposure in wave 3 (while Religious attend in wave 3 has no significant association with Violence Exposure).

Religion attendance in wave 3 is associated with much less Household Deprivation in wave 3, less Violent Home Environment and Harsh/Inconsistent Parenting only in wave 3, a much more positive School Attitude in wave 3, less reported School Failure overall, more positive Future Attitude in wave 3, less reported Substance Abuse in wave 3, a much more positive Maternal Assessment in wave 3, and a lower Violence Scorecard in wave 3 (with lower scores on the Deviant Peers, Pro-Violence, and Pro-Gangs sub-scales). However, no wave 2 measures are significantly associated with Religion attendance in wave 3.

Thus, there are, overall, some positive associations between both Religion attendance and Amandla participation and reduced likelihood of violent offending, in terms of both the Violence Propensity Score and actual self-reported violence. That said, these correlations are somewhat small, with none above the  $B=0.2$  'threshold' for a small effect size (Coen, 1988), and inconsistent across waves and component measures.

Religion and all Amandla participation measures are significantly negatively correlated with Less Parental Involvement in both waves. These correlations, consistent across waves and with each 'structured leisure activity measure' suggest that more involved parents may influence their children's participation in both Religion and Amandla, resulting in potential 'selection bias', inherent differences between subjects who enter into Religion or Amandla participation and those that do not. While Parental Involvement effects can be controlled for in multivariate modelling in subsequent analyses, theory dictates that more involved parents will assist in their child's pro-social development and attempt to intervene (directly or through 'programming') when signs of anti-social/deviant/potentially

violent behaviour are detected. Thus, there are aspects deeper than the Parental Involvement construct measure that may remain ‘lurking’ or undetected.

#### 8.4 Longitudinal multiple linear regression modelling with intervention variables

I then ran successive regression models without and then with each of the main interventions to establish if there are significant changes to the R-squared, variance explained value, through inclusion of either of the intervention variables.

Longitudinal multiple linear regression model for: Violence Propensity Score-Khayelitsha wave 3

	population weighted N=311	un- weighted N=311	un-weighted N=311	un-weighted N=311	un- weighted N=311	14-16 year-olds N=102	17-19 year-olds N=122	20-24 year-olds N=78
Variable	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$	Model 4 $\beta$	Model 5 $\beta$	Model 6 $\beta$	Model 7 $\beta$	Model 8 $\beta$
(Constant)	-6.14	-7.65	-8.72	-4.84	-5.99	9.73	-0.45	23.15
Age	.225**	.162*	.163*	.155*	.155*			
Household Deprivation w2	.078	.033	.032	.038	.038	.048	.040	.068
Violent Home w2	.166**	.125*	.119	.123*	.116	.086	.033	.243
More Harsh Parenting w2	-.076	-.069	-.071	-.060	-.062	.030	-.133	-.145
Less Parent Involvement w2	.000	.012	.017	.007	.013	-.044	.074	-.008
Substance Abuse w2	-.217**	-.153*	-.149*	-.157*	-.151*	.138	-.160	-.318
Neg. School Attitude w2	.092	.139*	.148*	.128	.139*	.115	.242*	.052
Failed school 1+ grade w2	.030	.043	.043	.044	.045	.071	-.005	.058
Neg. Future Attitude w2	.011	-.002	-.003	-.008	-.010	.032	-.098	-.042
Violence Scorecard w2	.046	.089	.085	.094	.089	.088	.156	-.007
Amandla Wave2-how often	.035		.042		.056	-.001	.165	.063
Religion Participation w2	-.103			-.084	-.093	-.126	-.006	-.152
$R^2$	0.13	0.10	0.10	0.11	0.11	0.14	0.12	0.14
$\Delta R^2$			.002	.007				
$F$	3.67*	3.28*	3.02*	3.19*	3.00**	1.36	1.42	1.00
$\Delta F$			0.53	2.21				

Table 8.2. Longitudinal multiple linear regression models for the dependent variable, Violence Propensity Score wave 3. Standardized coefficients reported. No collinearity tolerance < 0.35, or VIF > 2.82.

Note. \*= $p \leq .05$ . \*\*= $p \leq .01$ . Weighting based on 12-24 year old male population demographics of Khayelitsha Wards 90 and 91, South Africa Census 2011.

In the full, population weighted model (table 8.2, above), 13% of the variance in the dependent variable, Violence Propensity Score wave 3, is explained by the independent wave 2 variables. Neither the self-reported frequency of Amandla participation wave 2 ( $B=.035$ ,  $p=.55$ ) nor the self-reported frequency of Religion attendance wave 2 ( $B= -.103$ ,  $p=.08$ ) are significant correlates at  $p < .05$ , net of all other factors, with the Violence Propensity Score wave 3, although Religion participation wave 2 is significant at the  $p < 0.1$  level. The significance of Religion Participation wave 2 as a predictor decreases slightly in the same un-weighted model (including both Amandla and Religion measures of

attendance,  $B = -.093$ ,  $p = .11$ ) and its correlational strength appears to be largely attributed to the oldest 20-24 year-old cohort ( $B = -.152$ ,  $p > .05$ ) and the youngest 14-16 year-old group ( $B = -.126$ ,  $p > .05$ ).

As both Amandla participation and Religion participation are not evenly distributed across age (Amandla externally-verified attendance in wave 3 is negatively correlated with age,  $r = -.20$ ,  $p < .00$ ; Religion wave 2 is negatively correlated with age,  $r = -.12$ ,  $p = .04$ ), evaluation of r-squared change is conducted using the un-weighted model as the base (where age-weighting effects would not introduce additional bias). Inclusion of Amandla participation wave 2 increases the R-squared by .002, an insignificant value. Alternate inclusion of Religion participation wave 2 increases the R-squared by .007, also an insignificant change at the  $p < .05$  level (though the F Change = 2.21,  $p = .14$  is nearer to the  $p < .1$  level). Thus, neither structured leisure activity in wave 2 effects a significant change on the explanation of the Violence Propensity Score in Wave 3 in the full, un-weighted models.

### **8.5 Structural Equation Modelling with intervention effects**

I first tested the base model for explanation of the Violence Propensity Score wave 3 with the inclusion of self-reported frequency of Amandla attendance in wave 2 and Amandla-verified percentage of attendance in wave 3. As wave 3 (year 2014) Amandla attendance is measured subsequent to the wave 3 study interviews and the measures of Substance Use and the Violence Propensity Score in wave 3, paths can only be drawn to Amandla wave 3 attendance (as it is chronologically preceded by the outcome measures). This is an unfortunate shortcoming in the data. It was anticipated in the initial study-design phase, that Amandla-verified dosage data would have been available in waves 1 and 2 in order to precede wave 3 study/outcome measures.

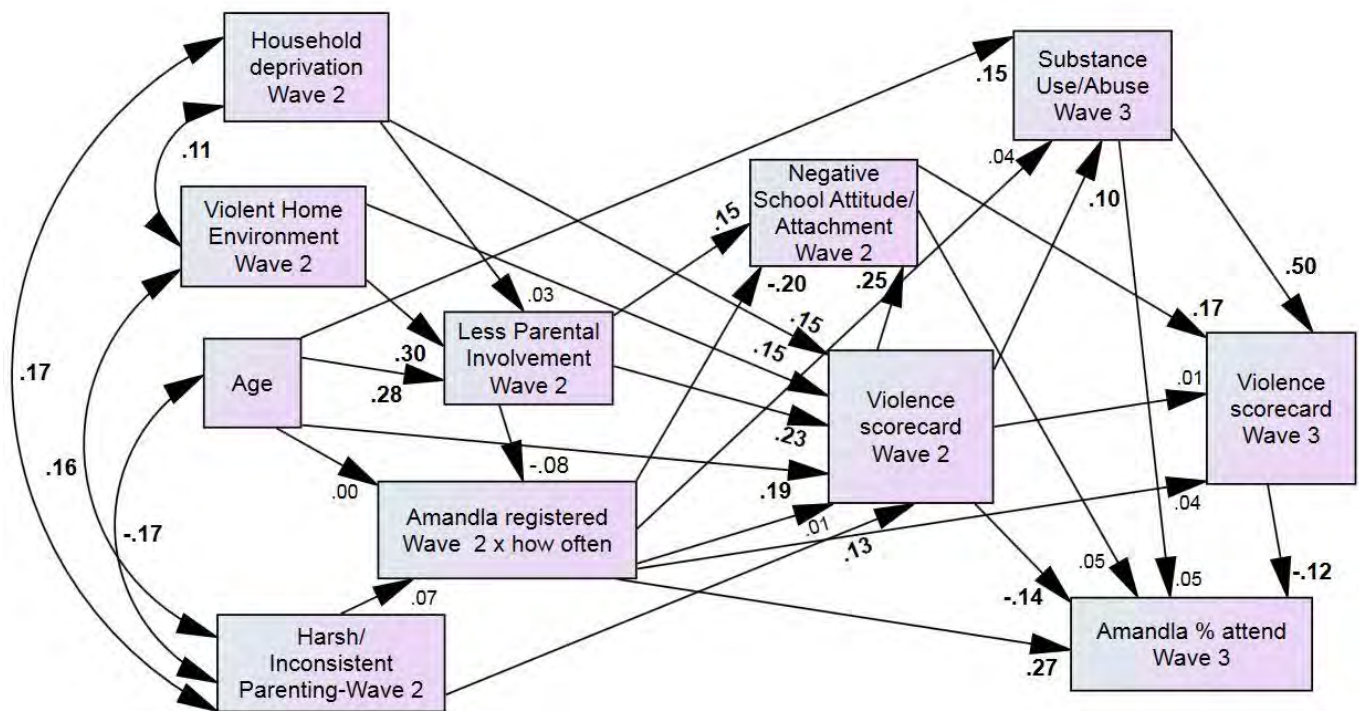


Figure 8.3. Structural Equation Model using longitudinal data and Amandla participation. Standardized coefficients reported. Fit statistics: Chi-square= 31.27. d.f.= 24. X<sup>2</sup>/df ratio= 1.30. p= 0.15. CFI= 0.98. RMSEA= 0.033. N= 276. Hoelter's (p=.05)=321. Multivariate normality = 2.00 c.r.= 0.98. Note: Coefficients in bold indicate p ≤ .05. No error terms are correlated.

While overall fit statistics remain excellent (in figure 8.3, above, as compared with figure 6.12), the increased chi-square value (31.27 vs. 20.56 in the base SEM, without Amandla measures) represents a non-significant increase (the difference 11.37 is less than the upper-tail chi-square distribution for 7 degrees of freedom and a p-value < .05 which equals 14.07). Path coefficients in the base model (figure 6.12) are not meaningfully affected by the inclusion of Amandla measurements and are not repeated here.

The frequency of self-reported Amandla participation in wave 2 is negatively associated with Less Parental Involvement wave 2 ( $\beta = -0.08$ ,  $p=.21$ ), although not statistically significant (a more significant relationship between Amandla participants and more Parental Involvement was seen in the bivariate correlation analysis). Path coefficients from Age and Harsh/Inconsistent Parenting to Amandla wave 2 participation are non-significant. Amandla wave 2 participation is directly correlated with significantly less Negative School Attitude wave 2 ( $\beta = -0.20$ ,  $p<.001$ ) but exhibits non-significant direct effects on the Violence Propensity Scores in both waves 2 and 3, and Substance Use/Abuse wave 3. Amandla wave 2 participation is a significant predictor of the externally-verified Amandla rate of participation in wave 3 ( $\beta = 0.27$ ,  $p<.001$ ), though not as significant as would be expected if programme participant-retention was high. Indirect effects of Amandla wave 2 participation are negligible on the wave 3 outcome measures.

While Amandla wave 2 participation does not significantly correlate with the Violence Propensity Score wave 2, there is a negative relationship between Violence Propensity Score wave 2 and Amandla attendance in wave 3 ( $\beta = -0.14$ ,  $p=.025$ ), and Violence Propensity Score wave 3 and Amandla attendance in wave 3 ( $\beta = -0.12$ ,  $p=.067$ ), suggesting that those study participants exhibiting higher violence risk are less likely to stay in Amandla and attend with frequency. The stability of these coefficients from wave 2 to wave 3 also suggests, though does not confirm, that frequent Amandla participants may experience a buffering effect from Amandla participation, keeping their violence-risk suppressed. Negative School Attitude wave 2 and the wave 3 outcome, Substance Use/Abuse, exhibit non-significant effects on wave 3 Amandla participation rate, overall.

Next, an alternative model is presented based on the Amandla-theorized critical attendance rate of 75%. This wave 3 attendance measure uses a dummy variable to denote Amandla attendance in wave 3 at 75% or higher.

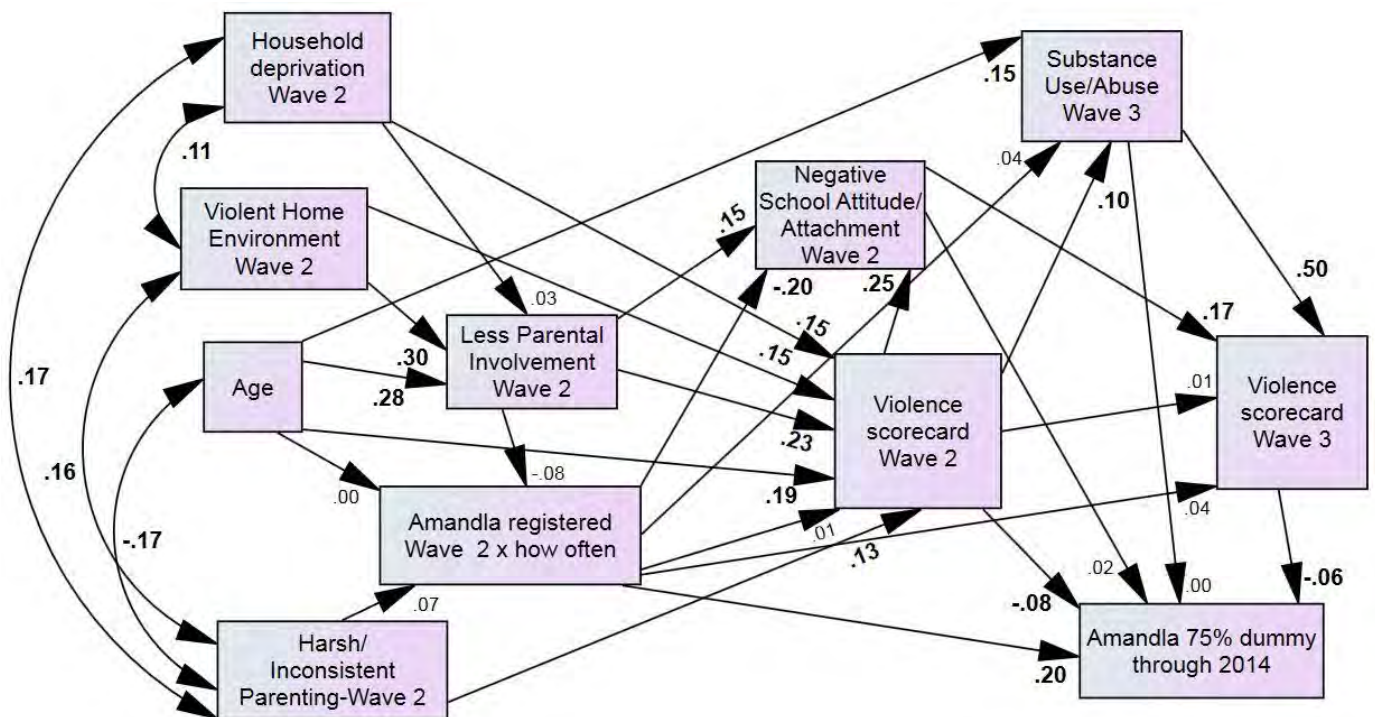


Figure 8.4. Structural Equation Model using longitudinal data and Amandla participation. Standardized coefficients reported. Fit statistics: Chi-square= 28.58. d.f.= 24. X<sup>2</sup>/df ratio= 1.19. p= 0.24. CFI= 0.98. RMSEA= 0.026. N= 276. Hoelter's (p=.05)=351. Multivariate normality = 8.98 c.r.=4.41. Note: Coefficients in bold indicate  $p \leq .05$ . No error terms are correlated.

In this alternate model (figure 8.4, above), fit statistics are marginally improved from the previous model with Amandla intervention participation rate expressed as a percentage (figure 8.3). The only path coefficients notably altered by substituting overall rate of Amandla attendance in wave 3 with the 75%-and-up dummy variable are those from Violence Propensity Score wave 2 to Amandla 75% participation wave 3 ( $\beta = -0.08$ ,  $p=.20$ ) and from Violence Propensity Score wave 3 to Amandla

75% participation wave 3 ( $\beta = -0.06, p=.36$ ). The mean Violence Propensity Score Wave 2 for this 75%-up group is 16.38 compared to 20.85 for all other study participants (mean difference= 4.47, t-test sig. =.100, equality of variances not assumed) and, in wave 3, a Violence Propensity Score mean of 18.10, compared to 21.42 for all other study participants (mean difference= 3.32, t-test sig. =.164, equality of variances not assumed). However, there is insufficient evidence to suggest that Amandla participation has had a buffering effect on these 21 frequent participants. Given the associations between more Parental Involvement (in both waves 2 and 3) and more likelihood of Amandla participation in wave 2 and wave 3, it is possible that frequent Amandla participants have more stable home environments and reduced risk factors that precede their Amandla participation.

In various studies, participation in organised religion is theorized to influence attitudes towards violence, low self-control (Reisig et al, 2012) and participation in/desistance from gangs (Salas-Wright et al, 2013). In the context of Khayelitsha, participation in organized religion is the most common structured leisure activity available to youth, outside of sports (most commonly football, which would be virtually impossible to dissociate from Amandla participation). Thus, in the next model (figure 8.5, below), the Amandla dosage variable was substituted with self-reported Religion Attendance in waves 2 and 3 to explore if a common alternative structured leisure activity could exhibit different effects on the outcomes of interest.

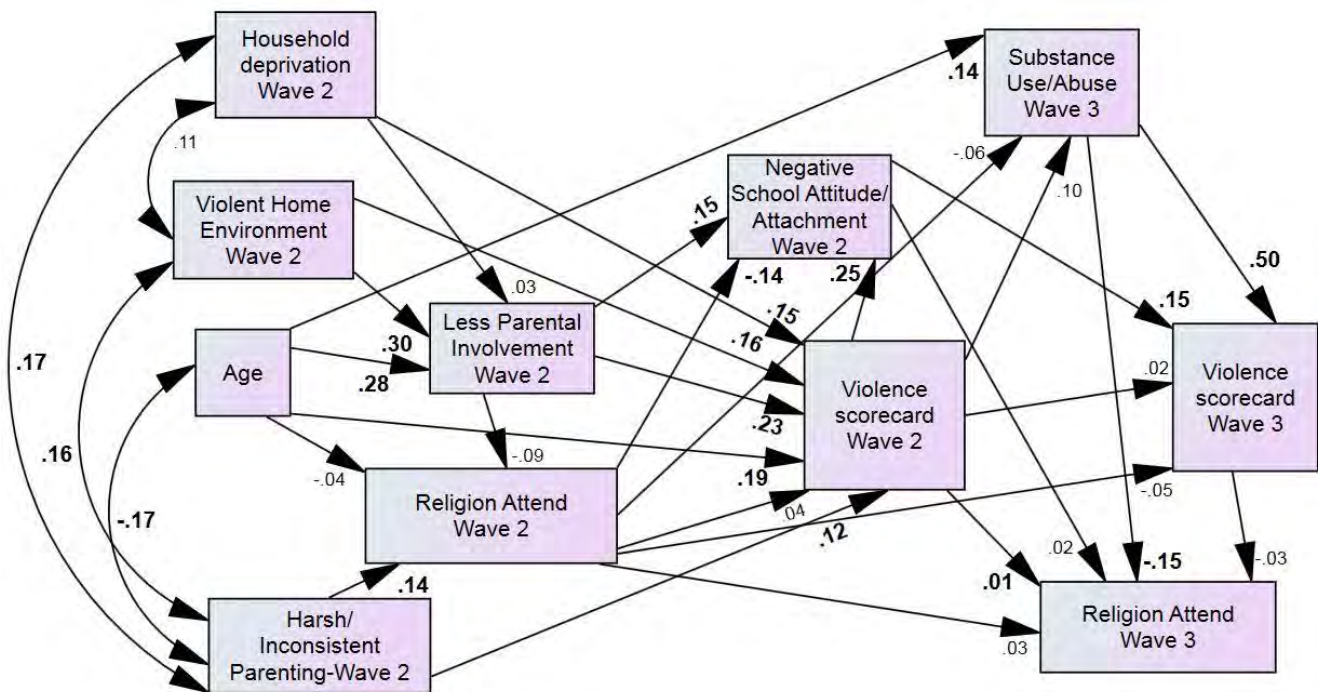


Figure 8.5. Structural Equation Model using longitudinal data and religion attendance measures. Standardized coefficients reported. Fit statistics: Chi-square= 25.89. d.f.= 24. X<sup>2</sup>/df ratio= 1.08. p= 0.36. CFI= 0.993. RMSEA= 0.017. N= 279. Hoelter's (p=.05) =387. Multivariate normality = 1.79 c.r.=0.88. Note: Coefficients in bold indicate  $p \leq .05$ . No error terms are correlated.

Fit statistics for the model including religion participation measurements improve slightly over the base SEM model without any structured leisure intervention (figure 6.12), though the chi-square change does not represent a significant improvement (a chi-square increase of 4.55 with 7 additional degrees of freedom), nor a significant improvement over the Amandla intervention models (a chi-square decrease of 7.34, both models have 24 degrees of freedom, requiring a lower-tail critical value of 13.85 at  $p < .05$  to represent a significant change). Path coefficients in the base model (figure 6.12) are again not meaningfully affected by the inclusion of Religion measurements and are not repeated here.

The frequency of self-reported Religion Participation in wave 2 is negatively associated with Less Parental Involvement wave 2 ( $\beta = -0.09$ ,  $p = .17$ ) and positively associated with Harsh/Inconsistent Parenting wave 2 ( $\beta = 0.14$ ,  $p = .025$ ) meaning Religion participants reported somewhat more involved parents (though not quite statistically significant) and, yet, stricter/harsher parents in wave 2 (also suggesting the potential inaccuracy of the Harsh/Inconsistent Parenting measure, as discussed in chapter 6). The path coefficient from Age to Religion Participation wave 2 is non-significant. Religion wave 2 Participation directly correlates with significantly less Negative School Attitude wave 2 ( $\beta = -0.14$ ,  $p = .013$ ) but exhibits non-significant direct effects on the Violence Propensity Score wave 2 and Violence Propensity Score Wave 3, Substance Use/Abuse wave 3 and, surprisingly, even on Religion Participation in wave 3. This suggests instability of Religion Participation, overall (that subjects truly don't maintain consistent place of worship attendance over time), or instability of this measure (and/or inconsistent self-reporting) across waves. Indirect effects of Religion wave 2 Participation are negligible on the wave 3 outcome measures, as was the case for Amandla wave 2 Participation.

Negative School Attitude wave 2 and the wave 2 and wave 3 Violence Propensity Scores exhibit non-significant effects on wave 3 Religion Participation yet Substance Use/Abuse wave 3 is negatively correlated ( $\beta = -0.15$ ,  $p = .028$ ). As these measures are self-reported at the same point in time, we cannot conclude that there is any true effect, only an association at one point in time.

Thus, there is no clear evidence in SEM testing that participation in Amandla has a measurable effect on violence potential, net of other factors. The most common alternative structured leisure activity in Khayelitsha (not associated with football), attendance to a religious place of worship/religion participation, also failed to show longitudinal effects on violence potential, net of other factors. Both measures may suffer from self-reporting bias. In the case of Amandla, externally verified dosage data was eventually recorded at the end of the 3<sup>rd</sup> wave of the study but could not be used as an independent, predictor variable. Further longitudinal study could allow for the predictive efficacy of the Amandla wave 3 dosage to be tested.

## 8.6 Area-based crime data analysis

While the limited panel and dosage data fail to demonstrate statistically significant effects of intervention on subjects' violence-potential, there remains the possibility that Amandla Edu-Football may have an overall crime reduction, or pacifying effect, on the surrounding community. Amandla theorizes that its Safe Hub creates a radiating safety effect. In order to test this concept, South African Police Service (SAPS) contact crime data for 2006-2015 has been accessed and analysed for various radii around the Amandla field/project site and the adjacent Ikhusi Primary School (hereafter, Ikhusi radius). This crime data is GPS-coded, although it is not clear how accurate such coding is with regard to the actual location of the crime incident. With ambulance data in South Africa, GPS coding often references the nearest major intersection where the injured have been collected, as ambulances cannot enter into informal settlement areas. In the Khayelitsha Commission of Enquiry, it was evidenced that patrolling and policing of informal settlement areas is limited due to narrow pathways and logistical/safety concerns (O'Regan et al, 2014). Further, these data explorations do not allow for any form of multivariate testing to control for alternative explanations for catchment-area/radius-based crime trends. While it has been possible to annually obtain GPS-tagged crime data for several radii surrounding specific coordinates, it was initially impossible to obtain a full set of GPS-tagged crime data for an entire police station area for an entire year (or multiple years). Criminologists in South Africa have long struggled to obtain any site-specific crime data from SAPS, nationally or provincially. Requests for information are often denied or ignored and the few researchers who have successfully obtained such data in the past (Breetzke, 2010) have not been granted further access following the departure of sympathetic police officials.

### 8.6.1 Crime data analysis – Amandla/Ikhusi Khayelitsha radius

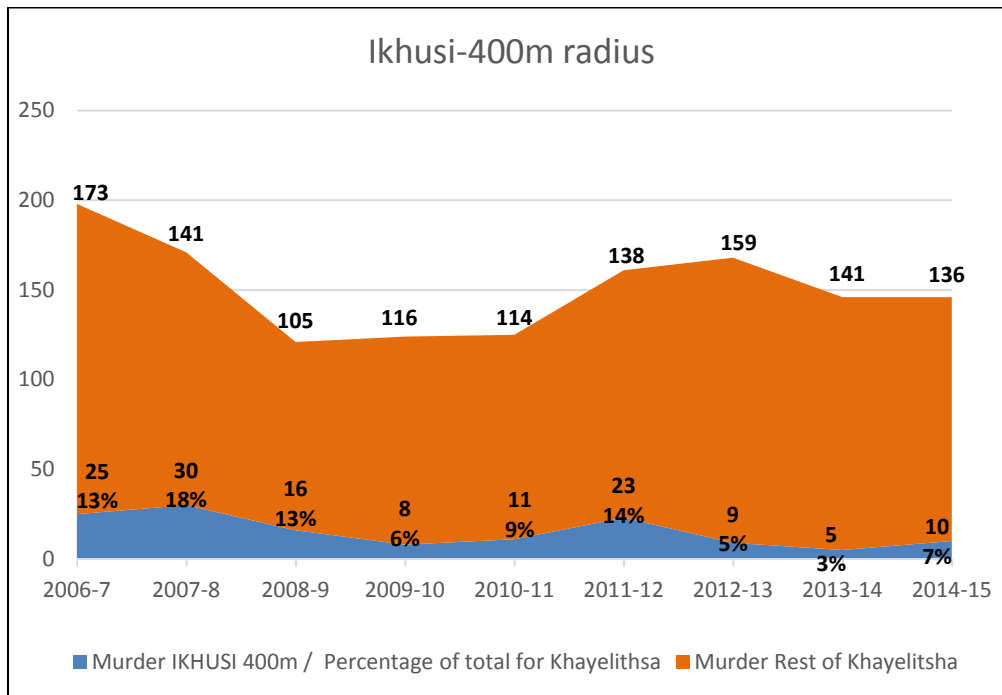


Figure 8.6. Police data on murders within a 400 meter radius of Ikhusi Primary School/Amandla Edu-Football project site (Longitude: 18.656131, Latitude: -34.024633) and the rest of Khayelitsha police precinct. Percentages reflect the Ikhusi radius share of the total for Khayelitsha Precinct. Rest of Khayelitsha figures exclude the data from Ikhusi radius for trend comparison purposes. (Data source: Crime Statistics and Research, Organizational Development, Western Cape, compiled on 27 Nov. 2015.)

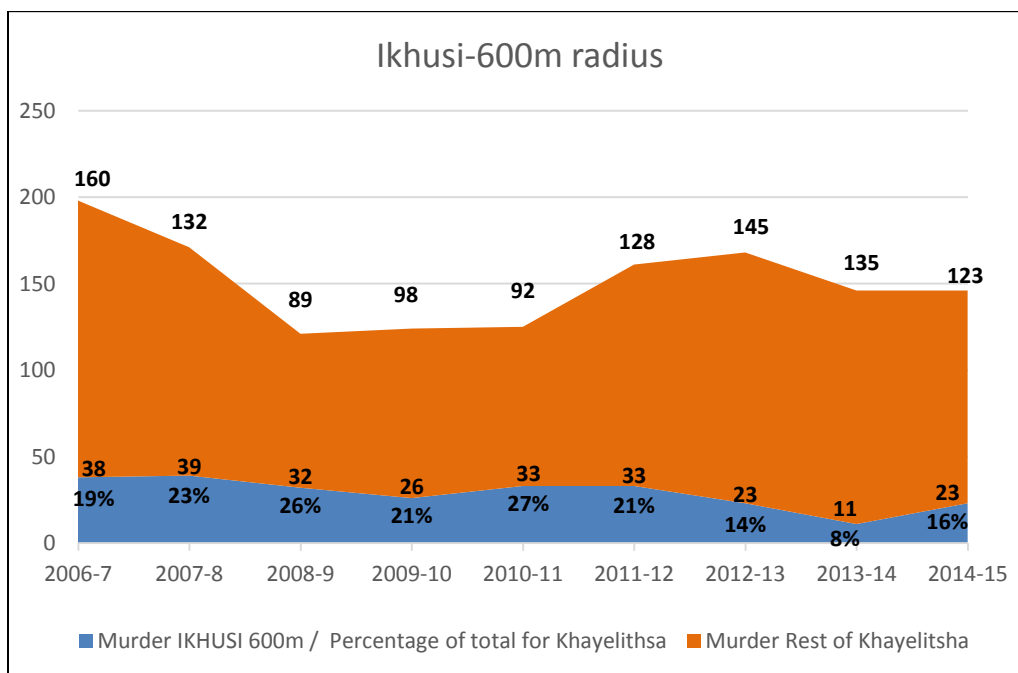


Figure 8.7. Police data on murders within a 600 meter radius of Ikhusi Primary School/Amandla Edu-Football project site and the rest of Khayelitsha police precinct. Percentages reflect the Ikhusi radius share of the total for Khayelitsha Precinct. Rest of Khayelitsha figures exclude the data from Ikhusi radius for trend comparison purposes. (Data source: Crime Statistics and Research, Organizational Development, Western Cape, compiled on 27 Nov. 2015.)

The total number of reported murders in the Ikhusi/Amandla 400m (figure 8.6, above) and 600m (figure 8.7, above) radii peaked in absolute terms at 30 in the 400m radius and 39 in the 600m radius, both in 2007-8. The Ikhusi 400m radius accounted for 18% of all murders in Khayelitsha police precinct in 2007-2008 before dropping over a 3-year period and increasing again in 2011-12 to 14% of the total with 23 murders and 7% in 2014-15, with 10 murders, after a dip in 2013-14 with 3%, or 5 murders. In the 600m radius, a high of 26% of all murders recorded in Khayelitsha police precinct took place in 2008-09 (32 murders) and in 2010-11 (33 murders). From 2010-11 in the 600m radius, there appeared to be a tapering trend, with the relative share dropping from 26% down to 8% in 2013-14 before rising again in 2014-15 to 16%, while the absolute number of murders dropped from 33 to 11 (a three-fold decrease), before rising again to 23. Within the more restricted 400m radius, there was a precipitous drop from 23 murders in 2011-12 (14% of the Khayelitsha precinct total) down to 5 murders (3% of the Khayelitsha precinct total) in 2013-14, although the number doubled in the most recent year, 2014-15, to 10 murders. Both of the 400m and 600m 2013-14 figures represent 8-year lows in the Ikhusi radii while, in the rest of Khayelitsha precinct (after removing the Ikhusi radius data), there has been an increase in total murders from 2011, reaching a 6-year high in 2012-2013, before tapering slightly in 2013-14 and 2014-15. With the increase in murders within both Ikhusi radii, in the last year, the suggestion of a steady murder-reduction trend has been interrupted. What may have initially appeared as a potential radiating safety effect of the Amandla safe hub may, instead, be the result of random variation in the most serious (although limited) incidents of violent crime (murders).

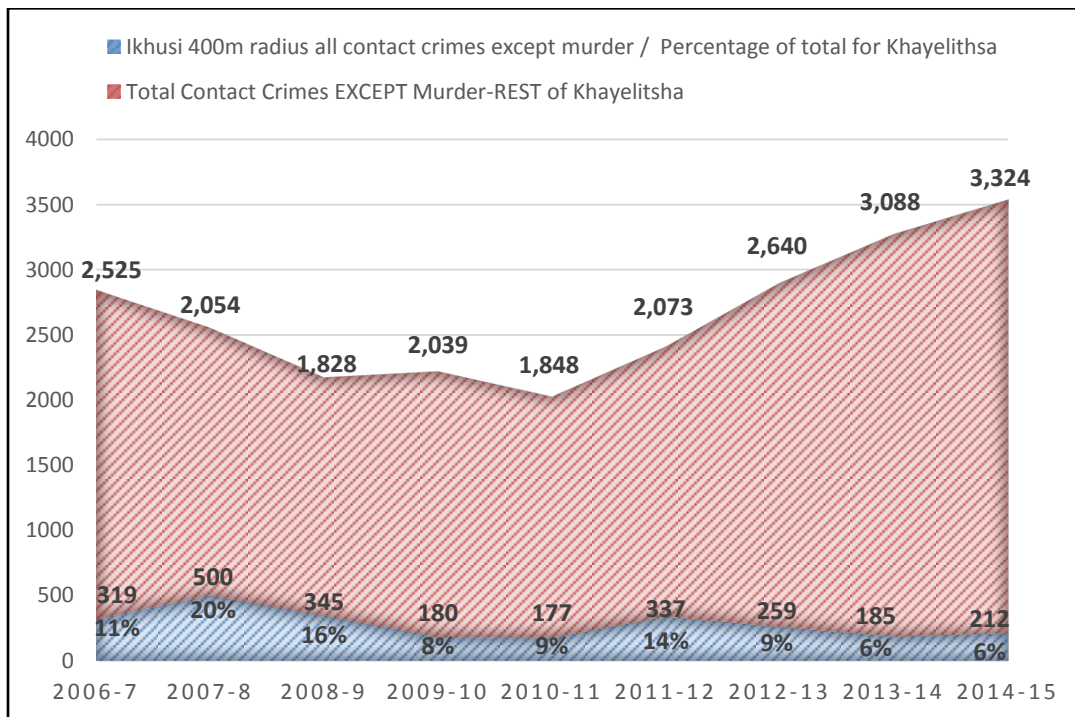


Figure 8.8. Police data on All contact crimes except murder within a 400 meter radius of Ikhusi Primary School/Amandla Edu-Football project site (Longitude: 18.656131, Latitude: -34.024633) and the rest of Khayelitsha police precinct. Percentages reflect the Ikhusi radius share of the total for Khayelitsha Precinct. Rest of Khayelitsha figures exclude the data from Ikhusi radius for trend comparison purposes. (Data source: Crime Statistics and Research, Organizational Development, Western Cape, compiled on 27 Nov. 2015.)

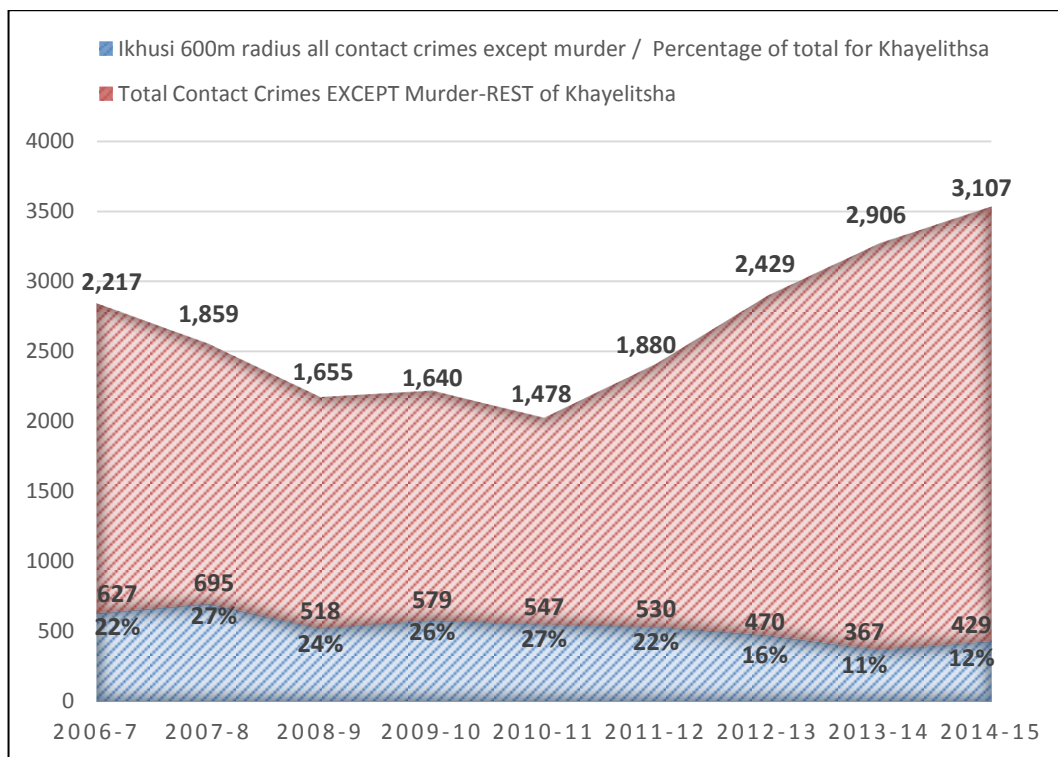


Figure 8.9. Police data on all contact crimes except murder within a 600 meter radius of Ikhusi Primary School/Amandla Edu-Football project site and the rest of Khayelitsha police precinct. Percentages reflect the Ikhusi radius share of the total for Khayelitsha Precinct. Rest of Khayelitsha figures exclude the data from Ikhusi radius for trend comparison purposes. (Data source: Crime Statistics and Research, Organizational Development, Western Cape, compiled on 27 Nov. 2015.)

Excluding murder, the rest of the recorded contact crimes include Attempted Murder, Assault with Grievous Bodily Harm, Common Assault, Common Robbery, Robbery with Aggravating Circumstances, and Sexual Crimes. With a greater variety and incidence of reporting than murders (although much more influenced by potential under-reporting), there is the possibility that trend analysis of these other contact crimes combined will reveal more information on localized trends and potential safety effects. In totalling these figures and comparing the Ikhusi 400m and 600m radii against the rest of Khayelitsha (figures 8.8 and 8.9, above), it appears that there is a general 4-year reduction in the 400m radius and a 5-year reduction in the 600m radius (down to an 8-year low in 2013-14 in the 600m radius with 367 contact crimes, accounting for 11% of the Khayelitsha precinct total before increasing to 12% or 429 crimes in 2014-15). Meanwhile, there has been a precipitous increase over the past 4 years in the rest of Khayelitsha, reaching a 9-year high in 2014-15. Exclusive of the murder data, this shows two potentially diverging trends, with increases in the rest of Khayelitsha precinct well beyond the levels of apparent reduction in the Ikhusi radius, suggesting factors other than crime displacement from the Ikhusi radius. To truly substantiate a radiating effect, we would expect to see stronger effects closer to the site (within the 400m radius as compared to the 600m radius). While murders and all other contact crimes appeared to drop in both 400m and 600m Ikhusi radii from 2011 until 2014, there were increases in the 2014-15 data and no evidence that crime levels changed in the 400m radius differently from the 600m radius over the same 5-year period (and as later bivariate correlation analysis will show, the strength of correlation with crime reduction over time increased from a 267-meter square range to an 800m square range). While a 4-year change is certainly not conclusive evidence of a long-term trend, it may be a plausible explanation if and when subsequent data reinforces a consolidated radius effect over time.<sup>45</sup>

While great caution must be used in both drawing a conclusion that some violent contact crime has truly been reduced within these radii and that such a reduction (if real) is attributable to the Amandla intervention, the charts show a possible trend of generally declining contact crimes in the 400m and 600m Ikhusi radii, while such crimes are increasing steadily in the rest of Khayelitsha. Such a trend would lead to speculation that violent crime has simply been displaced from the Ikhusi radius (or could be the result of changes in how or where crimes are GPS-tagged); such theories are nearly impossible to substantiate as criminal activity can be displaced due to numerous, and potentially random, factors (changes in policing, other crime/violence-reduction initiatives, increases in potential targets) all across a municipality and, even beyond (i.e., population movements to and from the Eastern

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<sup>45</sup> Data for 200m, 800m, and 100m radii were also studied and are presented in the appendix. There is, generally, insufficient data within the narrower 200m radius for comparative and trend analysis. At 800m, effects and trends seem to dissipate and, by 1000m, the trends mirror those in Khayelitsha precinct, overall. The 1000m radius appears to account for approximately 50% of all Khayelitsha precinct crime data.

Cape). There is no a priori reason to believe that a violence-reduction initiative predicated on behavioural change will simply displace violence to the adjacent areas. Furthermore, the increases seen in the rest of Khayelitsha police precinct surpass the levels of general decrease within the Ikhusi radii suggesting more than just displacement as a cause. Lastly, it is important to understand what areas could have feasibly been affected by displacement. Beyond the enclosure of the Amandla field itself and hired security patrols of the perimeter (the equivalent of, perhaps, a 100-meter radius) there is no other Amandla-related activity likely to produce displacement. The unsafe spaces (beyond the 100-meter 'safe hub zone' that is largely fenced/secured and patrolled during evening programming) within the 400-meter and 600-meter radii remain potentially unsafe. If significant and sustained violent crime reductions occur within this radius it may be more attributable to changing behaviours (of Amandla participants as well as knock-on effects on peers) than displacement.

In terms of participation of young people from the surrounding area in Amandla, the organisation claims (on its website) that it had 100 participants on a weekly basis in 2007, rising to 500 in 2008, up to 800 in 2009, more than doubling to 1,800 in 2010, to 2,200 in 2011, up to 2,500 in both 2012 and 2013, and peaking at 3,000 in 2014 (figures for 2015 have not been presented). While these are significant increases in numbers of potentially at-risk youth involved in Amandla programming (with potentially fewer hours of weekly 'violence-risk exposure'), there are several caveats to suggesting a relationship to localized crime reduction. The first issue relates to the veracity of these Amandla participation figures. As discussed in chapter 9, Amandla was unable to capture complete attendance data for all registered participants until 2014. It was also shown in this study that there were discrepancies between self-reported Amandla participation, registering to participate at Amandla in a given year, and actually maintaining consistent participation over the course of the programme year. For these reasons, it is suspected that average daily or weekly participant visits and unique visits (removing counts of multiple visits by some participants) would be much lower and would offer a more accurate reflection of average attendance and average number of participants. In a review of Amandla attendance data from the third quarter of 2015, there were only 423 participants who registered any attendance over this 3-month period (including a group of 29 Under-19 participants who may have been double-counted in the night crime prevention league). Thus, there is an enormous difference between registered participation well into the yearly programme cycle (about 400 persons in 2015) and the claimed numbers of weekly participants .

The second issue relates to the likely commission of many violent crimes by a small number of individuals. Common to nearly all self-report studies, a small number of non-conforming respondents disclose disproportionately high levels of self-reported offending (Krohn et al, 2010) that could be attributed to reporting issues (Lauritsen, 1998) or to the existence and propensity of life-course

persistent offenders (Moffit, 1993; Souverin et al, 2015). If such offenders are active in Khayelitsha and in the Amandla project catchment radius, there is little reason to believe that increased Amandla participation rates would alter their rates of violent offending (if such offenders, themselves, are not involved in the programming).

Lastly, it is possible that other violence-reduction elements in the immediate area could be responsible for the crime reduction. Community policing fora (known as CPF's) are the officially recognized community safety and police-interface bodies, intended to reduce crime and improve safety through community involvement. As was disclosed during the Khayelitsha Commission of Enquiry, these CPF's are largely dysfunctional in Khayelitsha and emblematic of the breakdown in relations between the community and the police (O' Regan et al, 2014). In the absence of effective CPF and visible, responsive policing, Khayelitsha residents are largely left to themselves to provide self-protection, apprehend suspects, and even mete out justice (through 'People's Courts' and vigilantism). Street Committees have served political and organising functions since the Apartheid era, while also acting in varying degrees as a de facto community-protection service, either against or in the absence of the Apartheid-era police force (Burman, 1989; Buur & Jensen, 2004; Seekings, 2001; O' Regan, et al, 2014). Private groups have also established themselves to provide local security services with varying degrees of organisation and professionalism. Many of them are not registered businesses, community-based organisations, or official private security firms with any recognized training or standards. In the Ikhusi radius, the Mayitshe provide such services to local businesses and residents, including Amandla. The Mayitshe, like numerous street committees, have also been accused of involvement in vigilante justice (O' Regan, et al, 2014). Therefore, it is hard to find any evidence (even anecdotal) that other elements are responsible for this apparent crime reduction (if it is, indeed, a true crime reduction).

### **8.6.2 Crime data analysis for comparison site – Football for Hope Centre, Harare**

For trend comparison purposes, I have drawn and analysed comparable data for 400-meter and 600-meter radii around the Football for Hope Centre in Harare (figures 8.10-8.13, below), an extension of Khayelitsha with a separate police station (and separate statistical reporting area). The Football for Hope Centre and Ikhusi/Amandla points are approximately 3.6 km apart, meaning that even 1 km project radii would not overlap. The NGO, Grassroots Soccer, runs football-based life skills programming focused on HIV/AIDS awareness and targets primary-school-aged children at the Football for Hope Centre. Adjacent to the Football for Hope Centre is the Harare development district with new infrastructure (including a library, lighted walkways, safety corridors and guard lookout units, retail and trading areas, and parks) designed by Violence Prevention through Urban Upgrading

(VPUU). VPUU engaged in a process of public consultation and data-gathering prior to design and construction, dating back to 2006 (with construction from 2008).<sup>46</sup>

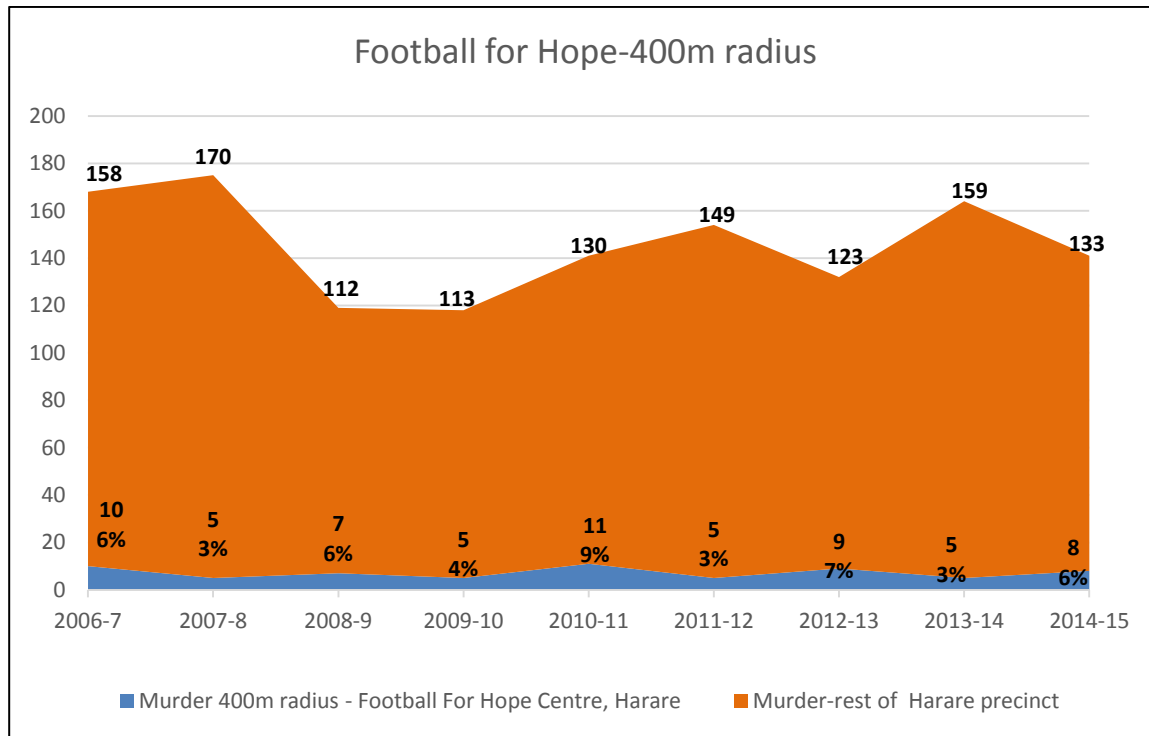


Figure 8.10. Police data on murders within a 400 meter radius of Football for Hope/VPUU project site (Longitude: 18.6703731, Latitude: -34.055216) and the rest of Harare police precinct. Percentages reflect the Football for Hope radius share of the total for Harare Precinct. Rest of Harare figures exclude the data from Football for Hope radius for trend comparison purposes. (Data source: Crime Statistics and Research, Organizational Development, Western Cape, compiled on 27 Nov. 2015.)

<sup>46</sup> See: [www.vpuu.org.za](http://www.vpuu.org.za)

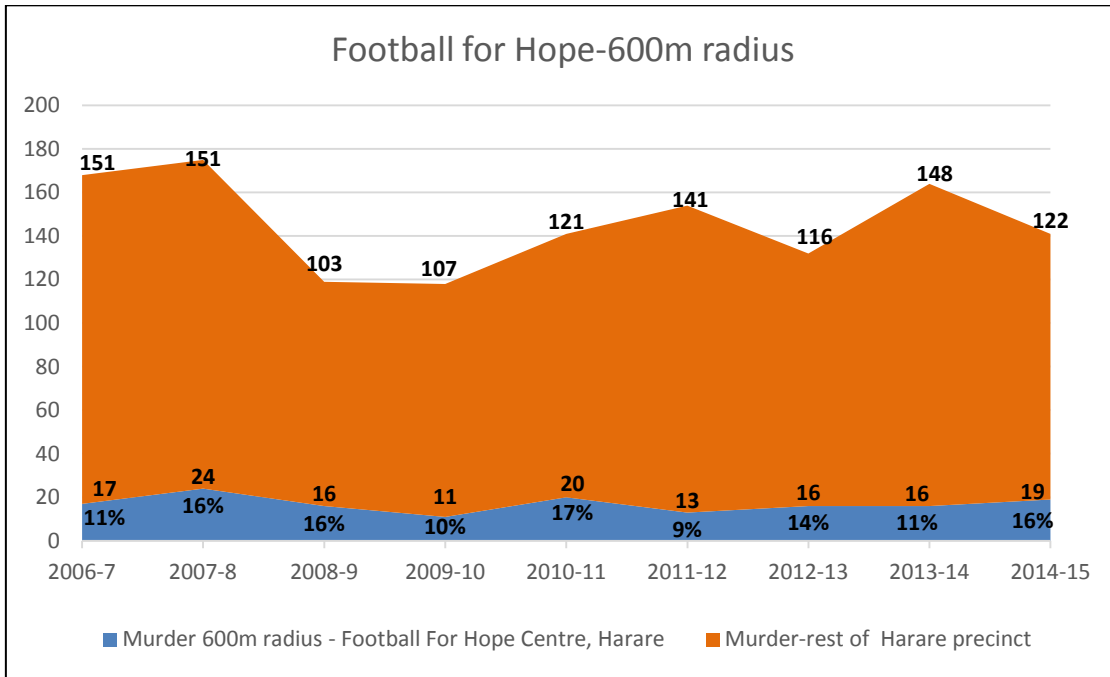


Figure 8.11. Police data on murders within a 600 meter radius of Football for Hope/VPUU project site (Longitude: 18.6703731, Latitude: -34.055216) and the rest of Harare police precinct. Percentages reflect the Football for Hope radius share of the total for Harare Precinct. Rest of Harare figures exclude the data from Football for Hope radius for trend comparison purposes. (Data source: Crime Statistics and Research, Organizational Development, Western Cape, compiled on 27 Nov. 2015.)

With significant resources directed at infrastructure, community engagement, and violence-intervention programming between Football for Hope and VPUU, it was expected that a radiating safety effect should be more pronounced, and/or sustained over time, in these Football for Hope radii, as compared with the Ikhusi/Amandla radii. While murders peaked in 2007-8 in the 600-meter Football-for-Hope radius (figure 8.11, above) at 24 (16% of the Harare total in that year), they peaked later, in 2010-11 in the 400-meter radius (at 11, or 9% of the Harare total, figure 8.10, above). From 2010-2014, there was a reduction from 11 to 5 (9% to 3%) in the 400-meter radius and from 20 to 16 (17% to 11%) in the 600-meter radius, though the numbers have not consistently declined each year and rose somewhat in 2014-2015.

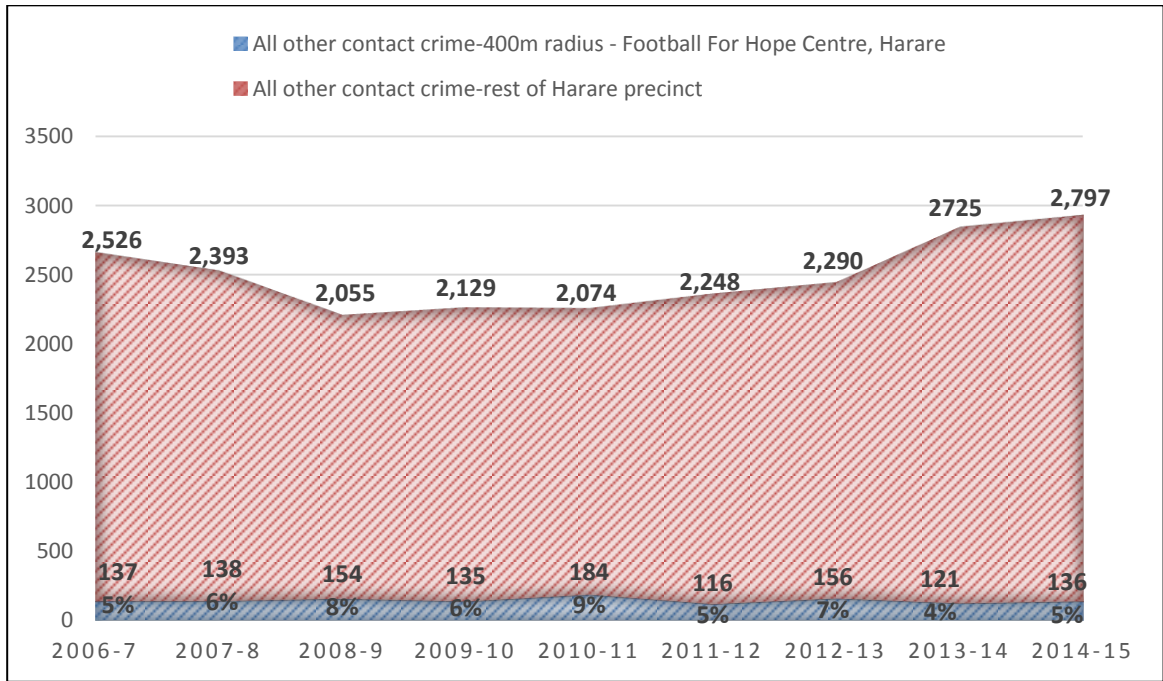


Figure 8.12. Police data on all contact crimes except murder within a 400 meter radius of Football for Hope/VPUU project site (Longitude: 18.6703731, Latitude: -34.055216) and the rest of Harare police precinct. Percentages reflect the Football for Hope radius share of the total for Harare Precinct. Rest of Harare figures exclude the data from Football for Hope radius for trend comparison purposes. (Data source: Crime Statistics and Research, Organizational Development, Western Cape, compiled on 27 Nov. 2015.)

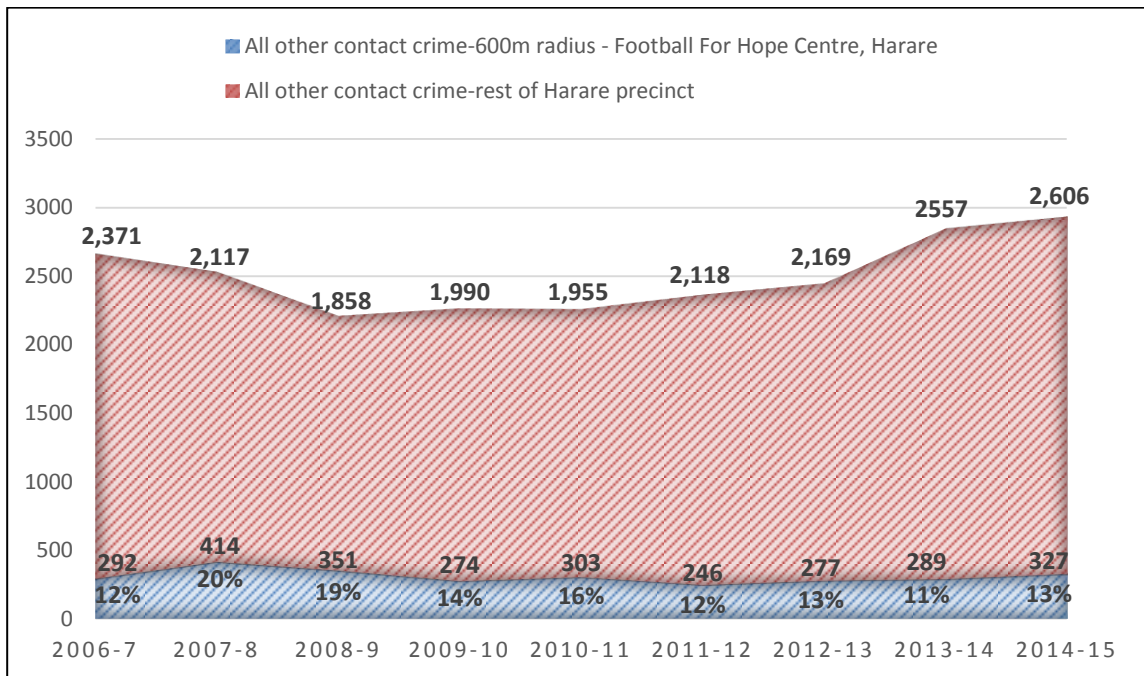


Figure 8.13. Police data on all contact crimes except murder within a 600 meter radius of Football for Hope/VPUU project site (Longitude: 18.6703731, Latitude: -34.055216) and the rest of Harare police precinct. Percentages reflect the Football for Hope radius share of the total for Harare Precinct. Rest of Harare figures exclude the data from Football for Hope radius for trend comparison purposes. (Data source: Crime Statistics and Research, Organizational Development, Western Cape, compiled on 27 Nov. 2015.)

For all other contact crimes, number also peaked in the 600-meter radius (figure 8.13, above) in 2007-8 at 414 (20% of the Harare total) and in 2010-11 in the 400-meter radius (figure 8.12, above) at 184 (9% of the Harare total). Again from 2010-2014, there is a marginal, though inconsistent, reduction from 9% of the Harare total to 4% of the Harare total in the 400-meter radius and from 16% to 11% of the Harare total within the 600-meter radius, before increases were seen in the latest 2014-15 data.

In absolute terms, the number of murders across Harare police precinct has changed little from 2006-7 until 2014-15 (168, 175, 119, 118, 141, 154, 132, 164, 141 each year, respectively). The same holds true for all other contact crimes (2,663; 2,531; 2,209; 2,264; 2,258; 2,364; 2,446; 2,846, 2933 each year, respectively), though these have reached a 9-year high in 2014-15. This suggests the possibility that the VPUU approach has displaced crime beyond the radii (but within Harare). Whereas, in Khayelitsha police precinct, murders have tapered overall (198, 171, 121, 124, 125, 161, 168, 146, 146 each year, respectively) and other contact crimes have grown (2,844; 2,554; 2,173; 2,219; 2,025; 2,410; 2,899; 3,273, 3536 each year, respectively). Across the four Football for Hope graphs, there is little suggestion of any crime reduction trends within the 400m or 600m radii and less pronounced (although visible) increases in contact crimes across the Harare police precinct.

### **8.6.3 Full Khayelitsha police crime data analysis**

After the initial suggestion of an apparent crime reduction effect in the Amandla/Ikhusi radius, I sought further data to test the uniqueness of the finding. After repeated requests, it eventually proved possible to obtain GPS-tagged crime data for all crimes in the entire Khayelitsha Police Precinct from 2006-2015 (incidentally, this was the result of a request that is rarely if ever granted by SAPS, according to local criminologists). The dataset included a date and time code, category of crime, and GPS coordinates. No further localized data, down to 600-meter radius or smaller units, are available to serve as controls in any multivariate analysis.

To assess if reduction effects in the Amandla/Ikhusi area were truly unique (and potentially significant) over the 4-year 2011-2015 period, a quadrat mapping technique (Eck et al, 2005) was adapted to visualize and assess localized changes in crime incidents over time. All crimes were binned into 267-meter square grids across the reporting area (a zigzag shaped polygon, see figures 8.14 and 8.15, below). Reductions in murders (in absolute numbers) year-on-year were calculated for each 267m square and, separately, for reductions year-on-year in all other contact crimes combined. Grids with no reported murders or other contact crimes over the period were dropped from the mapping to simplify visualization. The grid placement was adjusted so that the Amandla-Ikhusi football field was situated near the centre of one 267m square, within the middle of a 3x3 (800m square) grid. This





increase with the distance from a police station. Here, it would seem to increase with proximity and to have actually increased between two-fold and four-fold over the past 4 years. This finding is counter-intuitive and brings to the fore questions of GPS-tagging methodology and veracity (and consistency in practice over time).

To visualize these issues, I have employed point mapping (Jefferis, 1999) to plot all crimes in (roughly) 12-month blocks over each of the past 4 years in the immediate vicinity of the police station (figures 8.16 – 8.19, below). Most crimes appear to be tagged in the settlement area immediately NE of the police station (within 150m, actually) and both increase in frequency over the period and seem to be placed in a non-repeating, evenly spaced grid pattern from 2013-14 (not a result of any operator functions on my end, as far as I am aware). Such a uniform, non-random distribution and massive increase (or displacement, if such could be ascertained) are illogical and strongly suggest that the GPS-tagging of crimes does not occur at the scene of the crime but after the fact, on writing up the report at the station, perhaps, or has been imputed at a later stage with attribution to a particular community and through a function that distributes the points evenly across an area. Such abnormalities may effectively rule all GPS-based Khayelitsha crime data useless for reputable area-based analysis. Further, a similar non-random assignment of crimes appears in the other quadrant displaying sizable crime increases in figure 8.15, an area bordering RR informal settlement and a green corridor notorious (anecdotally, if not statistically) for crime and insecurity. Moreover, the uniform grid of crime incidents even extends into the undeveloped greenbelt, itself (figure 8.20, below).



Figure 8.16. All crime incidents near Khayelitsha police station (in lower centre of picture, south of intersection of Siyaya Ave. and Sulani Dr.) 2011-2012.



Figure 8.17. All crime incidents near Khayelitsha police station (in lower centre of picture, south of intersection of Siyaya Ave. and Sulani Dr.) 2012-2013.



Figure 8.18. All crime incidents near Khayelitsha police station (in lower centre of picture, south of intersection of Siyaya Ave. and Sulani Dr.) 2013-2014.

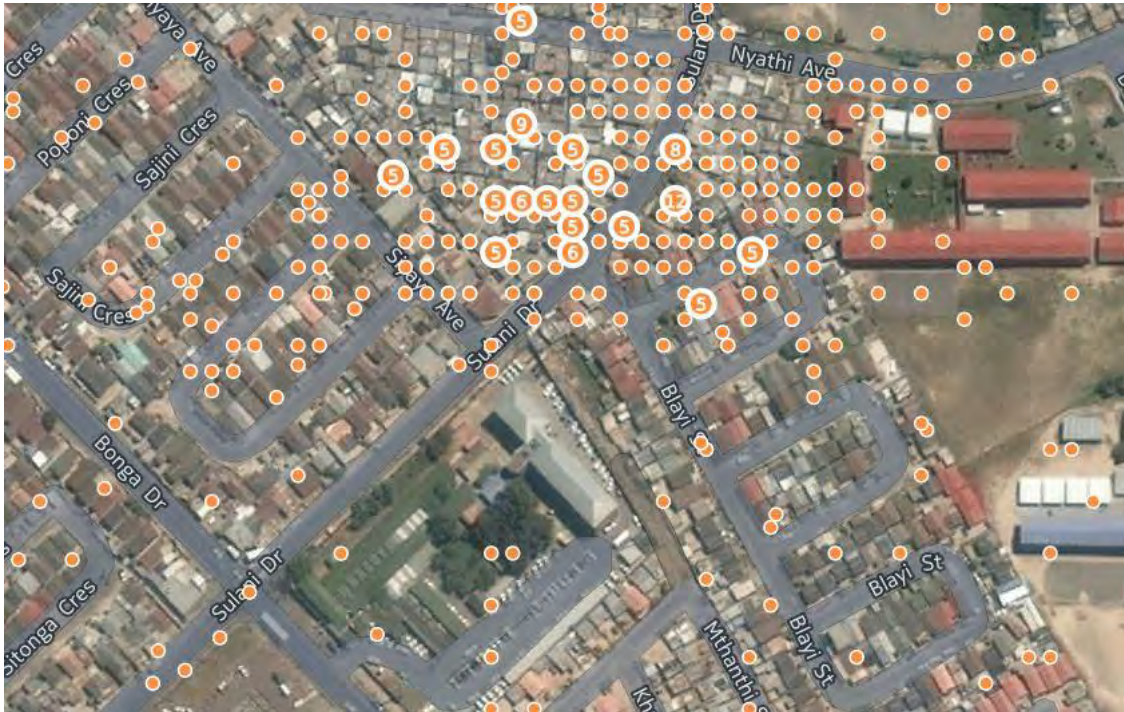


Figure 8.19. All crime incidents near Khayelitsha police station (in lower centre of picture, south of intersection of Siyaya Ave. and Sulani Dr.) 2014-2015.

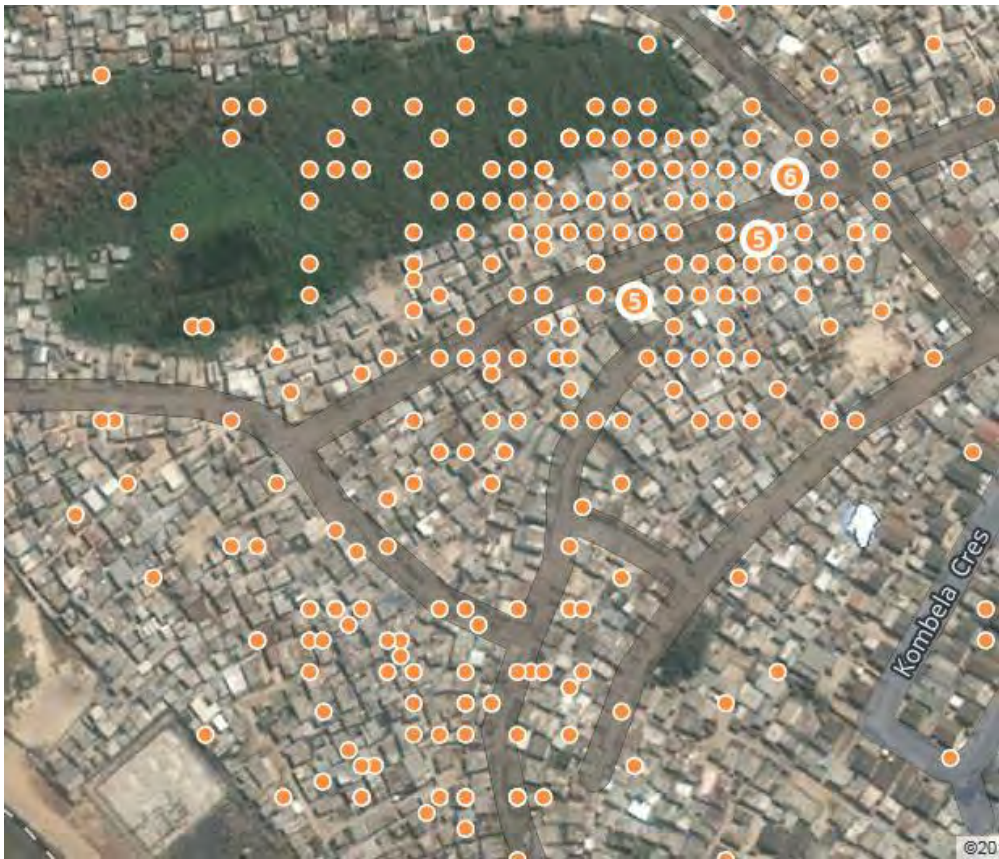


Figure 8.20. All crime incidents near RR informal settlement and greenbelt, 2014-2015

To follow this same visual, chronological analysis, I explore the Ikhusi field grid and, in particular, the UT informal settlement area bordering the field on the southern end. This settlement contains a conservative estimate of 600 shacks and 2,100 people. What can be seen in the crime distributions since 2011 is not only a reduction in crimes but a near-total disappearance of crime across the settlement. Again, this is highly improbable and contradicts local accounts. It may be more likely that police are either not entering into the congested settlement area itself to investigate crimes or simply not making use of accurate GPS coordinates when compiling incident reports. Further, in 2011-2012, there are even multiple crimes tagged within the Amandla-Ikhusi field; such incidents are not corroborated by Amandla staff. Therefore, the visual record of crime reduction in the immediate Ikhusi vicinity (the nearest and most densely populated and allegedly crime ridden area) is also riddled with questions and anomalies.



Figure 8.21. All crime incidents near Amandla field/Ikhusi Primary School and UT informal settlement to immediate south, 2011-2012.



Figure 8.22. All crime incidents near Amandla field/Ikhusi Primary School and UT informal settlement to immediate south, 2012-2013.



Figure 8.23. All crime incidents near Amandla field/Ikhusi Primary School and UT informal settlement to immediate south, 2013-2014.



Figure 8.24. All crime incidents near Amandla field/Ikhusi Primary School and UT informal settlement to immediate south, 2014-2015.

To conclude the comparative analysis, I have graphed crime in the 400-meter radius surrounding the Khayelitsha Police Station (figures 8.25 and 8.26, below) and compared trends with the rest of the Khayelitsha crime-reporting area over the 10-year period (the same as the analyses provided for the 400m Ikhusi radius in figures 8.6 and 8.8). Here, the trend suggests that since 2011-2012, there has been a significant increase in crimes reported near the police station (similar trends are seen in 150m and 200m radii, as well, but these are omitted in favour of a 400m radius that can be compared with Ikhusi). The percentage of total murders in the station radius has increased from 9% in 2011-2012 to 23% in 2013-14 and back down to 14% in 2014-15. Even more significantly, the share of all other contact crimes combined has increased from 12% (293 crimes) to 18% (638 crimes) from 2011-2012 to 2014-2015, a two-fold increase in total crimes. As robberies and stranger-assaults can be considered opportunity crimes (rather than crimes of passion) it does not stand to reason that there would be so many (and such a precipitous increase) within a 5 to 10 minute walk to the police station.

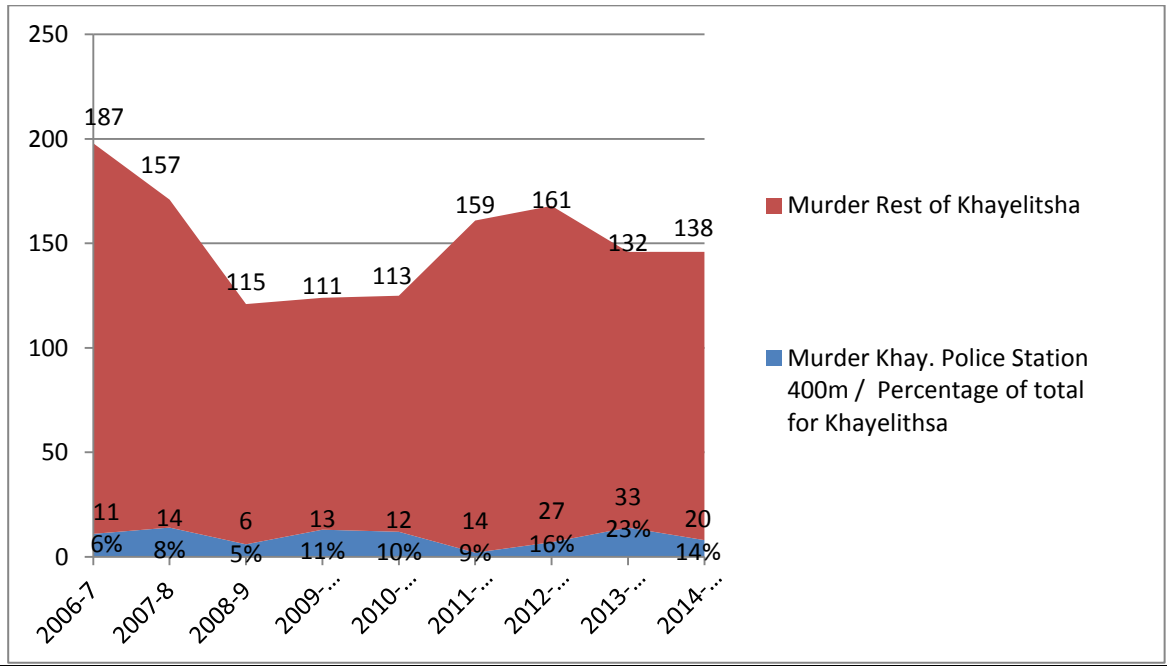


Figure 8.25. Police data on Murders within a 400 meter radius of the Khayelitsha Police Station (Longitude: 18.666072, Latitude: -34.023806) and the rest of Khayelitsha police precinct. Percentages reflect the 400-meter Police Station radius share of the total for entire Khayelitsha Precinct. Rest of Khayelitsha figures exclude the data from Police Station radius for trend comparison purposes. (Data source: Crime Statistics and Research, Organizational Development, Western Cape, compiled on 15 Feb. 2016.)

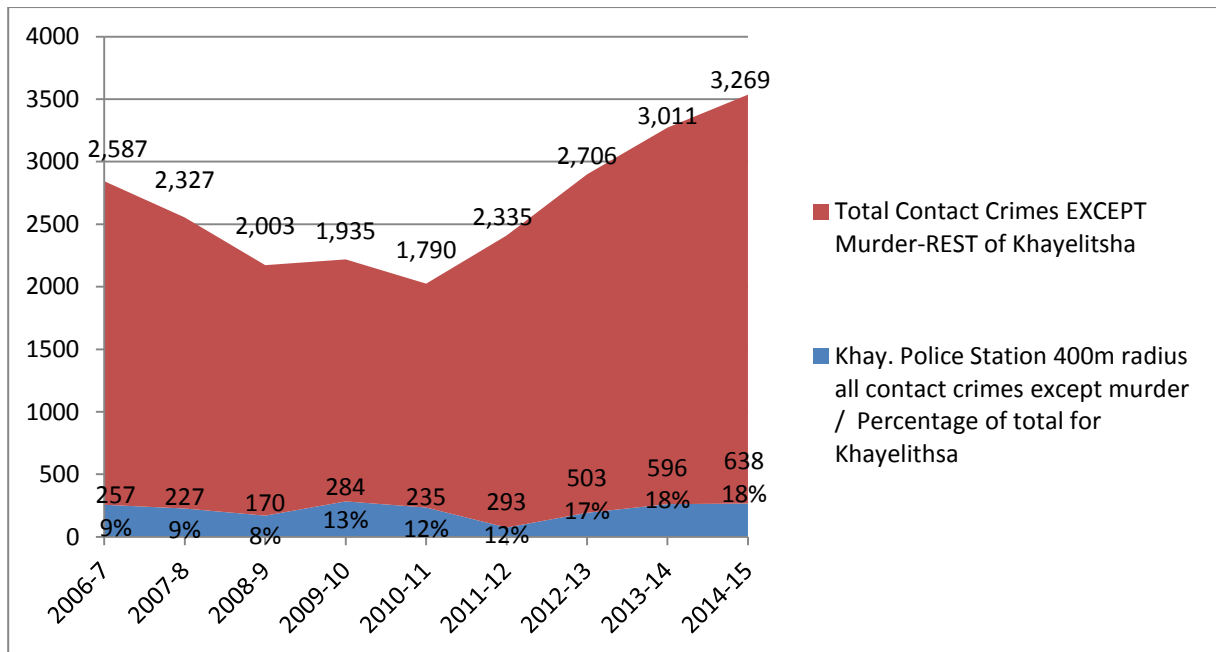


Figure 8.26. Police data on all contact crimes except murder within a 400 meter radius of the Khayelitsha Police Station (Lat. -34.023806, Long. 18.666072) and the rest of Khayelitsha police precinct. Percentages reflect the 400-meter Police Station radius share of the total for entire Khayelitsha Precinct. Rest of Khayelitsha figures exclude the data from Police Station radius for trend comparison purposes. (Data source: Crime Statistics and Research, Organizational Development, Western Cape, compiled on 15 Feb. 2016.)

To compare the strength of the linear trends in crime increase and crime reduction, I have run a bivariate correlation analysis between numeric (ascending) date, from 1 April 2011 through 31 March

2015, and dummy variables representing the 267m and 800m grids centred on Ikhusi, the two blocks that revealed greater reductions in the year-on-year analysis, and the two quadrants that revealed significant crime increases, the Khayelitsha police station grids and the grid bordering RR informal settlement and the greenbelt (as shown in figure 8.20).

Bivariate correlations between numeric date (ascending from 1 April 2011 to 31 March 2015) and dummy variables for 267m and 800m grids. N=11,330 total crime incidents	Ikhusi 267m sq.	Ikhusi 800m sq.	Police station 267sq	Police station 800m sq.	RR Settlement-greenbelt 267m sq.	grid no. 56, 267m sq	grid no. 56, 800m sq.	grid no. 48, 267m sq.	grid no. 48, 800m sq.
Pearson's Correlation	-.052**	-.068**	.107**	.076**	.063**	-.039**	-.089**	-.060**	-.048**
Two-tailed sig.	.000	.000	.000	.000	.000	.000	.000	.000	.000

Table 8.27. Bivariate correlations between numeric date (ascending from 1 April 2011 to 31 March 2015) and dummy variables for 267m and 800m grids. N=11,330 total crime incidents.

As seen in table 8.27, all correlations are significant at the  $p < .001$  level. At the 267-meter square level the Ikhusi-area reduction (corr.  $-.052$ ,  $p < .001$ ) is smaller than the reduction seen in grid number 48 (corr.  $-.060$ ,  $p < .001$ ), where a year-on-year reduction of 46 crimes was calculated from 2011-2015 (as shown in fig. 8.15). At the 800-meter square level, the Ikhusi-area reduction (corr.  $-.068$ ,  $p < .001$ ) is more significant (as effects at the 267-meter level could be attenuated by the secured area of the field and school, itself), though also surpassed by another 800-meter block (centred on grid number 56, corr.  $-.089$ ,  $p < .001$ , which also included the aforementioned 267m grid number 48). Thus, there is evidence that overall linear crime reduction since 2011 was significant in the Amandla-Ikhusi area compared with the rest of the Khayelitsha police station statistical reporting area, but it was not unique.

Conversely, crime increases were most significant in the 267-meter block surrounding the Khayelitsha Police Station (corr.  $.107$ ,  $p < .001$ ) and somewhat less significant across the greater 800-meter square area (corr.  $.076$ ,  $p < .001$ ). The 267-meter grid displaying the second highest increase in year-on year crime totals (outside of the 800-meter Police Station grid), the RR informal settlement/greenbelt grid, also displayed a significant linear increase over time (corr.  $.063$ ,  $p < .001$ ), though somewhat lower in magnitude than the Police Station grid. Thus, there is statistical evidence across the entire crime dataset that increases in recorded incidents in the immediate vicinity of the Khayelitsha Police Station were significant, unique, and, in magnitude, much greater and more

concentrated than linear changes (increases or decreases) seen elsewhere. Taken as a whole, alongside the visual evidence of incident mapping oddities (seen in figures 8.16-8.20), inferences on crime patterns derived from this Khayelitsha police data should be made with extreme caution.

Further spatial and regression analyses could consider enumerator-area data and variables (subject to availability) such as proximity to schools, churches, shebeens, open spaces, ablution blocks, light masts, and busy intersections. To the extent that changes in these community assets and attributes are documented (uniformly, across the Khayelitsha area) this could provide important information on crime effects. Interaction effects between time of day, day of week, month/time of year and crime changes over time (by quadrat, or hotspot) may also reveal useful information on patterns of crime increase and reduction. Even fixed elements such as elevation and slope have been studied in relation to crime patterns and control (Breetzke, 2012), suggesting the breadth of potential for spatial crime analysis. However, as Khayelitsha crime data are of questionable veracity and the availability and coverage of other data unexplored, such analytical possibilities remain merely speculative. Indeed, the field of spatial crime reduction analysis is replete with tools, software, and colourful visualizations that are often unable to answer core questions about crime change due to inadequate, ‘under-resolved’ data (Eck et al, 2005).

## **8.7 Discussion**

In the quantitative analyses, the structured leisure intervention under study, Amandla Edu-Football, and a comparison, in this case, regular attendance to a place of worship (Religion Participation) were tested for bivariate and multivariate correlations with the key violence-risk-contributing study measures. Self-reported Amandla Participation in wave 2 was not significantly associated with any wave 3 outcome measures. On the other hand, self-reported regular Religion Attendance in wave 2 was correlated with higher Parental Involvement in both waves (a potential confounding variable), with less multi-category Serious/Violent Offending in wave 3, alongside a lower Violence Propensity Score in Wave 3. In multivariate correlations, neither structured leisure activity significantly improved the explained variance in the Violence Propensity Score Wave 3 in the full models, yet Religion showed a stronger negative coefficient, largely driven by the younger (14-16 years) and older (20-24 years) age groups. No effects of self-reported Amandla Participation in wave 2 emerged as significant in regression models although an exploratory composite measure, based on wave 3 attendance data and length of time as an Amandla participant, did show signs of a potential

emerging effect among the youngest age group. Further longitudinal study would be required to substantiate such an effect.<sup>47</sup>

In structural equation modelling, neither wave 2 intervention measure exhibited a significant effect on wave 3 outcomes, despite both being associated with more positive School Attitude/Attachment in wave 2. Religion in wave 3 was associated with less Substance Use/Abuse in the same wave and Amandla participation in wave 3, with a lower Violence Propensity Score in both waves 2 and 3 (suggesting some violence-potential stability among this group). Model fit did not improve with inclusion of any intervention/structured leisure measures over the base model presented in chapter 6 suggesting that, overall, there is no clear evidence of an intervention-leading-to-violence-reduction effect.

That said, police crime data for the Khayelitsha precinct and customized for 400m and 600m radii around the Amandla intervention project site allowed for analysis of real-world crime data at a resolution where intervention impact may be discernible. While violence-reduction trends in the Amandla/Ikhushi radii are short-lived at present (visible for only 3 years or less), there is some evidence of a possible reduction in contact crimes (other than murder) in the Amandla/Ikhushi radius while there are clear increases in the rest of Khayelitsha (in magnitude, beyond those of the decreases within the Ikhushi radius, negating displacement as the sole explanation of the increases). Thus, there is the possibility of a community-level intervention effect that is not yet detected in the subject-reported data and no other known and plausible explanations for crime changes within the Ikhushi radius (although a degree of random variation in crime is a widely regarded phenomenon). By comparison, crime data from the Football for Hope Centre radius in Harare, Khayelitsha was expected to show larger safety effects due to the extensive nature of the violence interventions, but violence-reduction trends appeared weaker and less consistent. Further exploration of area-based effects across the Khayelitsha Police Precinct reporting area revealed that Ikhushi/Amandla trends, while significant, were not unique (another 800m quadrant revealed greater reductions) and that GPS-coding may be suspect (particularly where large crime increases and uniform crime-patterning are seen).

The primary measure of Amandla Participation wave 2 (subject-reported participation) may suffer from imprecision of “dosage”, uncertainty as to who really participated and how often. Accurate and complete attendance data was only generated in wave 3 and cannot be used as a predictor of the

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<sup>47</sup> An Amandla attendance measure was created by multiplying the wave 3 attendance rate by the length of time subjects self-reported being Amandla participants with the following response options: 1=less than 3 months, 2=3-6 months, 3=7 months-1 year, 4=between 1 and 2 years, 5=2 years or more. Thus the highest possible score would be 5 for a subject who has perfect 100% attendance at Amandla this year and has participated for the past 2 years or longer. In an alternative multiple linear regression model including this Amandla measure and Religion Participation wave 2, the Amandla measure was the only significant ‘predictor’ of Violence Scorecard wave 3 among the 14-16 year-olds ( $\beta = -0.20$ ,  $p=.04$ ), although Religion was not far behind in strength in the same age-group ( $\beta = -0.14$ ,  $p=.19$ ).

other wave 3 measures (particularly as most wave 3 Amandla attendance occurred after the wave 3 interviews). That said, self-reported Amandla Participation in 2013 (wave 2) is corroborated by the subject's identification of a valid Amandla staff member, and is significantly correlated with several key wave 2 variables (less Negative School Attitude, less Pro-Violence Attitude, as compared with non-Amandla-participant subjects in wave 2).

Unfortunately, the transient nature of Amandla participation seems incompatible with a rigid longitudinal panel study (where subjects in the treatment group drop out of treatment in large numbers or otherwise fail to receive the prescribed treatment dosage). Of the 112 study participants in wave 2 who were also registered Amandla participants in 2013, 54 (48% of this sub-group) did not participate at all in Amandla in 2014 (though all 112 of these were retained as panel study participants in wave 3). Bivariate correlations between these Amandla participation-attriters and non-attriters revealed correlations between Amandla attrition and Age, Violence Propensity Score Wave 2 (particularly the Deviant Peer subscale), Less Parental Involvement in Wave 3, and Combined Serious/Violent Offending wave 2.<sup>48</sup> However, among all wave 3 study participants, Age was also positively correlated with Violence Propensity Score Wave 2 (also with the Deviant Peer sub-scale), with Less Parental Involvement in Wave 3, and with Combined Serious/Violent Offending wave 2. Thus, we cannot conclude that Amandla participation-attriters are uniquely different from other study participants their age. Subjects seem to simply drop in and drop out of Amandla participation.

Thus, given currently available data and, generally speaking, the transient nature of participation in Amandla, I cannot conclude that there is any significant positive or negative effect of the treatment. Further longitudinal data and exploration would be required to substantiate or negate any intervention effects. It should be noted here that, overall, the sport-for-development field is lacking good examples of rigid programme evaluation (Levermore, 2011a and Levermore, 2011b; Kidd, 2011; UNICEF, 2006), despite much publicity (especially in South Africa surrounding the 2010 Soccer World Cup). In Levermore's 2011 (Levermore, 2011a) review of sport-for-development evaluation (of internationally recognized projects), he found no evidence of published longitudinal or control group empirical impact evaluations.

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<sup>48</sup> Amandla attrition from wave 2 to wave 3 is correlated with Age ( $r=0.23$ ,  $p=0.01$ ), Violence Scorecard Wave 2 ( $r=0.24$ ,  $p=0.01$ ), particularly the deviant peer subscale ( $r=0.23$ ,  $p=0.016$ ), Less Parental Involvement in Wave 3 ( $r=0.26$ ,  $p=0.006$ ), and Combined Serious/Violent Offending wave 2 ( $r=0.26$ ,  $p=0.006$ ). Among all wave 3 study subjects, age is also correlated with Violence Scorecard Wave 2 ( $B=0.23$ ,  $p=0.000$ ), the deviant associate component ( $r=0.39$ ,  $p=0.000$ ), Less Parental Involvement in Wave 3 ( $r=0.24$ ,  $p=0.000$ ), and Combined Serious/Violent Offending wave 2 ( $r=0.16$ ,  $p=0.005$ ).

## 8.8 Amandla Intervention as-delivered

Drawing on direct observation and discussions with participants, field staff, and management, I turn here to discuss the Amandla intervention, as delivered and observed, in Khayelitsha.

### Attendance/dosage data

Before conception of the study design, it was confirmed (by senior Amandla management) that Amandla was capable of compiling attendance or dosage data for all of its participants and that this would be regularly shared to explore emerging participation effects. It appears that asking for this attendance data may have placed more administrative focus on the veracity of attendance records and the methods of collection. In wave 1, attendance was to be captured manually by coaches/facilitators and uploaded to a central records system (as had apparently been done in previous years). Over the course of the year, it emerged that attendance was not consistently captured by many of the coaches/facilitators, that this task took valuable time away from programming, and attendance sheets were often lost and the data, cumbersome to upload, maintain, clean, or analyze for the limited number of full-time staff. Thus, wave 1 attendance data was considered incomplete and inaccurate by Amandla management. In wave 2, an electronic fingerprint-recognition system was incorporated to try to address these issues. Immediately, there were substantial problems with accurate recognition, with massive queues of participants and means of access to the field without passing through the scanning station, and issues with the corresponding database setup and management. Despite good intentions to improve attendance data for year 2, by the end of the year, 2013, Amandla management was forced to concede that attendance data was again inaccurate, incomplete, and that the new system had been compromised and weakly managed. In year 3, it appears that these issues had finally been corrected. This required construction of a turnstile entry point (and sealing off all other points of access/egress) with two fingerprint booths manned by staff trained to ensure an appropriate fingerprint capture and accurate identification before allowing access (and even this solution still seemed a work in progress over the course of the year), a dedicated full-time employee to supervise attendance record collection, verification, and database management, and an additional hand-stamp verification system to be monitored by the coaches/facilitators. With the additional systems, management felt that attendance records were improving in accuracy and completeness over the course of year 3 (2014), but had admittedly been a work in progress.

As attendance data became more accurate and more available, it emerged clearly that most participants do not maintain consistent attendance and this significantly undermines attainment of the theorized critical programme dosage (75% attendance). Explorations for reasons of flagging attendance suggested that school pressures, family requirements (particularly completion of chores by girls or minding of younger siblings), and inclement weather were all influent factors. Less apparent,

or less disclosed at least, is the possibility that many participants view Amandla as more of a ‘drop-in programme’ and feel less obligation to their Amandla team to maintain attendance than may be expected on competitive youth sports teams. It is also possible, as school friendships and other activities present themselves (with increasing frequency over the course of the academic year), that competing interests, whether in pro or anti-social activities, have a negative impact on Amandla participation rates. Amandla has, to their credit, recognized inconsistent attendance as a major priority to be addressed. They have developed and strengthened incentive systems, including attractive prizes and invitation-only tournaments based on attendance, as well as formal ‘graduation’ recognition for completion (at 75% or higher attendance) of the year-long programme.

There is also a significant initial drop-out rate. At the beginning of each year, Amandla conducts a registration drive, visiting various neighbourhoods within the project catchment area and conducting street football tournaments, coaching clinics, and presentations. Each year the goal has been to register and retain 1,500 participants across all age groups in Khayelitsha. While Amandla believes they have the capacity to deliver programming for 1,500 participants on a weekly basis, it has not proven possible to maintain this level of steady participation for one intake of participants across an entire year (official Amandla programming runs from April through November). After the initial registration, there appears to be a dropout rate of approx. 50% (persons who register and never attend or do not return after 1-2 visits) within the first month, requiring additional registration drives ahead of each 4-month season (there are two league seasons each year to keep sufficient teams and player-numbers in the leagues). This, in and of itself, becomes a monumental task. At the time that I conceived the study design, attendance numbers were more speculative and there was firm belief from Amandla management that a random selection of participants would maintain consistent attendance over a 3-year period and that overall participation numbers (average number of unique participants per week) would reach and even exceed the 1,500 mark.

With these notions of strong programme demand among the eligible youth population and purportedly strong adherence (regular attendance over time), the idea of random assignment to treatment and control had even been considered. It was believed that interest in attending Amandla was high enough that a lottery could be incorporated. It was ultimately decided that barring some (would-be) participants could create a negative impression in the community that Amandla might not be able to adequately control. Thus, it was agreed not to attempt randomized assignment to Amandla and to a control. In retrospect, this was a wise decision; it has allowed Amandla to promote its programme as open (and free of cost) to all and, ultimately, random assignment would not have resulted in an adequate experimental group sample, given the high rates of Amandla attrition.

## Life Skills

The delivery of life skills curriculum was irregular, affected by participant tardiness, length of time required to sign-in attendees (whether by the life skills facilitator or later through fingerprint recognition system), the motivation and capacity of each facilitator (a young person earning only a stipend for a full-year, full-time learnership), and the level of rapport between facilitator and Amandla participants. Age and gender of the facilitator with respect to the participants may have also had an impact. This dynamic of compromised life skills delivery reflected the concept of ‘sport-plus’ becoming reduced to ‘sport-only’ when realities do not sufficiently support successful delivery of the ‘plus’ component (Coakley, 2002; Hartmann and Wheelock, 2002).

In focus group discussions, Amandla participants, generally, could not articulate any of the more developed life skills concepts (conflict resolution, goal setting and planning, etc.) suggesting that they may never have been presented with the full curriculum (in the current or previous years of programming) and/or had insufficient time to synthesize the learnings therein. Even the coaches/facilitators struggled with goal setting, planning, and plan-of-action adherence during the course of their learnerships. Thus, there appeared a significant gap between the intended curriculum outcomes (e.g. an altered, improved self-identity, sphere of influence and relations to others, and life plan) and even short-term realized outputs among those hand-picked, competitively selected, leadership programme participants, let alone across the spectrum of the fair play football league and life skills curriculum recipients. It appeared that success stories (transitions out of crime and gangsterism or into tertiary education or gainful employment) were somewhat rare and could have been the trajectories of already-determined individuals who found Amandla (but may have likewise distinguished themselves in another youth development programme) rather than scores of participants who were transformed through Amandla.

In addition to the implementation challenges, the life skills curriculum itself was not published or adopted until year 2 of the study (2013). In previous years there were various lessons that had been tested and it was up to the facilitators to choose and prepare what they would deliver that day or week. With the adoption of an official curriculum, there was clarity on the ideal lesson progression but irregular and tardy attendance often required repetition and revision of the lessons such that the full curriculum was rarely fully covered. For the later life plan development lessons, there appeared insufficient time, resources, and establishment of prior knowledge. Some lessons specified that participants needed to prepare work at home (develop and elaborate goals and concrete steps to achieve them) but it did not appear that participants were willing or able to complete this work without direct supervision during programming hours. This posed a seemingly significant challenge: if nearly all life skills participants by the end of the programme year were still unable to independently reflect on their

lives, their goals and aspirations, and to articulate concrete steps and commitments to move towards those goals, then either the curriculum was not age or context appropriate or the mechanisms for delivery (the facilitator, the ‘outdoor classroom’, the ‘class dynamic’ and peer motivation) insufficient or ineffective.

In my observation, successful delivery and completion of this curriculum requires well-trained, experienced coaches/facilitators who also have a demonstrated capacity to serve as mentors and role models for the young participants/students in their groups. Yet, the facilitators are (previously) unemployed youth with very limited prior training and experience who are, themselves, yet to attempt, let alone master, many of the tasks required of the students in the curriculum (i.e., goal planning and adherence, independent learning, etc.). Amandla management has recognized this dynamic and has sought to improve the quality of its leaders through more rigorous evaluation before intake/hiring, extending the leadership programme/learnership to 2 years (instead of 1 year) for those who are achieving, and reconfiguring fair-play football teams to have a permanent assigned coach/facilitator for the year (previously a rotation system was implemented). While these improvements are potentially beneficial, there remains a structural constraint: to achieve maximum potential effect (and high programme fidelity), the programme needs to be delivered and reinforced by experienced professionals who have the capacity to build and maintain strong mentoring relationships with the youth participants. Unfortunately, this dynamic still appears to be the exception and not the norm. And, each year, Amandla tries harder to recruit strong participants for the leadership programme and, yet, each year there are several ‘dropouts and disappointments’, one or two ‘shining stars’, and a ‘middle-of-the-road’ group.

Prior to implementation and (some limited) monitoring of the official life skills curriculum in year 2, there was little accurate information on what lessons were actually being implemented to whom and with what results. Thus, it was intended or believed that all age groups (under-15 and under-19 year-olds) that attended Amandla after-school sessions were receiving life skills lessons. Yet, during the process of official curriculum implementation, it emerged that under-19 boys were not interested in the life skills sessions and this had a major negative impact on their attendance. Thus, midway during year 2, the curriculum-based life skills sessions were discontinued, in favour of a stronger focus on competitive football training, the real hook that drew older teenage boys to Amandla (the ‘bait’, as per Hartmann and Wheelock, 2002), and the convening of a process, to be informed by the youth themselves, to redesign a more age- and interest-appropriate life skills curriculum. This has since remained a work in progress with no evidence of a re-developed, youth-approved, and implemented life skills curriculum for the under-19 group. There have been a number of once-off topical workshops, school holiday programmes, and thematic tournaments where issues such as joining gangs and gender-

based violence have been discussed, but these are short-term events without pedagogic foundation and any objective means of assessment and adjustment. Thus, it became clear that the sport-plus programming was only being delivered, as theorized, to the under-15 group (who also appeared to struggle with the level of the content).

### Behaviour

Behaviour is observed primarily by the coaches/facilitators (the youth leadership group participants) with secondary oversight by the programme managers/supervisors of the leadership groups (permanent paid staff). Problem behaviours are discussed in weekly debriefing sessions though efforts are made to address and resolve minor issues immediately on the field rather than after the fact. Serious offences are referred to the disciplinary committee (which includes youth participants) for investigation and hearing. In extreme circumstances (multiple transgressions, perceived danger to self or other participants), participants have been temporarily suspended from Amandla. Otherwise, the fair-play point system is the only official means of regulating behaviour of participants (while at Amandla) on an ongoing basis. In addition to scoring goals, points are rewarded or deducted for behaviour during the match, not unlike the yellow and red card system in other football leagues. Amandla has demonstrated that fairplay point scores tend to increase over the course of each programme cycle, suggesting participants are learning and obeying the rules, if not otherwise altering their attitudes and behaviours on (or off) the soccer pitch. However, the fair play points system has not been successfully implemented in the night crime prevention league (it led to more disputes with referees and between teams and appeared to affect absenteeism) suggesting its limitations as a tool of instruction. More serious anti-social behaviours at the facility (fighting, repeated verbal abuse, carrying weapons, bringing drugs or alcohol into the facility) have been referred to a disciplinary committee and adjudicated on an ad hoc basis. The intent has been to correct the behaviour without losing the participant. Management contends that this mechanism is sufficient and effective but there has been no analysis of outcomes (whether the participant in question improved behaviour and maintained/improved participation rates or otherwise), nor consideration of behaviours outside of the confines of the Amandla facility.

Over the 3-year period of study, I spoke directly with more than 200 Amandla participants and staff, across age and gender. Efforts were made to ensure that participant focus groups included individuals who were not always strong, regular Amandla participants (or even strong soccer players) and those who may have been 'on the fence' with regard to gang and criminal involvement. Occasionally, I was able to speak to individuals who disclosed serious violent offending, often with little sense of regret, and also spoke to the importance of Amandla in their lives, to help them stay out of further trouble. However, I rarely managed to find and follow-up with these same individuals on

later field visits, suggesting that their adherence to Amandla may have lapsed (that kids who were in trouble could not easily get out and stay out, even with the presence and support of Amandla). More frequently, I met and spoke with kids who seemed to be relatively protected from direct engagement in violence, potentially ‘the good kids’ who have avoided peer pressures and deviance. For them, Amandla provided a safe space for play, to have fun with their friends, and experience some aspects of ‘normal’ childhood, temporarily free from the exposure to violence and insecurity elsewhere in their communities. Undoubtedly, this is a vital benefit for the community (a safe space for youth development and play) yet, it does not adequately confirm that Amandla reduces crime or changes deviant behaviour. And, in this regard, empirical evidence of impact in this study, regrettably, mirrors the short-comings in the extant sport-for-development literature on programmatic and violence-reduction effects (Peachey & Cohen, 2015).

## **Chapter 9: Case studies – significant Amandla-participant change**

In line with the same approaches to qualitizing data and Most Significant Change utilised in the select case studies presented in chapter 7, two more cases are presented and analysed here that may help to understand potential Amandla-participation effects on individuals. In each of these cases, it was possible to obtain some follow-up information in 2015 (from Meli, directly, and from Lethu's grandmother) that is incorporated.

### **9.1 Case study – Meli**

Meli lives in U Section, has been in the study for 2 years, turned 19 in November of 2014. He is still in school and is not working, nor looking for work.

There are 10 people living at home, 2 of them are working in 2014 (there were 5 at home with 2 working in 2013) and someone currently receives a grant (and received this in 2013). They live in a freestanding house and use flush toilets. In 2013 and 2014, he reports they had electricity, a television, a cell phone, and a refrigerator. Both his parents are alive and he often spends a lot of time with both of them. He often receives financial and emotional support from his mother and sometimes from his father (his mother provided more support than his father in 2013). In 2013, he reported that an older sibling had been to prison in the past (though this was not reported in 2014).

In 2014, he reports going without enough food, medical treatment, electricity and fuel once or twice each and without income a few times. In 2013, he reported never going without food or medicine in the previous 12 months but went without income once or twice and without electricity and fuel a few times.

In 2014, Meli spends 1-5 hours each week on homework and watching TV, and 6-10 hours each on sports and meeting friends. In 2013, he spent 3 hours each week playing video games and using his cell phone, 2 hours each playing sports and meeting friends, and 30 minutes each watching TV and doing homework.

In 2014, he reports that he does not go out at night at all, though in 2013 he reported going out 1 or 2 nights a week and coming home between 8pm-10pm. His parents now sometimes know where he goes when he's not at home and he is hardly ever in trouble with them. They sometimes shout at him, but never beat him, lock him out of the house, or punish him because he "never disobeys them" [his words]. In 2013, his parents often shouted at him but, again, never beat him or locked him out of the house. They often check his homework and attend school meetings (and also did so in 2013).

Meli has lived in this neighbourhood his whole life and agrees that he likes it. He agrees that people in the neighbourhood are willing to help if one is in need and that they can be trusted, and that

there are people he can talk to (in his family, at Amandla, and his neighbours) and agrees that he has role models (family and sporting personalities). In 2013, he strongly agreed that he liked his neighbourhood but did not agree that people are willing to help nor can they be trusted. In 2013, he did not feel that he had anyone that he could talk to but did identify family members and Amandla staff as role models.

He says his neighbourhood has lots of crime most of the time and sometimes has lots of fights and feels like a war zone, making him feel only somewhat safe there. He presently fears murder, guns and gangs. In 2013, he felt very safe in his neighbourhood but admitted that he was afraid of rape and getting AIDS.

In 2014, Meli reports having 1 or 2 friends who have dropped out of school, smoke cigarettes, and go out at night without permission but none who drink, do drugs, have engaged in crime, or been arrested. In 2013, he reported having friends who bought drugs every day, 5 or more friends who skipped school a lot, went out without their parents' permission, smoked cigarettes and drank alcohol regularly, and 1 or 2 who had dropped out of school and who carried weapons sometimes. In 2013, he also strongly agreed that he did not mind friends using drugs around him but reported no friends who had robbed/mugged people.

Meli now visits sports grounds every day and the library, weekly and clinic, monthly. He does not visit the shebeen and reports no drinking. In 2013, he reported visiting sports grounds every day, the library each week, the community hall each month, and the shebeen each week, drinking alcohol once or twice and spending R100 on it in the previous 7 days but no other reported drug use.

Meli reports no history of violence in the home in 2013 or 2014. In the past year, he claims he has heard gunshots 2 times, but has not seen anyone beaten up nor seen anyone stabbed or shot. In 2013, he heard gunshots 4 times in the previous year, had seen people beaten up 9 times, and stabbed or shot 10 times but he had never been chased by a gang.

In 2013 and 2014, Meli says he had failed a grade of school more than once. In 2014, he is less positive about his school experience; he does not agree that he likes school or that he tries very hard and agrees that school is boring and that he does poorly at school, but he reports no history of abuse at school. In 2013, he had a more positive attitude toward school, strongly agreeing that he liked school, tried hard and that getting good grades was important to him. However, he disagreed that he felt safe at school, did not report any abuse at school but stated that he had been forced once or twice to do something that he felt was wrong.

He reports that in 2014 the only group social activity he participates in is Amandla, attending more than twice a week because it benefits the community and because "a friend asked him to participate". In 2013, he also reported only participating in Amandla (no other leisure activities) more

than twice a week (“to keep myself busy and healthy and because I love football very much”).

According to Amandla records, he achieved a 77% attendance rate through the end of 2014, and was also a participant in 2013.

Meli’s current view of the future is mostly positive. He strongly agrees that he has goals in his life and that his own actions will determine his future. He believes he has many future opportunities, stating he wants to become a successful soccer player through Amandla. In 2013, he was again mostly positive about his future but strongly disagreed that he would be able to survive on his own if he had to. However, he felt he had no future opportunities at all, and stated he wanted to be a soccer player by studying.

He reports no victimization in 2014 but in 2013 reported that a sibling had been assaulted and threatened with a weapon, that he, himself, had been robbed, and that the entire household had experience house robbery.

Meli disclosed in 2013 that he had stolen something from another person 2 or 3 times in the past year but disclosed no other serious or violent offending. In 2014, he did not disclose any history of offending.

Meli has no pro-gang attitudes in 2014 but in 2013 strongly agreed that some of his friends at school belonged to gangs and that his friends would not think less of him if he joined a gang, though he did not state that he was a gang member.

In 2014, Meli has not been in any physical fights and did not express any statements favourable to the use of violence (though he only disagreed, he did not strongly disagree, with such statements). In 2013, Meli had been in 4 or 5 fights in the past year and strongly agreed that carrying a gun makes people feel safe and agreed that it’s ok to hit someone who hits you first.

Meli’s mother says he is often considerate and obedient, sometimes helpful, but often does not obey rules. Further, she says he never has a hot temper, never fights with siblings, but often does get into trouble in the community. In 2013, he was always considerate, sometimes obedient, sometimes disobeyed rules, was often helpful around the house, never fought with siblings and never got into trouble in the community.

In 2014, they never fight about what he does when he’s not at home or when he comes home at night, nor about him having bad friends. In 2013, they sometimes fought about what he did when not at home, about what time he came home and having bad friends. His mother observed in 2013 that he was “trying harder not to lose his temper because of Amandla”.

His Violence Propensity Score was 48 in wave 2 (among the highest 4%) and dropped to 14 in wave 3, a 34 point decrease, largest among any current Amandla participant and 8th largest overall. The Deviant Peers subscale decreased from 22 in wave 2 to 8 in wave 3. The Pro-Gangs subscale

decreased from 4 in wave 2 to 0 in wave 3. However, the Pro-Violence subscale increased moderately from 2 in wave 2 to 6 in wave 3. And, the fighting subscale decreased from a score of 20 in wave 2 to 0 in wave 3.

I succeeded in tracking down Meli by phone in November 2015 and conducted a short follow-up interview, some 19 months after the wave 3 interviews. Meli is turning 20 years old in Nov. 2015 and is in grade 11. Next year, he hopes to write and pass matric at age 21, after failing 3 times during high school. He is now serious about passing matric and wanting to move out of Khayelitsha to the suburbs where people are more polite and there is less crime and violence. He still hopes to become a professional soccer player but will consider studying to become a lawyer if soccer doesn't work out, though he admits that he doesn't really like studying his books. Many of his friends are doing robbery, involved in gangs, carry knives and some of them, guns. Four of his friends are now in jail after being caught robbing people with weapons; he says he was attending church at the time but otherwise might have been with his friends and could now also be in jail. This served as a wake-up call for him and he has since withdrawn from all his deviant peer associations, no longer going out at night to shebeens. He attends church and Amandla (because he loves soccer and it still helps him to stay out of trouble). It's difficult as he still faces peer pressure and people calling him names in public and he yearns to have more of a social life; instead he spends evenings watching t.v. or reading books.

He admits that about 3 years ago he was forced to join a gang for protection when travelling to school across sections (invisible gang boundaries). He was also bullied into joining the gang at the school he attended. Now, these pressures have been reduced because his school principal called in taxi association members who threatened to beat any kids they found involved in gang activities. Some of his classmates have been killed in the gang fights and others are in jail, few of them are left in school. Between lectures at school, advice from church, and from Amandla, he has realized that his behaviours were wrong and dangerous and has found the courage to reject peer pressure. Although he did drink alcohol, he never tried any drugs like dagga or tik and this may have saved him. He no longer gets in any fights because the gangs are not active and he does not spend any time with his bad friends. He still believes he is a very talented soccer player but states that his Amandla team is not strong and the pro scouts that come to Amandla for trials are only looking for young talent (16 and under) so it's difficult for him to be scouted.

## **9.2 Case study – Lethu**

Lethu has been in the study for 3 years and turned 17 in September, 2014. He dropped out of school between waves 2 and 3 and is not working.

There are 5 people living at home, none of them are working in 2014 (the same in 2013), though someone does receive a grant (and did in 2013). They live in a permanent house and use flush toilets. In both wave 2/2013 and wave 3/2014, he reports they had electricity, a television, a refrigerator, and a cell phone. Both his parents are alive but he reports never spending time with either nor receiving emotional support from them in 2014, though they both sometimes provide support financially (neither provided any form of support in 2013). He says his grandmother knows him better than either of his parents. None of his family members have ever been to prison.

In 2014, Lethu reports that he has gone without needed medical treatment, income, electricity, and fuel for cooking/heating a few times in the past year, and gone without enough food to eat once or twice. In 2013, he had gone without income, electricity, and fuel for cooking/heating a few times.

In 2014, Lethu spends 16-20 hours each week meeting friends and 6-10 hours watching TV (and reports no other weekly activities). In 2013, he spent 1-5 hours each on homework, chores, meeting friends, sports activities (outside of Amandla), watching TV, playing video games, and using his cell phone.

He now reports that he goes out often at night but it varies too much to say how many nights per week and what time he usually returns. In 2013, he reported only going out 1 or 2 nights a week and coming home before 10pm. His caregivers hardly ever know where he goes and they often shout at him, sometimes lock him out of the house, hardly ever refuse to give him food, never beat him and now “don’t do or say anything when [he] disobeys them” [his words]. In 2013, his caregivers sometimes shouted at him, but never beat him or locked him out of the house and would make him clean the whole yard as punishment. They often checked his homework and attended school meetings in 2013, when he was still in school.

He has lived in the same neighbourhood his whole life and does not agree that he likes it (in 2014). He does not know if people in the neighbourhood are willing to help if one is in need or if they can be trusted, and does not have people he can talk to in the neighbourhood nor any role models, yet does report having many friends. In 2013, he did like the neighbourhood and did agree that people were willing to help but felt they could not be trusted and did not have anyone that he could talk to, nor any role models.

Lethu states that in 2013 and 2014 the only group social activity he participates in was Amandla once a week because he likes soccer (in 2013 he participated “to keep himself safe and busy”). According to Amandla records, his rate of attendance in 2014 was 54% and he was also a registered participant in 2012 and 2013.

He says his neighbourhood has lots of crime and fights most of the time and sometimes feels like a war zone, though he still feels very safe there and is not afraid of anything, in general. In 2013, he felt somewhat safe in his neighbourhood and was afraid of murder, fighting, and gangs, in general.

In 2014, he reports having 5 or more friends who use drugs, have dropped out of school, smoke cigarettes, and go out without their parents' permission and 3 or 4 who have been arrested, skip school, drink alcohol regularly, carry weapons, and have been involved in crime in the past year. He also reports 1 or 2 siblings who have bought and used drugs and strongly agrees that he does not mind people using drugs around him and knows someone who makes a living from crime. In 2013, he reported 3 or 4 friends who drank alcohol regularly but no other peer deviance.

Lethu now visits the sports grounds each week, the clinic monthly, and the shebeens almost every day, reporting drinking on a monthly basis and spending R100 on alcohol in the past 7 days, using dagga on a weekly basis, spending R30 on it in the past 7 days, and using tik on a monthly basis, spending R60 on it in the past week. In 2013, he was visiting the sports ground weekly, the church and library monthly, the clinic less than monthly, and never visited the shebeen. He did not report any substance use in 2013.

Lethu reports no history of violence in the home and feels very safe there in 2014 but in 2013, said that people in the family sometimes lost their temper with each other (though he also felt very safe in his home in 2013).

In the past year, he claims he has heard gunshots 13 times, seen someone beaten up 12 times, seen someone stabbed or shot 10 times, and been chased by a gang 3 times. In 2013, he heard gunshots 2 times in the previous year, had seen people beaten up 6 times, and stabbed or shot 3 times, and been chased by a gang 6 times.

In 2014, Lethu says he has failed more than one grade of school (and had failed only once in the 2013 report) and is fairly negative about his school experience, agreeing that he does not like school and thought it was boring and he didn't really belong at school, but he did usually finish his homework and tried hard. He further reported being hit at school once or twice, threatened 3-5 times, and injured with a weapon once or twice, in the 2014 report. In 2013, he reported a very positive attitude toward school, and had only been pushed or shoved once or twice in the previous year (no other reported abuse at school).

Lethu refuse to answer most of the questions about his view of the future in wave 3, believing his opportunities are very limited and he's not sure where he will be in the future as "he's not studying and doesn't care". In 2013, he was mostly positive about his future but strongly disagreed that he would be able to survive on his own, could decide if a risk was worth taking, and strongly disagreed

that it was ok if there are people who do not like him. At the time, he believed he had many opportunities and planned to study further.

He discloses some health concerns in 2014, stating that he agrees that he has too many problems to deal with right now and does not agree that he is healthy and in good shape. Whereas, in 2013 he reported that he had been getting scared and panicky more than usual, and again agreed that he had too many problems to deal with.

He reports that he was assaulted and that his grandparents were robbed in 2014 but no other history of victimization. He says after the incident that he tried to look for them to get revenge but didn't find them.

In 2014, Lethu strongly agrees that some of his school friends belong to a gang, and agrees that you have protection and are safer in a gang, that it's cool to be in a gang, that people think he's a gangster and admits that he does belong to a gang, "because I was threatened and I joined" [his words]. In 2013, he had no favourable attitudes toward gangs.

Lethu does disclose in 2014 that he has stolen from people 2 or 3 times and carried weapons 4 or 5 times, using a weapon once to injure another person because "he wanted to buy something", had hit people on purpose 4 or 5 times and used a weapon to injure someone 4 or 5 times because "he was protecting himself" and had been involved in a gang fight because "he was provoked". In 2013, he did not disclose any history of offending.

In 2014, Lethu has been in 2 or 3 physical fights and strongly agrees that it's ok to hit someone who hits you first, and agrees that sometimes a person doesn't have any choice but to fight, that he has threatened people he knows, that he gets into fights a little more than the average person, that people usually have a good reason for fighting, that friends think he is a hothead, and that he gets angry easily. In 2013, Lethu had also been in 2 or 3 fights in the past year and strongly agreed that if he walked away from a fight, he'd be a coward, that it's ok to hit someone who hits you first, and agreed that sometimes a person doesn't have any choice but to fight and that you've got to fight to show people you're not a wimp.

His Violence Propensity Score was 17.2 in wave 2 and jumped to 59 in wave 3, an increase of 41.8, 7<sup>th</sup> highest for any subject. The Deviant Peers subscale increased from 4.2 in wave 2 to 25 in wave 3. The Pro-Gangs subscale increased from 0 in wave 2 to 19 in wave 3. The Pro-Violence subscale increased moderately from 3 in wave 2 to 5 in wave 3. And, the fighting subscale remained steady at a score of 10.

Lethu's grandmother says he is seldom considerate or obedient and never helpful, almost always disobeys rules, often fights with siblings, seldom has a hot temper, but almost always gets into trouble in the community. In 2013, he was always obedient and helpful, sometimes considerate,

sometimes had a hot temper and fought with siblings, but never got into trouble in the community. In 2014, they often fight about what he does when he's not at home, when he comes home at night, and about having bad friends (and sometimes fought about each of these in 2013).

It was not possible to re-establish contact directly with Lethu in November 2015 but I did succeed in reaching his grandmother. She admitted that Lethu has developed a serious drug habit (probably tik): he has "eyes like fire", no longer stays at home and has stolen everything of value out of the house to sell for drug money (and his cell phone was no longer working). She sent him to 4 different schools (outside of Khayelitsha) and each time he failed. Lethu is now 18 and was due to appear in court on 9 Dec. for criminal charges (she does not know the details). She had once called the police to intervene in his behaviour and they never showed up at her house. Lethu did not register or participate in Amandla in 2015. His grandmother states that he loves football and she doesn't know why he doesn't attend anymore.

### 9.3 Discussion

Meli and Lethu were both semi-regular Amandla participants, as self-reported in wave 2/2013 and confirmed by Amandla attendance records in wave 3/2014 (with Meli attending at a 77% rate and Lethu at a 54% rate). Meli did manage to maintain the critically-theorized 75% rate over the course of 2014, while Lethu's attendance dropped over the course of the year. In fact, only 8.4% of all participants in this study and only 7% of all Amandla-2014-registered participants (across all age and gender groups<sup>49</sup>) maintained the 75% attendance rate over the course of 2014. In 2015, Meli maintained a 68% attendance rate at Amandla, in the night crime prevention league and believe that Amandla participation was still helping him stay out of trouble. Lethu did not register or attend Amandla at all in 2015.

Meli's violence potential has significantly decreased due to fewer deviant peer and gang associations and the absence of fighting. He also reportedly stopped drinking, visiting shebeens, and going out at night (and he re-affirmed all of this directly in the 2015 interview). The report from his mother suggests that he has issues with his temper that may have been attenuated through Amandla participation. Meli turned 20 in 2015 and is still in school (despite having a somewhat negative attitude toward school and a history of school failure) and may also be maturing and trying to develop himself (having also seen a sibling and close friends go to prison in the past). Thus, it is possible that his adolescent-limited offending has run its course. He says he attends Amandla to keep busy and healthy

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<sup>49</sup> Over the course of 2014, 65 of the 966 registered participants in under-15 boys, under-15 girls, and under-19 boys programmes maintained a 75% rate of attendance from the beginning of the year. 23% (216 participants) maintained a 50% or higher attendance rate over the same period.

and because he loves soccer (and hopes to become a professional soccer player). This narrative does suggest that Amandla may help to buffer Meli from greater violence potential and risk associations (and Meli confirmed this belief in 2015, along with the support of church and school authorities). However, it seems uncertain if Meli will achieve his soccer-career dreams or find another stable, pro-social career. As quickly as his violence-associations reduced from wave 2 to wave 3, they could increase if he ‘gives up’ on his soccer dream, does not succeed in his final year of secondary schooling, and experiences goal blockage.

And, Lethu would appear to have ‘given up’ over the course of 2014 (and seemingly descended into drug addiction, homelessness, and criminality by 2015). He dropped out of school at 16, has become involved with a gang, is regularly using alcohol and drugs (including tik), has used a weapon to injure people multiple times, and admits that he now doesn’t care about his future. Lethu also has a problem with his temper, according to his grandmother, often fighting with siblings in both wave 2 and wave 3, but now frequently gets into trouble in the community (never reported in wave 2). Despite all of this, Lethu remained a fairly regular Amandla participant in 2014. Does this mean that Lethu is ‘learning violence’ (or ‘teaching violence’) at Amandla, or that it may still offer him reprieve from greater risk of violence, or that it’s simply cool to play soccer at Amandla, regardless of one’s engagements in violence and criminality? Lethu states that he attends “to keep himself safe and busy”. However, it would seem that his potential drug addiction and severe anti-social behaviour have made his continued participation in Amandla in 2015 impossible.

In focus group discussions with Amandla participants, ‘keeping away from drugs, gangsterism, and the pull of the streets’ was the most common reason for participation (see focus group analysis, in appendix). However, participants could not articulate how Amandla participation protected them during the many out-of-school hours when they do not attend Amandla. Some reported that they just stay at home while others clearly remain with potential risk exposure. For Meli, even into early adulthood, it seems he stays at home and attends church to protect himself. If this perspective is accurate, it does suggest the importance of the ‘Safe Hub’ function of Amandla, offering some reprieve from violence and risk exposure, even for those who may be deeply involved in violence beyond the confines of Amandla (at least up to a certain point, beyond which violence and drug habits may become the only daily priorities). Lethu’s participation in Amandla (and that of others like him) suggests why Amandla effects are not more positive and pronounced, whether his ‘fall’ is any way attributable to Amandla or may have, alternatively, been ‘delayed’ somewhat by Amandla participation. It also suggests the ease with which such a programme could show iatrogenic effects if the ‘Melis’ become negatively influenced by the ‘Letus’. Fortunately, there is no empirical evidence to suggest an iatrogenic Amandla-effect on violence and the area-based crime data points to a possible crime

reduction trend, potentially attributable, in part, to Amandla. However, the persistent question remains: Is there a measurable and conclusive Amandla-effect? Unfortunately, the study design revisions and dosage data limitation, coupled with high rates of Amandla attrition do not allow for a definitive answer. More research would need to be conducted, ideally in a new replication site (with sufficient funding and high programme implementation and fidelity) with true baseline data, sufficient sample size and control/comparison group, and longitudinal data for at least 3-5 years with strong validity and reliability and limited study attrition.

## Chapter 10: Conclusions, limitations, and recommendations

### 10.1 Review of research questions

To conclude this dissertation, I begin by discussing each of the research questions and what conclusions have been reached. I then discuss the limitations of this study and finally offer recommendations, both for future research in the field of youth violence and for violence-intervention programming and evaluation in the South African context.

The first research question was: *What risk and protective factors predict violence potential? Can these be successfully measured?*

Longitudinal modelling of future violence, or violence-potential, is a messy business. Even highly-funded, long-term, developed-country studies have yielded results that sometimes contradict theory. For instance, in the latest re-testing of data from the seminal longitudinal youth violence studies in the U.S. through the Center for Disease Control's Expert Panel on Protective Factors for Youth Violence (Hall et al, 2012), the (theoretically) most consistent risk factor for youth violence, deviant peer associations, revealed significant effects in both the theorized and un-theorized direction. Subjects exhibiting high-risk peer associations were both more likely in some sites to engage in more violence at a later stage and less likely in other sites to engage in more violence. Meanwhile, the less-peer-deviance 'protective factor' also was associated with some higher future violence effects, net of other factors. Thus, successfully measuring violence potential is no easy task.

As the key violence-outcome measure, the Violence Propensity Score was developed with four sub-scales, a deviant/Criminal Associates sub-scale, a Positive Attitude toward Gang Associations sub-scale, a Positive Attitude toward the use of Instrumental Violence sub-scale, and a self-reported Physical Fighting sub-scale. Confirmatory Factor Analysis confirmed the presence of a 20-item 4-factor solution with both wave 2 and wave 3 data. The Violence Propensity Score also showed stability across waves with no mean score change and significant pairwise correlation across waves ( $r=.18$ ,  $p=.001$ ). The Violence Propensity Scores were highly correlated with (limited) self-reporting of violent offending, Substance Use/Abuse, and the Maternal Assessment of the Subject's Risky Behaviour in cross-sectional analyses. The wave 2 Violence Propensity Score was also correlated with subsequent Substance Use/abuse in wave 3 ( $r=.18$ ,  $p=.001$ ) and Victimization in wave 3 ( $r=.16$ ,  $p=.000$ ). Collectively, this evidences a potentially valid and reliable measure of violence-potential. Across the extant literature, there are very few youth violence risk (and risk change) assessment tools that have been developed (Funk et al, 1999; Grinberg, 2004; Walker, 2005; Yang et al, 2010; Fazel et

al, 2012) and none that have been tested using confirmatory factor analysis and pre-test/post-test measures.

Findings from the multivariate regression analyses and SEM conducted in this study revealed a correlation between the Violence Propensity Score measured in wave 2 (in particular, the Deviant/Criminal Associate component) and Substance Use/Abuse measured a year later, in wave 3. Substance Use/Abuse is then highly correlated with the contemporaneous reports of Violence Propensity Score Wave 3 and self-reported Serious/Violent Offending. In longitudinal analysis, Farrell et al (2005) found evidence that early aggression predicted a subsequent increase in drug use, but no evidence that drug use predicted later violence. In a nationally representative sample of over 9,000 15-26 year-old Americans, Reingle et al (2012) found that reported peer use of alcohol predicted both violence escalation and violence desistance. These studies further evidence the inconclusive nature of findings in the extant literature.

The Violence Propensity Score Wave 2 is, in turn, directly correlated with the family background constructs, Household Deprivation, Violent Home Environment, and low Parental Involvement, while correlated with the contemporaneous measure of Negative Attitude toward School. Thus, there is not a significant direct effect from Violence Propensity Score in wave 2 to Violence Propensity Score in wave 3; the effect is mediated through School Attitude and Substance Use/Abuse. In essence, high violence potential in one wave does not directly influence high violence potential in the next, the effect of that violence-risk on (simultaneous) school attachment (normative, institutional socialization) and subsequent alcohol/drug use does appear to contribute to greater violence potential in the future. Similarly, Reingle et al (2012) found that low parental involvement was a robust predictor of future violence, even after controlling for the mediating effects of subject behaviour. Social disorganisation (neighbourhood effects) did not predict future violence in Reingle et al's study (2012) but social learning, the influence of parents and peers, did influence trajectories of violence. Reingle et al (2012) also provide evidence for late-onset violence, contradicting the age-crime curve theory that most adolescence-limited offenders age out of violence by their mid-20's. Meanwhile, Stoddard et al (2012) found longitudinal evidence that family violence may have a delayed effect (on subject violence) that is only manifest once subjects engage in their own intimate relationships.

The findings of this study suggest the possibility that violence potential can be successfully measured in the South African context and appropriate interventions could be targeted to address parenting deficits, early deviant peer associations, the harms of substance use, and the benefits of maintaining a high attachment to schooling. There is still need for further research to substantiate the Violence Propensity Scorecard in other samples and in the prediction of violent outcomes and changes in violence-risk.

The second research question asked: *Can evidence of behavioural or attitudinal change with regard to violence potential be discerned over a 3-year period?*

The first challenge in answering this question is that the study effectively only ran for 2 years as the sample was largely redrawn in the second wave (and wave 1 data was of poor reliability). As there was stability in the mean scores of the Violence Propensity Scorecard in both waves, individual changes could, theoretically, be detected. But, with only two waves of data, there is the problem of prediction vs. correlation, or the lack of exogeneity. We saw the tendency for risk factors within the same wave, such as Negative School Attitude and the Violence Propensity Score, to be strongly correlated. A change score (in violence propensity) over wave 2 to wave 3 would necessarily incorporate data that is 'cross-sectionally related' to the predictor. With 3 waves of good data, it would have been possible to create change scores between waves 1 and 2 that could then be tested for prediction of independent wave 3 measures.

An exploration of Violence Propensity Score changes and School Attitude/Attachment risk and protective factors explored the possibility of a risk or protective factor as a marker for change. Findings from the data were inconclusive, both limited by only two waves of data, and an apparent regression-to-the-mean trend. While there is evidence of a pathway to higher violence potential through Negative School Attitude and the influence of Deviant Peers, as mediated by Substance Use, the evidence for behavioural change is less clear. Thus, I cannot conclude that any evidence of behavioural (or violence-risk potential) change has emerged in the 2 waves of analysed data (the quality of wave 1 data and the inadequacy of the sample precluded a 3-year analysis, a significant impediment to answering this question conclusively). As previously discussed, there are no comparable studies exploring measures of change in violence risk potential. This signals the complexity of risk assessment, of measurement stability, and of change analysis, while also suggesting the imperative for greater research in this field.

The third research question was: *Is there a measurable change in violence-potential/behaviour among Amandla participants compared with a control group with similar environmental characteristics and risk factors?*

Notwithstanding the previous discussion on the difficulty of evidencing behavioural (or attitudinal) change with only 2 waves of data (where a 3-wave analysis was initially intended), overall intervention effects on/correlations with the key violence-related outcome measures appear non-significant. However, given that the relationships between Amandla Participation and the Violence Propensity Score in both waves are negative (and statistically significant at the  $p < .05$  level), it is possible that greater Amandla participation/retention among panel study participants could have resulted in a significant Violence Propensity Score reduction-effect. Unfortunately, panel study

selection (set in wave 1, with resampling in wave 2) is rigid while intervention participation appears to be quite fluid and open to interpretation (while 66% of subjects self-reported Amandla participation in wave 3 at the time of the interviews, only 30% were confirmed by Amandla staff to be registered participants in 2014 and only 7% remained current Amandla participants at the program-critical 75%+ rate throughout 2014).

Thus, we have no empirical evidence to conclude that Amandla participation leads to a reduction in violence-potential, though it may help to buffer participants from violence-potential increases, through risk reduction (as Meli's case study highlights). On the other hand, there is also no evidence that Amandla participation yields a negative, iatrogenic effect on violence, which is a potential concern when participants with less violence potential are mixed with participants with high violence potential (or actual histories of offending), creating a scenario for 'learning violence'. As several prominent youth violence intervention studies have revealed iatrogenic effects (McCord, 1992; Dishion et al, 2001), a finding of no evidence of harmful effects on participants is, in essence, an important result (at least in the interim, before intervention effects can be more fully assessed). Further, among the few empirical studies of sport participation, Begg et al (1996) found that participation in non-team sports at age 15 was correlated with an increase in later delinquent behaviour for boys at age 18, casting doubt on the deterrence hypothesis that sports participation, in the absence of a deeper programme methodology, inherently builds character, channels aggression, and reduces violence and crime.

Further, Amandla participation does not appear to have an effect significantly greater than the most common alternative structured leisure activity among Khayelitsha male youth, participation in organized religion (of which, self-reported participation appears even less consistent than Amandla participation). At least one recent study from a developing country has found evidence that spirituality may influence delinquent behavior (Salas-Wright et al, 2013).

As mentioned in chapter 8, in age-group linear regressions using an alternative measure of Amandla attendance (wave 3 attendance rate times self-reported length of time attending Amandla), a potential intervention effect emerged with the youngest cohort (primarily 14-16 year-olds).<sup>50</sup> There are ample reasons why this measure is problematic for drawing inferences (it partially follows, chronologically, the outcome measures and percentage of attendance in one year cannot be attributed to a previous year without separate measurement) yet, it suggests the possibility that an effect could emerge over time with sustained Amandla participation from a younger age. Further longitudinal study would be needed to both substantiate this speculative effect and to ascertain if such effects are transient

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<sup>50</sup> The correlation between the Amandla wave 3 attendance x How Long have you participated and the Violence Scorecard wave 3 is  $r = -.215$ ,  $p = .030$  for  $n = 102$ . This represents a small-to-medium effect size according to Cohen (1998) guidelines.

(and disappear as these subjects age) or are the early signs of an enduring effect. Thus, at this stage, I cannot conclude that there is rigid evidence of any intervention effect or significant independent correlation in the longitudinal study of individual trajectories.

That said, area crime data does suggest the possibility that patterns of violence are changing within the Amandla-Ikhushi Khayelitsha project catchment areas compared with the rest of Khayelitsha police reporting area, further supporting the possibility (mentioned above) for a less violent future, particularly for the younger subjects. The evidence of crime reduction in an 800-meter square area around the Amandla project was statistically significant but not unique in comparison with all other quadrants of the reporting area. Deeper analysis of the dispersion of crime and, particularly, pockets of high crime increase revealed potential issues with the veracity and consistency of this GPS-tagged crime data that may render any results inconclusive. Again, further data and more rigid, multivariate and spatial analysis would be required to substantiate these early trends and such evidence could only support findings emerging from the simultaneous empirical study of programme effects on participants. There are too many factors influencing crime itself, reported crime (as a subset of all crimes committed and also subject to reporting error), and the accuracy and adequacy of police-generated GPS-tagged crime statistics to conclusively link reductions within a confined radius with Amandla programming. In summation, there is no evidence of measurable change due to intervention, though I do find relative stability in lower violence potential for a small number of frequent Amandla participants (but cannot conclude that this did not precede any Amandla participation).

The fourth and final research question asked: *If detected, are these "Amandla-effects" transient or sustained.* As significant effects were not detected, this question cannot be answered with current data. A limitation to the Amandla intervention dosage measure was the absence of externally-verified attendance data prior to the 3<sup>rd</sup> and final wave of the study. This meant that only self-reported measures of participation (and frequency of attendance, or intervention dosage) could be tested for effects on wave 3 outcomes. As was discussed earlier, there were sizable differences between self-reported Amandla participation and actual records. In fact, this issue (incorrect self-reported Amandla participation) was one of the drivers of the decision to overhaul the study sample from wave 1 to wave 2 (to increase the number of 'true Amandla participants' in the study).

While there is limited evidence of a group difference (not necessarily an effect) between regular Amandla participants and the rest of the study cohort, there is no evidence to link prior Amandla attendance to future violence-potential reduction, when controlling for other factors (including the prior level of violence potential). This would require several more years of study with accurate, verified dosage data. And, even then, it would be difficult to conclude that Amandla participants were not less violent to begin with (before participating in Amandla). To evidence behavioural change, we would

either need true baseline data, before any intervention, to establish risk levels independent of the experiment/intervention or, we would need multiple years of data, linked to intervention dosage, to establish different trajectories between intervention and control groups. Given the linkages between violence participation and age/developmental effects, i.e. adolescent-limited vs. career offending (Moffit, 1993), a longitudinal panel study of more than 3 years (or a very intricate accelerated panel design) would be required to conclusively answer questions around sustained or transient effects (provided that there are intervention effects, in the first place).

## **10.2 Limitations**

As was previously discussed, both the lack of verified intervention dosage (attendance) data over the full course of the study and the sampling revision after the first wave resulted in significant limitations. With only two waves of data, measurement of change was inconclusive and determination of sustained or transient effects, impossible. And, without exogenous intervention dosage data preceding outcome measurement, irrefutable evidence of cause (the intervention) and effect (reduced violence-potential) could not be found. Much of the extant literature on youth violence risk and attitudinal measures is further limited to only cross-sectional study.

Fieldwork, itself, both confronted and created a variety of limitations. The alleged falsified interviews, where large numbers of study participants from both wave 1 and wave 2 could not be verified as having ever existed the following year, imposed serious limitations on the sample and the findings. Fieldworker fraud is not without precedence in the South African field research literature (Finn & Ranchhod, 2013), although this embarrassing phenomenon is likely rarely disclosed by researchers. Even within interviews with verified study participants, there was potential for distorted responses, the lack of or uneven level of disclosure, and sufficient ‘opportunities’ for fieldworkers to cut corners. That said, most theorized constructs were successfully measured and confirmed over 2 waves in this study, along with evidence that wave 2 indicators contributed (measurably) to wave 3 outcomes. Thus, fraudulent fieldwork remained the exception and not the rule.

In addition to the limits of self-disclosure and the unknown accuracy thereof, there were definite limitations to what could be measured in this study and for how long (and how far back in time). Genetic and physiological factors such as resting heart rate and IQ have been found to relate to violence potential (Loeber & Hay, 1997) but were not feasible to measure in this study. Similarly, outcome measures, such as actual school results and externally-verified reports of aggression/violence, were limited to self-reports from the study participant and the one exogenous measure, the Maternal Caregiver Assessment. Ideally, a prospective study of violence, or violence potential, as an outcome, would incorporate additional measures of triangulation to pinpoint the actual onset, incidence,

intensity, duration, and desistance of violent behavior. While aggression, as a potential precursor for violent offending, could, theoretically, be observed at school or at Amandla, violent offending, illicit and covert by its very nature, cannot be observed. Adjudicated court records could be sought but, given the extraordinarily low levels of investigation and conviction in the Khayelitsha context (O'Regan et al, 2014), such records, even if possible to access, might offer little generalizability to the actual incidence of violent offending. Peer nominations have been used in other contexts (Loeber & Farrington, 1994), particularly with aggressive (not illegal) behavior but would undermine the trust and confidentiality that has allowed some study participants to disclose their violent behaviours, as it would necessarily require identification and assessment by third parties.

Beyond the aforementioned challenge to measure and verify intervention dosage over the entire course of the study, it was clear in the study design phase that it would be impossible to randomize treatment. Amandla has chosen a mass-participation approach predicated on somewhat targeted recruitment (in nearby high-risk neighbourhoods) but completely open and free enrolment. To begin turning would-be participants away in order to attempt randomization for study purposes would have both negatively affected Amandla's acceptance and support from the community, and also presented a risk of further damage to Amandla participation rates. Thus, without randomization, and with only a short period of study (after Amandla programming had already begun), it became necessary to measure as many theoretically important violence-risks as possible, to attempt to control for lurking variables and prior group differences. A more feasible approach might be to develop a natural experiment at a new intervention site by drawing the sample and baseline data before any Amandla recruitment or programming begins. While this would require a significant sample size, concentrated on the principle project catchment area, it would allow for a true random sampling with baseline measures that precede any (identifiable) external intervention. Thus, those self-selecting into the intervention (and randomly captured in the study sample) could be compared across the range of measures against those who have not self-selected into the intervention. Any group differences prior to or during the intervention (if detected) could then be controlled for.

Adherence to treatment was a very significant, and somewhat unexpected, limitation. I believed (before developing the study design) that intervention attendance and retention rates were high and that accurate records of attendance were kept and would be made available. Simply put, these were false assumptions. Intervention attendance and retention turned out to be very low, with the vast majority of participants (in the range of 90-95%) failing to meet programme targets of 75% attendance rates over the course of each 9-month programme cycle. Further, awareness of Amandla was so high that most study participants had heard of Amandla and a large majority self-reported (by wave 3) that they had participated at some point, suggesting the fluidity of crossover from control/comparison to treatment

and back again. Even if an intervention truly has a positive effect, it can be virtually impossible to detect this effect, or behavioural/attitudinal change, within such a shifting group.

Programme fidelity is a separate but related issue. In the case of Amandla, the programme theory was not based on prior evidence but developed ‘in the field’. During the course of the study, I also advised/assisted Amandla to define and develop this programme theory, partly informed by my own reviews of the literature and field experience in sport-for-development programming. Further, the life skills curriculum was not fully compiled and uniformly implemented before the end of 2012. And, at the Kagiso site, this curriculum was never fully implemented. In Khayelitsha, observation and discussion with staff and participants suggests that, while curriculum is now implemented, it is still being refined and standardized. Thus, programme theory and fidelity are clearly ‘works in progress’ and not uniform across time or sites.

This research employed a site-based approach to study and sample design which, largely, mirrored the site-based intervention programming and theorized ‘safe hub’ effect. This approach can be of great value to deeply probe localized effects and to, potentially, compare sites (which did not prove possible between Khayelitsha and Kagiso because the Kagiso intervention was never fully implemented and both the intervention and study were ended prematurely there). The potential for corroboration of programme effects with changes in localized crime data is one particularly interesting ‘real-world triangulation mechanism’ with the potential to become a game-changer (irrefutable evidence if panel study effects mirror changes in crime across the programme catchment radius) in the sport-for-development field which still lacks any solid empirical evidence of impact. Yet, a clear limitation of the contextualized, site-based approach is in the generalizability of findings. It is not really possible to generalize these findings beyond the 12-24 year-old male youth in this section (Site B, Khayelitsha), or even a sub-section thereof. And, only the multiple linear regression models could be population-weighted to generalise to the rough age ratios for the males in these particular wards. Re-weighting is not possible in SEM so those findings cannot, in the strictest sense, be generalized beyond the study sample. Future studies of site-based approaches could consider drawing a sample that is more closely balanced to the population demographics. Such an approach, if preserved over a longitudinal study, could allow SEM findings to be generalized, at least to the local population.

### **10.3 Recommendations**

Given that the time frame of the panel study was too short to see change and determine its permanence/transience (and dissociate those changes from development effects), it would be sensible to extend the period of study of the Khayelitsha cohort for several additional years/waves to further explore intervention effects, behavioural/attitudinal changes, and youth-to-adult-transitions. While

panel and intervention attrition may remain problematic, assessment waves could also be spread over a 2-year period, rather than annually. It would be advisable, in the interim, to design and implement an SMS or phone app system for establishing and maintaining some contact with study participants with the hope of reducing study attrition.<sup>51</sup>

The Violence Propensity Scorecard should be administered and tested in other youth violence/development intervention research, in order to substantiate confirmatory factor analysis results with separate samples, compare reliabilities, triangulation with violence-related behavioural measures and exogenous measures, and, with longitudinal data, predictive power on future violent outcomes. Such testing would, however, require that data is shared with the author and/or the results of testing published in the public domain. It is believed that such a tool could serve to strengthen the connection between research and practice within the domain of youth violence in South Africa. Dishion et al (2001, p.79) describes this process as “‘model building’... an iterative process in which the outcomes of intervention research inform the next stage of developmental research, confirming causal hypotheses, or proving them false, with quantitative data.”

Replication of this study should be considered for other proposed site-based youth violence interventions in South Africa, or beyond. As previously discussed, the sample selection and baseline data should, ideally, be captured before any intervention programming begins, in order to establish a natural experiment, where one randomly selected group later self-selects into intervention (if true randomization into treatment and control groups is not possible). Such an approach would require careful sampling to ensure saturation across the proposed intervention catchment area so that sufficient numbers of study participants would randomly select into intervention. Such a replication should also run for a longer time frame and possibly focus on a narrower age range, for instance following 12-18 year-old subjects over a 10-year period, capturing several waves of data on the transitions from adolescence to adulthood. Lastly, with such a site-based approach to research and intervention, it is possible to incorporate and control for the effects of alternative social development-interventions. Interventions such as parenting programmes, structured academic support, classroom interventions, and trauma counselling could be tested separately from, and in conjunction with, Amandla (or other structure leisure intervention) programming. Such an approach, particularly if situated in a highly violence-affected community, could provide a real-world laboratory for violence and development research and practice, incorporating ongoing learning and community participation.

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<sup>51</sup> The Safety Lab, a Cape Town-based test centre focused on safety and security has developed a phone app for violence incident reporting (see: <http://safetylab.co.za/isafety/>). A mechanism such as this could assist to maintain contact with panel study subjects, update contact details, and potentially generate new data on violence incidents, with geo-coding.

The final recommendation comes directly from analysis of focus group interviews I conducted with a range of Amandla participants during waves 1 and 2 (and was most recently echoed by follow-up with Meli). It is intended to highlight both the potential for soccer (and sport, in general) to engage at-risk youth in an altered developmental trajectory and to address some of the common myths and pitfalls that envelope the field of sport-for-development:

*Pro soccer still emerges as the most commonly identified future that Amandla participants aspire to. It did not appear that any focus group participants (besides one young woman already studying law at university) have developed clear ideas about where they want to be and how to get there. Among older (late teen to 20's) male participants, there was a strong split between high football aspirations, a couple individuals committed to community work, and those unemployed with no ideas about where they're going (or willingness to articulate such ideas to the interviewer). This suggests that as boys age (though many of these older Amandla participants did not attend Amandla as youth), their future orientations appear to dissolve as unemployment and limited qualifications/proficiencies take root. Too many young men still cling to the notion of becoming pro soccer players despite the fact that they have attended numerous professional soccer club trials and have not been selected (or have even been told directly by talent scouts that they are too short). While bringing scouts to Amandla or organizing friendly matches with pro clubs would certainly increase Amandla participation and excitement, the final outcome will not affect the vast majority of these unemployed, unskilled young men. Any such professional club partnerships should be matched with talks designed to revise some of the myths around pro soccer as a viable stand-alone career aspiration, while expanding an understanding of the wider career fields connected to sports (as referees, trainers, statisticians, physical therapists, accountants, etc.)*

*Across all of the focus groups (polling more than 200 participants), only a handful of these participants referenced other career aspirations (than pro soccer): lawyer, doctor, pilot, baker, Kentucky Fried Chicken franchise owner, radio presenter, journalist, judge, and business executive. While these ideas were encouraging, few of the holders of those aspirations had taken any steps to learn more about those careers and forge a path to their realization, despite many of these ideas coming from individuals in their mid or late teens. Career talks from Khayelitsha-bred (or, at least, local, African) professionals could make a difference. Further, it is unclear if any high school students have access to or make use of guidance counsellors.*

This final observation and recommendation brings us back to the core questions posed at the outset of this study: how can young South Africans “who live in adverse contexts develop moral lives;

what difference poor schooling, partial-parenting, a history of dehumanising racial subjugation and the normalisation of violence make to their lived morality; and how they retain their humanity in the midst of filthy environments, struggles for survival, the physiological effects of poverty, the absence of recreation and the widespread availability of alcohol and drugs” (Swartz & Scott, 2014, p.330).

This study has highlighted the measurable effects of both background factors and subject choices and attitudes, such as Attitude toward School, in the development of violence potential (or navigating a moral life, as Swartz and Scott refer to it). Despite this raft of challenges, many young South Africans do navigate through this terrain to avoid violent trajectories and live moral lives. While this study did not find conclusive empirical evidence that Amandla Edu-Football measurably affected these trajectories, the Safe Hub envisioned by the organisation may have affected crime patterns in the catchment area. And, for those committed participants, it represents an important place of safety, recreation, and the potential for pro-social development. To the extent that this space can be expanded, refined, replicated, and rigorously tested, it is possible that site-based youth violence intervention and research can make a difference.

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# WAVE 1 Questionnaire



## BASELINE STUDY

March 2012

Hello. My name is \_\_\_\_\_. I am part of a team doing research in Khayelitsha on a local violence prevention project in the area. The study is conducted on behalf of the International Committee of the Red Cross (ICRC). In total, we will interview approximately 400 young boys and men, from the ages of 12 years and older, who will be randomly selected from households in the area.

The questions will ask about the neighbourhood in which you live, and how you feel about living here; your home environment; experiences at school; exposure to violence and crime; knowledge of support structures; and the social activities that you participate in.

You may choose to participate, or refuse to participate in the study. All the information collected will be anonymous and kept completely confidential. No-one but myself and my office will be able to see any of the answers you give me. If you agree to participate in the study, you may stop the interview at any time should you feel uncomfortable with any of the questions being asked.

Should you have any further questions on the study that I cannot answer, please do not hesitate to contact my supervisor, \_\_\_\_\_ (name) on \_\_\_\_\_ (mobile), or Lezanne Leoschut, the supervisor responsible for the fieldwork, on (021) 447 1818.

Do you have any questions? YES  NO

Do you agree to participate in the study? YES  NO

Signed: (name) \_\_\_\_\_ (date) \_\_\_\_\_

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For children UNDER 16 years of age only – complete IN ADDITION TO the above

## CAREGIVER CONSENT

Should you consent to allow your child or the child in your care, to participate in the study, please sign and date the form below.

I, (name) \_\_\_\_\_ consent to allow my child (name) \_\_\_\_\_ to

participate in this baseline study. I understand that my child will be allowed to stop the process at any stage, or may, himself, refuse to participate in the study.

Signed \_\_\_\_\_ (date) \_\_\_\_\_

## HOUSEHOLD SELECTION DATA

<b>Province</b>	1 = Gauteng 2 = Western Cape	
<b>Name of city/community</b>	1 = Khayelitsha 2 = Kagiso 3 = Mannenberg/Lavis	
<b>Area/zone/section name</b>		
<b>Household No. (and street name if available)</b>		
<b>Contact name / number</b>		
<b>Fieldworker name/ID</b>		

## INTERVIEWER VISITS

	1	2	3
DATE	_____	_____	_____
INTERVIEWER'S NAME	_____	_____	_____
*RESULT	_____	_____	_____
NEXT VISIT: DATE	_____	_____	
TIME	_____	_____	
1 = Completed 2 = No suitable respondent at home 3 = No suitable respondent lives in household 4 = Entire household absent for extended period of time 5 = Postponed 6 = Refused 7 = Dwelling not found 8 = Incomplete			

SUPERVISOR	QUALITY CONTROLLER	CAPTURED BY
NAME _____	NAME _____	NAME _____
DATE _____	DATE _____	_____

<b>SECTION 1: DEMOGRAPHICS</b>			
<b>INTERVIEWER TO READ OUT: I'm going to start by asking you a few simple questions about yourself.</b>			
1.1	Race (DO NOT ASK)	1 = White 3 = Indian/Asian	2 = Black 4 = Coloured
1.2	Gender (DO NOT ASK)	1 = Male 2 = Female	
1.3	How old were you at your LAST birthday?		Years
1.4	Please tell me when your birthday is?	dd/mm/yyyy	
1.5	Do you have any biological children?	1 = Yes 2 = No → <b>SKIP TO 1.6</b>	
1.5.1	If YES, how old were you when you had this child (or the first child, if more than one)?		Years
1.5.2	If YES, does this child (or any of these children) live with you most of the time?	1 = Yes 2 = No	
1.6	What is your highest level of school education <b>completed</b> thus far?	1 = Grade 1-11 → <b>SKIP TO 1.8</b> 2 = Grade 12 → <b>SKIP TO 1.7</b> 99 = Never attended school → <b>SKIP TO 1.9</b>	
1.7	What is the highest post-school qualification you have completed (tertiary education)?	1 = Undergraduate degree (Bachelor) 2 = Postgraduate degree (Honours/Masters/PhD) 3 = Diploma 4 = Certificate 5 = Still busy studying 99 = Other (specify)	
1.8	Are you currently attending classes/courses of any kind?	1 = Yes 2 = No	
1.9	(In addition to your schooling) Have you received any other form of skills training?	1 = Yes 2 = No → <b>SKIP TO 1.10</b>	
1.9.1	If YES, then what was the nature of this training?	1 = Computer literacy 2 = Computer programming 3 = Book keeping 4 = Trade skills (e.g. carpentry, panel work) 5 = Nursing/home-based care 99 = Other (specify)	
1.10	What is your employment status?	1 = Unemployed, seeking work 2 = Unemployed, NOT seeking work, do NOT WANT to work 3 = Temporary or seasonal labour (e.g. fishermen) 4 = Part-time employed 5 = Full-time employed 6 = Self employed 99 = Other (specify)	
1.11	Do you have a physical disability that affects your everyday activities?	1 = Yes 2 = No	
<b>SECTION 2: HOME ENVIRONMENT</b>			
<b>INTERVIEWER TO READ OUT: Next I'd like to ask you some questions about your family and home environment.</b>			
2.1	When you were growing up, with whom did you live most of the time?  (PROMPT- ONLY ONE ANSWER)	1 = Both parents 2 = Mother only 3 = Father only 4 = Older brother or sister 5 = Paternal Grandparents	

		6 = Maternal Grandparents 7 = Other relatives 8 = Non relatives 9 = No one 10 = Younger siblings 99 = Other (specify)	
2.2	How many people live in your household normally (including yourself)?		No.
2.3	How many people in this household have permanent work or a stable source of income (excluding government grants)?		No.
2.4	Housing type	1 = Free standing house/townhouse/duplex 2 = Flat, multiple rooms 3 = Flat, single room 4 = Hostel 5 = Backyard shack 6 = Squat/shack/other informal room not in backyard 7 = RDP / low income housing 8 = Other formal housing	
2.5	What kind of toilet does this house use?	1 = None (bush, buckets, sand dunes, etc.) 2 = Flush toilets 3 = Single household pit latrine / ventilated pit latrine (VIPS / portable / chemical toilet 4 = Communal Pit latrines / ventilated pit latrines (VIPS / portable / chemical toilets	
2.6	Which of the following do you or your household have at home? (Please select as many as necessary)	1 = Television 2 = Electricity 3 = Motor car (automobile) 4 = Cell phone 5 = Refrigerator	
2.7	MAIN home language  (only ONE answer)	1 = English 2 = Afrikaans 3 = Xhosa 4 = Zulu 99 = Other (specify)	
2.8	Does anyone in this household receive any form of government grant (e.g. pension, child care, or disability grant etc.)?	1 = Yes 2 = No	
2.9	Is your birth mother alive?	1 = Yes 2 = No	
2.10	Is your birth father alive?	1 = Yes 2 = No	
<b>INTERVIEWER TO READ OUT: HAVE YOU</b>			
		<b>In your lifetime</b> 1 = Yes, all of my life 2 = Yes, some of my life 3 = No, never	<b>In the past 12 months</b> 1 = Often 2 = Sometimes 3 = Never
	Spent a lot of time with your father?	2.11	2.11.1
	Spent a lot of time with your mother?	2.12	2.12.1
	Received financial support from your mother?	2.13	2.13.1
	Received financial support from your father?	2.14	2.14.1

Received emotional support from your mother?		2.15	2.15.1
Received emotional support from your father?		2.16	2.16.1
2.17	Which parent do you think knows the most about you?	1 = Both mother and father 2 = Mother only 3 = Father only 4 = No-one 5 = Other primary caregiver/s	

**INTERVIEWER TO READ OUT: Are either of your parents or any primary caregiver at home when...**

	<b>When...</b>	<b>If YES, then Who?</b>
	1 = Yes, always 2 = Yes, sometimes 3 = No, never → <b>SKIP TO NEXT QUESTION</b>	1 = Both mother and father 2 = Mother Only 3 = Father Only 4 = Primary Caregiver 5 = No-one 99= Other (Who?)
You wake up in the mornings	2.18	2.18.1
You come home from school in the afternoons?	2.19	2.19.1
You have supper at night?	2.20	2.20.1
You go to bed at night?	2.21	2.21.1

**ENUMERATORS FOR THE NEXT QUESTION, YOU CAN SELECT A MAXIMUM OF THREE ANSWERS**

2.22	When you need money for clothes, shoes and such, where do you get this money from?  (MULTIPLE RESPONSE – MAX 3 ANSWERS)	1 = Employment 2 = Both parents 3 = Partner 4 = Primary Caregiver 5 = No-one 6 = Mother only 7 = Father only 8 = Older brother/sister 9 = Grandparent/s 10 = Step-parent/s 11 = Other relatives 12 = Non-relatives 13 = Friends 14 = Hand-outs/begging 15 = Donations 16 = Allowances 17 = Criminal activity 99 = Other (please specify)	
2.23	Has any member of your family ever been in prison?	1 = Yes 2 = No → <b>SKIP TO 2.24</b>	
2.23.1	If YES, is this member currently in prison serving a sentence?	1 = Yes 2 = No	
2.23.2	Who is/was this (these) person(s)?  (MULTIPLE RESPONSE POSSIBLE)	1 = Both parents 2 = Mother only 3 = Father only 4 = Partner 5 = Older brother or sister 6 = Grandparents(s) 7 = Other relatives	

		99 = Other (specify)	
2.23.3	At what age did they first go to prison?	1 = 18 years or younger 2 = 19 to 25 years 3 = 26 to 35 years 4 = 36 to 45 years 5 = 46 to 55 years 6 = Older than 55 years	

<b>INTERVIEWER TO READ OUT: In the last 12 months, how often have you or your household.... (circle the appropriate response)</b>						
		<b>Never</b>	<b>Once or Twice</b>	<b>A few times</b>	<b>Many times</b>	<b>Always</b>
2.24	Gone without enough food to eat?	0	1	2	3	4
2.25	Gone without medicine or medical treatment that you needed?	0	1	2	3	4
2.26	Gone without a cash income?	0	1	2	3	4
2.27	Gone without enough clean water to drink or cook with?	0	1	2	3	4
2.28	Gone without shelter?	0	1	2	3	4
2.29	Gone without electricity in your home?	0	1	2	3	4
2.30	Gone without enough fuel (electricity, propane, paraffin, wood, coal) to heat your home or cook with?	0	1	2	3	4

<b>INTERVIEWER TO READ OUT: How often do you...</b>					
		<b>Never</b>	<b>Sometimes</b>	<b>Many Times</b>	
2.31	Do household chores such as cooking, cleaning and fetching water?	0	1	2	
2.32	Care for younger children in your household or area?	0	1	2	
2.33	Go shopping or run errands for people in your community?	0	1	2	
2.34	Do unpaid housework for people in your community?	0	1	2	
2.35	Make or fix things for people living in your community?	0	1	2	
2.36	Prepare or give food to people in the area or community?	0	1	2	
2.37	Care for sick relatives in your household or area?	0	1	2	

<b>INTERVIEWER TO READ OUT: During the week, and during term time, how much time do you spend (WHEN NOT AT SCHOOL (if a student) OR WORK (if out of school and working) engaging in the following activities? INDICATE HOURS SPENT PER WEEK.</b>		
	1 = 1-5 hours 2 = 6-10 hours 3 = 11-15 hours 4 = 16-20 hours 5 = 21 or more hours	
Doing homework (school-related)	2.38	
Doing Household chores (e.g. cooking, cleaning, fetching water)	2.39	
Participating in Amandla Edu-Football activities	2.40	
Meeting friends (outside of Amandla Edu-Football)	2.41	
Sports activities (outside of Amandla Edu-Football)	2.42	
Selling or trading goods at the market (after school or other work)	2.43	

Other (please specify)		2.44	
<b>INTERVIEWER TO READ OUT: Now, I would like to ask you some questions about your relationship and interactions with your parents/caregivers...</b>			
2.45	On average, how many nights a week do you go out?	1 = 1 or 2 nights 2 = 3 or 4 nights 3 = 5 to 7 nights 4 = Varies too much to say	
2.46	What time do you usually return home after you've been out at night?	1 = Between 6 and 8 pm 2 = After 8 but before 10 pm 3 = Between 10 and 12 4 = After 12 pm 5 = Varies too much to say	
2.47	Do you feel that the rules in your family are clear?	1 = Yes, always 2 = Yes, only sometimes 3 = No, never	
2.48	Do you need permission from any of your parents/caregivers when you go out?	1 = Yes, always 2 = Yes, only sometimes 3 = No, never	
2.49	Do any of your parents/caregivers know where you are when you are not at home?	1 = Yes, always 2 = Yes, only sometimes 3 = No, never	
2.50	Do any of your parents/caregivers know what you spend your money on?	1 = Yes, always 2 = Yes, only sometimes 3 = No, never	
2.51	How often are you in trouble with any of your parents/ caregivers?	1 = Often 2 = Sometimes 3 = Hardly ever 4 = Never	
2.52	How often do your parents/caregivers ground you or stop you going out?	1 = Often 2 = Sometimes 3 = Hardly ever  <b>4 = Never</b>	
2.53	How often do your parents/caregivers stop your pocket money?	1 = Often 2 = Sometimes 3 = Hardly ever 4 = Never 5 = Don't receive any pocket money	
2.54	How often do any of your parents/caregivers check or ask whether you have done your homework?	1 = Often 2 = Sometimes 3 = Hardly ever 4 = Never	
2.55	How often do any of your parents/caregivers attend school meetings?	1 = Often 2 = Sometimes 3 = Hardly ever 4 = Never	
2.56	How often do any of your parents/caregivers shout at you?  (Enumerators please note the change in response options)	1 = All of the time 2 = Most of the time 3 = Sometimes 4 = Never	
2.57	How often do any of your parents/caregivers hit, slap, cane, punch, beat, or in any other way, physically hurt you?	1 = All of the time 2 = Most of the time 3 = Sometimes 4 = Never	

2.58	How often do any of your parents/caregivers lock you into or out of the house?	1 = All of the time 2 = Most of the time 3 = Sometimes 4 = Never	
2.59	How often do any of your parents/caregivers refuse to give you food (when there is food in the house)?	1 = All of the time 2 = Most of the time 3 = Sometimes 4 = Never	
2.60	How often do your parents/caregivers punish you when you do not obey their rules or instructions?	1 = All of the time 2 = Most of the time 3 = Sometimes 4 = Never	
2.61	What do they do when you disobey them?  OPEN-ENDED RESPONSE		

### SECTION 3: NEIGHBOURHOOD

**INTERVIEWER TO READ OUT: Next I'd like to ask you some questions about your neighbourhood, and how you feel about living here. (By neighbourhood, I mean the area in which you live). Please tell me if you agree or disagree with the following statements.**

3.1	How long have you lived in this neighbourhood?		Years
3.2	I like my neighbourhood	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
3.3	Most people in my neighbourhood are willing to help if you need it	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
3.4	Most people in my neighbourhood can be trusted	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
3.5	There are people in my neighbourhood that I can talk to about things that are important to me	1 = Agree 2 = Disagree → <b>SKIP TO 3.6</b>	
3.5.1	If AGREE, then who are these people (what organisation are they from)?  (MULTIPLE RESPONSE SET – MAX 3 ANSWERS)	1 = Police Officer 2 = NGO/volunteer group member 3 = School staff or/ educator 4 = Childline/safeline member 5 = Street committee 6 = Social worker 7 = Family members 8 = Church or mosque 9 = Amandla Edu-Football staff 99 = Other (please specify)	
3.6	There are people in my neighbourhood or family who I look up to? (role-models)	1 = Agree 2 = Disagree → <b>SKIP TO 3.7</b>	
3.6.1	If AGREE, then who are these individuals?  (MULTIPLE RESPONSE SET – MAX 3 ANSWERS)	1 = Police officer 2 = NGO/volunteer group member 3 = School staff/ educator 4 = Childline/safeline member 5 = Street committee 6 = Social worker	

		7 = Family members 8 = Church or other religious official 9 = Amandla Edu-Football staff 10 = Sporting personality 99 = Other (please specify)	
3.7	I have many friends in my neighbourhood.	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
3.8	Have you changed homes in the past 12 months?	1 = Yes 2 = No → <b>SKIP TO 3.9</b>	
3.8.1	If YES, please tell me how many times you have moved homes in the past 12 months.		Times
<b>INTERVIEWER TO READ OUT: Please tell me if any of the following describe the area in which you live...</b>			
3.9	Lots of crime?	1 = All of the time 2 = Most of the time 3 = Sometimes 4 = Never	
3.10	Lots of fights?	1 = All of the time 2 = Most of the time 3 = Sometimes 4 = Never	
3.11	Sometimes living in my neighbourhood is like being in a war zone	1 = All of the time 2 = Most of the time 3 = Sometimes 4 = Never	
3.12	Generally, how safe do you feel in your neighbourhood?	1 = Very safe → <b>SKIP TO 3.13</b> 2 = Somewhat safe → <b>SKIP TO 3.13</b> 3 = Somewhat unsafe 4 = Very unsafe	
3.12.1	IF SOMEWHAT UNSAFE OR VERY UNSAFE, why do you say this?  MULTIPLE RESPONSE - RANK TOP 3 ANSWERS	1 = Have been a victim of crime in the past and scared of a repeat 2 = Crime is common in this area 3 = There are always/often bad, dangerous people in this area 4 = I feel alone/isolated 5 = There is so much crime reported in the news that I am scared of it happening to me 99 = Other (please specify)	
3.13	Generally, at home, school, or anywhere else, what are the things that make you most scared?  MULTIPLE RESPONSE – RANK TOP 3 ANSWERS	1 = Murder 2 = Rape/sexual assault 3 = Fighting 4 = Girlfriend falling pregnant/impregnating someone 5 = Theft/mugging 6 = Verbal abuse/being teased 7 = Guns 8 = Getting HIV/AIDS 9 = Gangs (gang) 10 = Nothing 99 = Other (please specify)	
<b>INTERVIEWER TO READ OUT: Next, I'd like to ask you a few questions on how easy drugs are to come by in your neighbourhood. Please tell me whether it would be hard or easy for you to access...</b>			
		<b>IN YOUR NEIGHBOURHOOD</b>	<b>AT SCHOOL</b>
		1 = Easy 2 = Hard	1 = Easy 2 = Hard
	Beer, wine or hard liquor (alcohol)	3.14	3.14.1

Marijuana or dagga	3.15	3.15.1	
Crack cocaine or ecstasy	3.16	3.16.1	
Tik	3.17	3.17.1	
Nyaope	3.18	3.18.1	
A firearm	3.19	3.19.1	
A knife or any other weapon	3.20	3.20.1	
<b>INTERVIEWER TO READ OUT: Now, I'd like to ask you a few questions about people you may know who may or may not be involved in any illicit activities. Without mentioning any names...</b>			
3.21	Do you know where you can buy any drugs at your school or in the community?	1 = Yes 2 = No	
3.22	Has anyone living in your neighbourhood ever been drunk or high in your presence?	1 = Every day 2 = Often 3 = Once or twice 4 = Never	
3.23	Have any of your friends bought drugs in the past year?	1 = Every day 2 = Often 3 = Once or twice 4 = Never	
3.24	Have any of your siblings (living in your household) bought drugs in the past year?	1 = Every day 2 = Often 3 = Once or twice 4 = Never	
3.25	Has anyone, in the past year, tried to sell or give you any drugs?	1 = Every day 2 = Often 3 = Once or twice 4 = Never	
3.26	I do not want to know any details but do any of your friends regularly use or sell drugs?  Interviewers please note change in response options!!	1 = Five or more friends 2 = Three to four friends 3 = One or two friends 4 = No, none of my friends	
3.27	I do not want to know any details but do any of your siblings (living in your household) regularly use or sell drugs?	1 = Five or more siblings 2 = Three to four siblings 3 = One or two siblings 4 = No, none of my siblings	
3.28	I do not want to know any details but do you know anyone else in your community who regularly uses or sells drugs?	1 = Five or more people 2 = Three to four people 3 = One or two people 4 = No, none of the people I know	
<b>INTERVIEWER TO READ OUT: I don't want to know any names, but do you personally know people who live in your neighbourhood who...</b>			
3.29	Do any other things that could get them into trouble with the police, such as stealing, selling stolen goods, mugging or assaulting others?	1 = Five or more people 2 = Three to four people 3 = One or two people 4 = No, none of the people I know	
3.30	Make a living from crime?	1 = Yes 2 = No → <b>SKIP TO 3.31</b>	
3.30.1	If YES, what type of crime does this person do (MOST, if	1 = Theft	

	more than one)?  ONE ANSWER ONLY	2 = Robbery 3 = Assault 4 = Housebreaking 5 = Vehicular crimes (including hijacking) 6 = Drug-related crimes 99 = Other (specify)	
3.31	Do you personally know anyone living in your area who is or has been in jail?	1 = Yes 2 = No → <b>SKIP TO 3.32</b>	
3.31.1	If YES, is this person(s) older than 22 years?	1 = Yes 2 = No	
3.32	Have any of your friends ever committed any crime such as stealing, selling stolen goods, mugging or assaulting others?	1 = Five or more friends 2 = Three to four friends 3 = One or two friends 4 = No, none of my friends → <b>SKIP TO 3.33</b>	
3.32.1	Have any of your friends ever committed any crime such as stealing, selling stolen goods, mugging or assaulting others in the past 12 months?	1 = Yes 2 = No	

**INTERVIEWER TO READ OUT: Do you make use of any of the following facilities in your neighbourhood?**

	In your neighbourhood	If YES, how often do you use this facility?	
	1 = Yes 2 = No	1 = Daily 2 = Weekly 3 = Monthly 4 = Less than monthly	
Sport grounds?	3.33	3.33.1	
Community hall?	3.34	3.34.1	
Shops?	3.35	3.35.1	
Mosque/ church/ other religious facility?	3.36	3.36.1	
Library?	3.37	3.37.1	
Training college/ facility?	3.38	3.38.1	
Any other support services such as welfare facilities, or family support?	3.39	3.39.1	
Health centre/ clinic?	3.40	3.40.1	
Telecentre or community centre?	3.41	3.41.1	
Shebeens/bars/pubs?	3.42	3.42.1	
Other (specify)	3.43	3.43.1	

**SECTION 4: EXPOSURE TO VIOLENCE**

**INTERVIEWER TO READ OUT: Now I'd like to ask you about violence you may have been exposed to in your home. Please tell me whether you agree or disagree with the following statements pertaining to your relationships with other family members.**

	In your lifetime?	In the past 12 months?
	1 = Not at all 2 = sometimes 3 = Yes often	1 = Not at all 2 = Sometimes

			3 = All the Time
People in my family look out for one another	4.1		4.1.1
People in my family often lose their temper with each other	4.2		4.2.1
People in my family argue a lot	4.3		4.3.1
Arguments in our household sometimes lead to violence	4.4		4.4.1
Fights and arguments in our household are sometimes influenced by the use of alcohol or drugs	4.5		4.5.1
4.6	How safe do you feel when you are in your home?	1 = Very safe → <b>SKIP TO 4.7</b> 2 = Somewhat safe → <b>SKIP TO 4.7</b> 3 = Somewhat unsafe 4 = Very unsafe	
4.6.1	If SOMEWHAT UNSAFE OR VERY UNSAFE, then ask why they feel unsafe?  (MULTIPLE RESPONSES)	1 = Scared of criminals 2 = Scared of parents 3 = Scared of being alone 99 = Other (specify)	

**INTERVIEWER TO READ OUT: Please tell me how often you have seen or heard any of the following in your neighbourhood... CIRCLE THE CORRECT RESPONSE!**

		Never in My life	Once or Twice in My Life	A few times In my life	Many Times in my life	Number of times in the past 12 months?  WRITE DOWN NUMBER
4.7	I have heard guns being shot (while in my home or in my neighbourhood)	1	2	3	4	4.7.1
4.8	I have seen somebody arrested	1	2	3	4	4.8.1
4.9	I have seen drug deals	1	2	3	4	4.9.1
4.10	I have seen someone being beaten up	1	2	3	4	4.10.1
4.11	I have seen somebody being stabbed or shot	1	2	3	4	4.11.1
4.12	I have seen someone pull a gun or knife on another person	1	2	3	4	4.12.1
4.13	I have seen gangs in my neighbourhood	1	2	3	4	4.13.1
4.14	I have been chased by a gang	1	2	3	4	4.14.1

**SECTION 5: PROFILE OF SUBSTANCE USAGE**

**INTERVIEWER TO READ OUT: The next several questions concern alcohol and/or drugs that you may have consumed. Please answer the questions as honestly as possible and remember that everything you tell me is confidential.**

Have you ever...  <i>(If YES, then ask have you done this in the past 12, months AND how often have you</i>		If YES, have you used this in the past 12 months?	If YES, how often in the last 12 months, have you used...	In the past 7 days, how much money did you spend on.... (if used
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<i>done this)</i>	1 = Yes 2 = NO → <b>SKIP TO NEXT SUBSTANCE</b>	1 = Yes 2 = No → <b>SKIP TO NEXT SUBSTANCE</b>	1 = once/twice 2 = monthly 3 = weekly 4 = daily	in the last week) <i>Answer in Rands</i>
Used alcohol	5.1	5.1.1	5.1.2	5.1.3
Used cocaine, including powder and crack	5.2	5.2.1	5.2.2	5.2.3
Used marijuana / dagga	5.3	5.3.1	5.3.2	5.3.3
Sniffed glue, breathed the contents of aerosol spray cans, or inhaled paints, sprays or benzyn to get high?	5.4	5.4.1	5.4.2	5.4.3
Used mandrax ("white pipes")	5.5	5.5.1	5.5.2	5.5.3
Used heroin	5.6	5.6.1	5.6.2	5.6.3
Used tik	5.7	5.7.1	5.7.2	5.7.3
Any other drugs? Eg. Nyaope	5.8	5.8.1	5.8.2	5.8.3

**If the respondent said NO to questions 5.1-5.8, then skip to SECTION 6! If YES to ANY of Q5.1-5.8 then ask...**

5.9	Has your use of these substances ever made you do something that could be considered wrong or against the law?	1 = No, never 2 = Yes, in the past 12 months 3 = Yes, but not in the past 12 months	
5.10	Have you ever used a firearm while under the influence of any of these substances?	1 = No, never 2 = Yes, in the past 12 months 3 = Yes, but not in the past 12 months	
5.11	Have you ever been involved in a physical fight while under the influence of these substances?	1 = No, never 2 = Yes, in the past 12 months 3 = Yes, but not in the past 12 months	
5.12	Has a friend, or relative, or anyone else, EVER expressed concern about your use of these substances?	1 = No, never 2 = Yes, in the past 12 months 3 = Yes, but not in the past 12 months	
5.13	Have you EVER tried and failed to control, cut down, or stop using any of these substances?	1 = No, never 2 = Yes, in the past 12 months 3 = Yes, but not in the past 12 months	

## SECTION 6: EXPERIENCES IN SCHOOL

**(IMPORTANT: ONLY ASK IF RESPONDENT HAS EVER ATTENDED SCHOOL)**

**INTERVIEWER TO READ OUT: Next, I'd like to ask you some questions about your experiences at school.**

6.1	How do (did) you normally travel to school?	1 = By foot (walk) 2 = Public transport (bus, taxi or train) 3 = Private vehicle 4 = Hitch hike 5 = Bicycle 6 = School bus 99 = Other (please specify)	
6.2	How long does (did) it normally take you to get to school?	1 = 30 minutes or less 2 = More than 30 minutes, less than 1 hour 3 = 1-2 hours	

		4 = More than 2 hours	
6.3	In the last year (you were at school), how many times have you been absent from school?	1 = Never 2 = 1-3 times 3 = 4-9 times 4 = 10 or more times	
6.4	Have you ever failed a grade?	1 = Yes, only once 2 = Yes, more than once 3 = No, never	

<b>INTERVIEWER TO READ OUT: Please tell me whether you agree or disagree with the following statements.</b>							
		Strongly Agree	Agree	Disagree	Strongly Disagree		
6.5	You like(d) school a lot	4	3	2	1		
6.6	School is (was) boring	4	3	2	1		
6.7	You usually finish(ed) your homework	4	3	2	1		
6.8	You don't (didn't) really belong at school	4	3	2	1		
6.9	Homework is (was) a waste of time	4	3	2	1		
6.10	You try (tried) really hard at school	4	3	2	1		
6.11	You do (did) poorly at school	4	3	2	1		
6.12	Getting good grades is (was) very important to you	4	3	2	1		
6.13	If you could choose on your own between studying to get a good grade on a test or going out with your friends, would (did) you...	1 = Definitely go out with friends 2 = Probably go out with friends 3 = Probably study 4 = Definitely study					

<b>INTERVIEWER TO READ OUT: Next, I'd like to ask you about experiences you may or may not have had while at school.</b>			
6.14	Do (did) you ever fear travelling to or from school?	1 = Yes 2 = No → <b>SKIP TO 6.15</b>	
6.14.1	If YES, during the past 30 days, how many days did you not go to school because you felt you would not be safe travelling to school?	1 = 0 days 2 = 1 day 3 = 2 or 3 days 4 = 4 or 5 days 5 = 6 or more days 6 = Not currently attending school	

<b>INTERVIEWER TO READ OUT: Please tell me how many times, in the last year of school, you had....</b>							
		Never	1-2 times	3-5 times	6-9 times	10-19 times	20 or more times
6.15	Been hit by someone at school	1	2	3	4	5	6
6.16	Been pushed or shoved by someone at school	1	2	3	4	5	6
6.17	Been yelled at or called mean names by someone at school	1	2	3	4	5	6
6.18	Someone at school threatened to hit or physically harm you	1	2	3	4	5	6
6.19	Been injured by someone with a weapon at school	1	2	3	4	5	6
6.20	Been forced to do something that you felt was wrong and did not want to do	1	2	3	4	5	6
6.21	Had someone say things about you that	1	2	3	4	5	6

	made other students laugh							
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**SECTION 7: VICTIMISATION**

**INTERVIEWER TO READ OUT:** Now, I'd like to ask you some questions about crime you might have experienced. Can you tell me if YOU or ANYONE ELSE IN YOUR HOUSEHOLD had personally experienced any of the following...

	Ever in your life?  1 = Yes 2 = No→ <b>SKIP TO the next crime type asked about</b>	If YES, did this/any of these crime(s) occur in the past 12 months?  1 = Yes 2 = No	Thinking of the last incident, did this crime occur in your neighbourhood?  1 = Yes 2 = No	Who were the victims?  1 = Me 2 = parent(s) 3 = sibling(s) 4 = grandparent(s) 5 = Other relative 6 = Other caregiver 7 = entire household
Any crime	7.1	7.1.1	7.1.2	7.1.3
Assault	7.2	7.2.1	7.2.2	7.2.3
Robbery	7.3	7.3.1	7.3.2	7.3.3
Home burglary	7.4	7.4.1	7.4.2	7.4.3
Theft of vehicle or bicycle	7.5	7.5.1	7.5.2	7.5.3
High-jacking of a vehicle or bicycle	7.6	7.6.1	7.6.2	7.6.3
Sexual assault/ Rape	7.7	7.7.1	7.7.2	7.7.3
Deliberate damage to property	7.8	7.8.1	7.8.2	7.8.3
Murder	7.9	7.9.1	7.9.2	7.9.3
7.10	IF YES TO ANY OF THE ABOVE, THEN ASK: After the crime did you ever feel that you wanted to get the perpetrator back for his/ her actions? (i.e. get revenge on the perpetrator?)		1 = Yes 2 = No → <b>SKIP TO SECTION 8</b>	
7.10.1	IF YES to 7.10, Did you ever act on these feelings?		1 = Yes 2 = No → <b>SKIP TO SECTION 8</b>	
7.10.2	If YES to 7.10.1, what did you do?  (OPEN-ENDED RESPONSE)			

**SECTION 8: ATTITUDES TOWARD GANGS**

**INTERVIEWER TO READ OUT: Now, I'm going to ask you some questions about your attitudes toward gangs. A gang refers specifically to a group of people who commits acts of crime or violence. Please indicate how true the following statements are for you. (PLEASE CIRCLE THE CORRECT RESPONSE)**

		Not true for me	Somewhat true for me	Very true for me
8.1	I think you are safer, and have protection, if you join a gang	0	1	2
8.2	I will probably join a gang	0	1	2
8.3	Some of my friends at school belong to gangs	0	1	2
8.4	I think it's cool to be in a gang	0	1	2
8.5	My friends would think less of me if I joined a gang	0	1	2
8.6	I believe it is dangerous to join a gang	0	1	2
8.7	I think being in a gang makes it more likely that you will get into trouble	0	1	2
8.8	Some people in my family or household belong to a gang, or used to belong to a gang	0	1	2
8.9	I belong to a gang	0	1	2
8.9.1	(If Yes, then why?)  (OPEN-ENDED RESPONSE)			

**SECTION 9: ATTITUDES TOWARD EMPLOYMENT (ONLY ASK IF RESPONDENTS ARE 15 YEARS AND OLDER!! IF THEY ARE YOUNGER, SKIP TO SECTION 10!!)**

**INTERVIEWER TO READ OUT: The following questions explore your attitudes toward employment. Please indicate the response that best corresponds with your beliefs.**

9.1	I have enough skills to do a job well	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
9.2	I know I can succeed at work	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
9.3	I would take almost any kind of job to get money	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
9.4	I admire people who do not work for a living	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
9.5	The only good job is one that pays a lot of money	1 = Strongly agree 2 = Agree 3 = Disagree	

		4 = Strongly disagree	
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9.6	Working hard at a job will pay off in the end	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
9.7	Most jobs are dull and boring	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
9.8	People should not have to work if they don't want to	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	

**SECTION 10: GENERAL BELIEFS AND ATTITUDES TOWARD VIOLENCE**

**INTERVIEWER TO READ OUT: Please tell me how much you agree or disagree with the following statements. (CIRCLE THE APPROPRIATE RESPONSE)**

		Strongly Agree	Agree	Disagree	Strongly Disagree
10.1	If I walk away from a fight, I'd be a coward.	1	2	3	4
10.2	I don't need to fight because there are other ways to deal with being mad.	1	2	3	4
10.3	It is sometimes okay for people to be discriminated against or physically harassed because of their nationality.	1	2	3	4
10.4	A guy shows he really loves his girlfriend if he gets in fights with other guys about her.	1	2	3	4
10.5	It's okay to hit someone who hits you first.	1	2	3	4
10.6	People from other races, sometimes deserve to be discriminated against or physically harassed.	1	2	3	4
10.7	Sometimes a person doesn't have any choice but to fight.	1	2	3	4
10.7.1	If agree, when is it ok to use violence?  <i>(OPEN-ENDED RESPONSE)</i>				
10.8	If people do things to make me really mad, they deserve to be beaten up.	1	2	3	4
10.9	It is sometimes okay for people to be discriminated against or physically harassed because of their sexual orientation.	1	2	3	4

**INTERVIEWER TO READ OUT: Please tell me what your response would most likely be in the following scenarios.**

10.10	If you witnessed one of your friends being attacked by someone of a different nationality or culture, what would you do?	1 = Defend your friend 2 = Try to break up the fight 3 = Try and get an adult to intervene 4 = Help your friend 5 = Walk away 6 = Do nothing 99 = Other (specify)	
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10.11	If you witnessed one of your friends physically attacking someone because of their sexual orientation, what would your most likely response be?	1 = Try to break up the fight 2 = Try and get an adult to intervene 3 = Help your friend, he must have a reason 4 = Walk away 5 = Do nothing 99 = Other (specify)	
10.12	If you witnessed one or more of your friends physically attacking someone because of their nationality, what would your most likely response be?	1 = Try to break up the fight 2 = Try and get an adult to intervene 3 = Help your friend/s, he/they must have a reason 4 = Walk away 5 = Do nothing 99 = Other (specify)	

### SECTION 11: SOCIAL CAPITAL

Do you participate in any of the following activities...?  <i>(IF YES to any of the following, THEN ASK, <u>how often</u>)</i>	1 = Yes 2 = No → <b>SKIP to next activity</b>	If yes, what is the name of this organisation?	If yes, <u>how often</u> ?  1 = Daily 2 = Weekly 3 = Monthly 4 = Less than monthly
Youth group?	11.1	11.1.1	11.1.2
Sports group/ teams?	11.2	11.2.1	11.2.2
Drama/ theatre group?	11.3	11.3.1	11.3.2
Dance group?	11.4	11.4.1	11.4.2
Choir/singing group?	11.5	11.5.1	11.5.2
Community safety project/ CPF/ block watch?	11.6	11.6.1	11.6.2
Arts and crafts programme?	11.7	11.7.1	11.7.2
Any other social programme (specify)?	11.8	11.8.1	11.8.2

### NB - IF YES TO ANY OF THE ABOVE... THEN ASK 11.9 and 11.10

11.9	<b>ONLY ASK IF YES TO ANY OF THE ABOVE</b> Which one of the above activities are your favourite?  (ONE answer only)	1 = Youth group 2 = Sports group or team 3 = Drama or theatre group 4 = drama/cultural group 5 = Choir or singing group 6 = Community safety project/CPF/blockwatch 7 = Amandla Edu-Football programmes 8 = Arts and crafts programme 9 = Any other social activity (specify)	
11.10	<b>What is the main benefit from participation or membership in this group or activity?</b>	1 = Important in times of emergency 2 = Benefits the community 3 = Enjoyment/ relaxation/ recreation 4 = Spiritual/ social status/ self- esteem 99 = Other (specify)	



SECTION 12: GENERAL HEALTH			
INTERVIEWER TO READ OUT: OVER THE PAST 4 WEEKS, HAVE YOU			
12.1	Been feeling perfectly well and in good health?	1 = Better than usual 2 = Same as usual 3 = Worse than usual 4 = Much worse than usual	
12.2	Had difficulty falling asleep or staying asleep?	1 = Not at all 2 = No more than usual 3 = more than usual 4 = Much more than usual	
12.3	Feel calm and can sit still easily?	1 = Better than usual 2 = Same as usual 3 = Worse than usual 4 = Much worse than usual	
12.4	Been getting edgy and bad-tempered?	1 = Not at all 2 = No more than usual 3 = more than usual 4 = Much more than usual	
12.5	Been getting scared or panicky for no good reason?	1 = Not at all 2 = No more than usual 3 = More than usual 4 = Much more than usual	
12.6	Felt that life isn't worth living?	1 = Not at all 2 = No more than usual 3 = More than usual 4 = Much more than usual	

SECTION 13: AMANDLA EDU-FOOTBALL KNOWLEDGE AND PARTICIPATION			
13.1	Have you ever heard of Amandla Edu-Football?	1 = Yes 2 = No → <b>SKIP TO SECTION 14</b>	
13.1.1	If YES, have you ever participated in any of their activities?	1 = Yes 2 = No → <b>SKIP TO SECTION 14</b>	
13.1.2	If YES, are you currently involved in any of their activities?	1 = Yes 2 = No → <b>SKIP TO 13.1.5</b>	
13.1.3	Which activities are you currently involved in?  (MULTIPLE RESPONSE = MAXIMUM 3 ANSWERS)	1 = After-school soccer league 2 = Friday night soccer league 3 = Life skills sessions 4 = Leadership development X = Other (please specify)	
13.1.4	Please tell me WHY you participate in the Amandla Edu-Football programmes?  (OPEN-ENDED RESPONSE) → <b>Then go to 13.1.6</b>		
13.1.5	If NO, is there any particular reason why you have stopped participating in the Amandla Edu-Football programmes? What are these?  (OPEN-ENDED RESPONSE)		
13.1.6	How long have you been participating in the Amandla programmes? (or had you participated in...)	1 = Less than 3 months 2 = 3-6 months 3 = 7 months to 1 year 4 = more than 1 year but less than 2 years 5 = 2 or more years	



13.1.7	Do any of your friends participate in the Amandla programmes?	1 = Five or more friends 2 = Three to four friends 3 = One or two friends 4 = No, none of my friends	
13.1.8	(Apart from your friends) Do you socialise with any other Amandla participants outside of the programme activities?	1 = Yes, all of the time 2 = Yes, some of the time 3 = No, never	

#### SECTION 14: SELF-REPORTED OFFENDING

**INTERVIEWER TO READ OUT: Now, I'd like to ask you about things that you may or may not have done, ever, and in the past 12 months.**

Have you ever... <i>(If YES, then ask have you done this in the past 12, months AND how often have you done this)</i>		If YES, have you done this in the past 12 months?	If YES, how many times has this happened in the last year?
	1 = Yes 2 = No → <b>SKIP TO NEXT ACTIVITY</b>	1 = Yes 2 = No → <b>SKIP TO NEXT ACTIVITY</b>	1 = One time 2 = Two to three times 3 = Four to five times 4 = Six or more times
Stolen money or something else from another person Without them knowing?	14.1	14.1.1	14.1.2
Carried a gun, knife or a weapon for protection?	14.2	14.2.1	14.2.2
Used force, threats or a weapon to steal money or Something else from somebody?	14.3	14.3.1	14.3.2
If Yes, for what reason?  (OPEN ENDED)	14.4		
Got into or broken into a house/building to try to steal something?	14.5	14.5.1	14.5.2
Set fire to or tried to set fire to something on purpose	14.6	14.6.1	14.6.2
If yes, under what circumstances?  (OPEN ENDED RESPONSE)	14.7		
Hit, kicked or punched somebody else on purpose?	14.8	14.8.1	14.8.2
IF YES, under what circumstances? Were you provoked?  (OPEN ENDED RESPONSE)	14.9		
Forced anyone to engage in sexual activity with you when they did not want to?	14.10	14.10.1	14.10.2
If yes, for what reason?	14.11		

(OPEN ENDED RESPONSE)

<b>Have you ever...</b>  (If YES, then ask have you done this in the past 12, months AND how often have you done this)		<b>If YES, have you done this in the past 12 months?</b>	<b>If YES, how many times has this happened in the last year?</b>
	1 = Yes 2 = No → <b>SKIP TO NEXT ACTIVITY</b>	1 = Yes 2 = No → SKIP TO NEXT ACTIVITY	1 = One time 2 = Two to three times 3 = Four to five times 4 = Six or more times
Taken or tried to take a car, van or motorbike and drive it away without the owner's permission?	14.12	14.12.1	14.12.2
Deal in marijuana (dagga), i.e. sell, make or smuggle marijuana?	14.13	14.13.1	14.13.2
Deal in any drugs other than marijuana (dagga), i.e. sell, make or smuggle any other drugs?	14.14	14.14.1	14.14.2
Used a weapon to threaten or injure someone else?	14.15	14.15.1	14.15.2
IF YES, under what circumstances? Were you provoked?  (OPEN ENDED)	14.16		
Driven a vehicle while YOU were under the influence of alcohol?	14.17	14.17.1	14.17.2
Been involved in any gang fights?	14.18	14.18.1	14.18.2
IF YES, under what circumstances? Were you provoked or forced?  (OPEN ENDED)	14.19		

**IF THE RESPONDENT HAS ENGAGED IN ANY OF THESE BEHAVIOURS EVER IN THEIR LIVES, BUT HAVE NOT DONE SO IN THE LAST 12 MONTHS, THEN ASK...**

14.20	Is there any particular reason why you are no longer engaging in this behaviour(s)?	1 = Yes 2 = No → <b>SKIP TO SECTION 15</b>	
14.20.1	If YES, then what was this reason?  (OPEN-ENDED QUESTION)		



**SECTION 15: PERCEPTIONS OF AUTHORITY**

15.1	When you have a personal problem you need help with, who is the FIRST person you would go to for help?	1 = Parents 2 = Brothers/sisters 3 = Other relatives 4 = Friends 5 = Amandla Edu-Football staff 6 = Teachers/principal 7 = Police 8 = No-one 9 = Neighbour 10 = Religious leader 99 = Other (specify)	
15.2	If you saw someone committing a crime, such as stealing a cell phone from another person or threatening another person with a gun, would you report it to the police?	1 = Yes → <b>SKIP TO 15.3</b> 2 = No	
15.2.1	If NO or (DON'T KNOW), why would you not report it?	1 = Not my business 2 = Too scared 3 = Don't think it would help 4 = I don't trust the police 99 = Other (specify)	
15.3	If you saw someone committing a crime, such as stealing a cell phone from another person or threatening another person with a gun, would you report it to anyone else, such as your parents or neighbours?	1 = Yes 2 = No	

**SECTION 16: ATTITUDES TOWARDS SEX**

**INTERVIEWER TO READ OUT: Next, I'd like to ask you a few questions that explore your attitudes towards sex. (PLEASE CIRCLE THE APPROPRIATE RESPONSE)**

		Agree	Undecided	Disagree
16.1	Most women like to show off their bodies.	3	2	1
16.2	On a date, the man should be expected to pay all expenses.	3	2	1
16.3	Girls should have the same freedoms as boys.	3	2	1
16.4	If a woman wears revealing clothing, then it is her fault if a man forces her to have sex with him.	3	2	1
16.5	If a young man gets an erection, then it is a sign that he must have sex with someone.	3	2	1
16.6	If I buy somebody a drink or take them on a date, then it is my right to have sex with them.	3	2	1

**SECTION 17: VIEW OF THE FUTURE**

**INTERVIEWER TO READ OUT: I'd like to ask you a few questions on how you feel about your future. Please tell me whether you agree or disagree with the following statements...**

17.1	I have specific goals in my life I want to achieve.	1 = Strongly Agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
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17.2	I have a good idea of where I am going in my life.	1 = Strongly Agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
17.3	My own efforts and actions are what will determine my future.	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
17.4	I feel that I would be able to cope with difficult situations that may present themselves in the future.	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
17.5	No matter how hard I try I will never be able to achieve my goals in life.	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
17.6	I am good at deciding whether a risk is worth taking.	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
17.7	I am able to survive on my own if I have to.	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
17.8	I feel proud that I have accomplished things in my life.	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
17.9	It is okay if there are people who do not like me.	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
17.10	I am as popular with kids my own age as I want to be.	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
17.11	There are some things I would not do to gain the respect of my friends.	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
17.12	I sometimes think that I am a failure (a loser).	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
17.13	I am as good a person as I want to be.	1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree	
17.14	I would like to know how you feel about your future opportunities to be successful and prosper, would you say....  READ OUT OPTIONS  (ALLOW ONLY ONE RESPONSE)	1 = Your opportunities are limitless 2 = You have many opportunities 3 = Your opportunities are very limited 4 = You have no opportunities at all	

17.15	What do you see as your possible future and how will you get there?  (OPEN-ENDED RESPONSE)	
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**INTERVIEWERS PLEASE NOTE!!!!**

**THIS IS THE END OF THE YOUTH QUESTIONNAIRE. PLEASE THANK THE YOUNG PARTICIPANTS FOR THEIR WILLINGNESS TO PARTICIPATE IN THE STUDY.**

**THE NEXT SECTION, SECTION 18, IS FOR THE MOTHERS OR FEMALE CAREGIVERS OF THE MALE PARTICIPANTS INTERVIEWED ONLY!!!!!!**

<b>SECTION 18: FEMALE PARENT/CAREGIVER ITEMS</b>			
<b>INTERVIEWER TO READ OUT: If it's okay, I'd like to ask you a few questions about your son and his behaviour within the home. Please tell me how often the following attributes describe your son...</b>			
18.1	Is considerate of other people's feelings?  (READ OUT THE RESPONSE OPTIONS)	1 = Almost always 2 = Often 3 = Sometimes 4 = Seldom 5 = Never	
18.2	Is generally obedient, usually does what you request?	1 = Almost always 2 = Often 3 = Sometimes 4 = Seldom 5 = Never	
18.3	Does not obey our family rules on his own.	1 = Almost always 2 = Often 3 = Sometimes 4 = Seldom 5 = Never	
18.4	Has a hot temper?	1 = Almost always 2 = Often 3 = Sometimes 4 = Seldom 5 = Never	
18.5	Is very moody and easily upset?	1 = Almost always 2 = Often 3 = Sometimes 4 = Seldom 5 = Never	
18.6	Hits parents/caregivers.	1 = Almost always 2 = Often 3 = Sometimes 4 = Seldom 5 = Never	
18.7	Is helpful around the house and towards others?	1 = Almost always 2 = Often 3 = Sometimes 4 = Seldom 5 = Never	

18.8	Fights with his siblings or other members of the household?	1 = Almost always 2 = Often 3 = Sometimes 4 = Seldom 5 = Never	
18.9	Gets into trouble at school, work and/or in the community?	1 = Almost always) 2 = Often 3 = Sometimes 4 = Seldom 5 = Never	
18.10	How much time do you spend per day doing things with your child/children such as talking, playing a game, or going out? (i.e. during the week)	1 = None 2 = 1 hour or less 3 = 1 - 2 hours 4 = 2 –4 hours 5 = More than 4 hours	
18.11	Do you feel that the rules in your family are clear?	1 = Yes 2 = No	
<b>INTERVIEWER TO READ OUT: How often do you fight with your son about...?</b>			
18.12	What he does when he is out? (not at home)	1 = Often 2 = Sometimes 3 = Hardly ever 4 = Never	
18.13	What time he comes home when he has been out?	1 = Often 2 = Sometimes 3 = Hardly ever 4 = Never	
18.14	Having bad or dangerous friends?	1 = Often 2 = Sometimes 3 = Hardly ever 4 = Never	
18.15	Have you noticed any changes in your son's behaviour in the last 12 months?	1 = Yes 2 = No → <b>END THE INTERVIEW</b>	
18.15.1	If YES, then how has his behaviour changed?  (OPEN-ENDED QUESTION)		
18.15.2	If YES, then why do you think his behaviour has changed?  (OPEN-ENDED QUESTION)		

## **Interview Protocol and Questionnaire Changes from Wave 1 to Wave 2**

### General points/points to clarify:

- Emphasise (and re-emphasize) confidentiality before sensitive sections
- Confirm use of English questionnaire in Khayelitsha?
- New data to be matched to wave 1 data by subject (questionnaire number) and questions (with exception of dropped/added items)
- Include full subject names in data set (in order to match with Amandla attendance records)
- All male interviewers with local language skills (Xhosa in Khayelitsha, Sesotho/Tswana in Kagiso) strongly preferred
- Please make sure q1.4 is used to verify same subject from wave 1
- please do not "re-use" question numbers from those items that have been deleted for newly added questions (so that new questions are not mistakenly linked with old questions)
- The "ever" questions in sections 7 (victimization) and 14 (offending) need to be asked again (in hopes that disclosure improves)

### Changes to existing questions:

- 1.6- include options for "Passed Matric", "Failed Matric", "did not write matric exams"
- 1.7-clarify question refers to POST-SCHOOL QUALIFICATION (not a high school senior certificate or still busy studying at high-school level). Clarify 4 = Certificate (refers to tertiary certificate, i.e. from FET college)
- 1.10-clarify that full-time students NOT working are actually unemployed and "seeking work" or "not seeking work" or may be temporary labourers (i.e. summer employment)
- 2.7-include "Setswana" and "Sesotho" options
- 2.44-Other: (add) "i.e. after-school programmes (not Amandla), extra lessons"
- 2.47-2.50- recode response option to: 1=often 2=sometimes 3= hardly ever 4= never
- 3.6-recode response options to: 1=strongly agree 2=agree 3= disagree 4= strongly disagree (skip to 3.7)
- 3.22 Add (in the past 12 months)
- 3.32.1-change response options to: 1=Five or more friends 2=three to four friends 3= one or two friends 4= No, none of my friends
- 4.11, 4-12 (ensure subjects understand the difference between these questions. More people should have "seen someone pull a gun or knife" on another person that "seen someone stabbed or shot")
- 5.8-explain which drug
- 5.10-firearm, knife, or other weapon
- 6.4-Have you ever failed a grade and been forced to repeat (a year)?
- 7.2-clarify assault as physical (attacked, beaten up by someone)
- 10.11 sexual orientation (because they are gay/lesbian)
- 10.12 nationality (because they are a foreigner)
- 11.6 include street committee
- 11.9 response 4 should be dance/cultural group
- 14.3-(include) said that you would hurt someone or beat them up if they did not do what you told them to do
- 16.5 **Must** (in bold)

### **Drop questions (do not adjust question numbering):**

- 2.1
- 2.11, 2.12, 2.13, 2.14, 2.15, 2.16 (note that we KEEP **In the past 12 months questions** in this section: 2.11.1, 2.12.1, 2.13.1, 2.14.1, 2.15.1, 2.16.1)
- 2.18, 2.18.1, 2.19, 2.19.1, 2.20, 2.20.1, 2.21, 2.21.1 (entire section removed)
- 2.23.3
- 2.27
- 2.31
- 2.43
- 2.50, 2.52, 2.53
- 3.14, 3.14.1, 3.15, 3.15.1, 3.16, 3.16.1, 3.17, 3.17.1, 3.18, 3.18.1, 3.19, 3.19.1, 3.20, 3.20.1 (entire section removed)
- 3.35, 3.38, 3.39, 3.41
- 4.1, 4.1.1
- 5.2, 5.5, 5.6
- 6.1, 6.2
- 6.21

7.1, 7.6, 7.8

9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8 (entire section removed)

14.17

**Add questions:**

In section 2.45-2.61:

My parent(s)/caregiver(s) give me good advice / 1=Often 2=sometimes 3=Hardly ever 4=Never

My parent(s)/caregiver(s) show their love for me / 1=Often 2=sometimes 3=Hardly ever 4=Never

My parent(s)/caregiver(s) show their interest in my friends / 1=Often 2=sometimes 3=Hardly ever 4=Never

My parent(s)/caregiver(s) make me feel good when I am with them / 1=Often 2=sometimes 3=Hardly ever 4=Never

There is someone in my home who drinks too much wine/alcohol / 1=Often 2=sometimes 3=Hardly ever 4=Never

In section 2.38-2.44:

Time spent per week watching tv / 1=1-5 hours, 2= 6-10 hours, 3=11-15 hours, 4=16-20 hours, 5=21 or more hours

Time spent per week playing video games / 1=1-5 hours, 2= 6-10 hours, 3=11-15 hours, 4=16-20 hours, 5=21 or more hours

Time spent per week using/playing/chatting with cellphone / 1=1-5 hours, 2= 6-10 hours, 3=11-15 hours, 4=16-20 hours, 5=21 or more hours

In Section 3.21-3.32

Have any of your friends dropped out of school? / 1=Five or more friends 2=three to four friends 3= one or two friends 4= No, none of my friends

Have any of your friends been at court because of their behaviour? / 1=Five or more friends 2=three to four friends 3= one or two friends 4= No, none of my friends

Have any of your friends skipped school a lot without permission? / 1=Five or more friends 2=three to four friends 3= one or two friends 4= No, none of my friends

Do any of your friends smoke cigarettes on a pretty regular basis? / 1=Five or more friends 2=three to four friends 3= one or two friends 4= No, none of my friends

Do any of your friends go out in the evening without their parents permission / 1=Five or more friends 2=three to four friends 3= one or two friends 4= No, none of my friends (include N/A)

Do any of your friends drink wine/alcohol fairly regularly? / 1=Five or more friends 2=three to four friends 3= one or two friends 4= No, none of my friends

I don't mind my friends using drugs around me / 4=strongly agree 3=agree 2=disagree 1=strongly disagree

I have friends who carry weapons sometimes / 1=Five or more friends 2=three to four friends 3= one or two friends 4= No, none of my friends

In 6.5-6.13

It is (was) important to me to be considered a clever student by my teacher(s) / 4=strongly agree 3=agree 2=disagree 1=strongly disagree

Teachers at my school are (were) willing to help students / 4=strongly agree 3=agree 2=disagree 1=strongly disagree

Most of my teachers notice(-d) when I am (was) doing a good job and let me know about it / 4=strongly agree 3=agree 2=disagree 1=strongly disagree

I feel (felt) safe at my school / 4=strongly agree 3=agree 2=disagree 1=strongly disagree

6.14.2 If yes (to 6.14) Why did you fear traveling to or from school? (open-ended response)

In Section 7:

Threatened with a weapon

stabbed or shot with a weapon

In Section 8:

People think I'm a gangster / 0=Not true for me 1=somewhat true for me 2=very true for me

I feel pressure by other people to join a gang / 0=Not true for me 1=somewhat true for me 2=very true for me

In Section 10:

If someone disrespects me, I have to fight them to get my pride back / 4=strongly agree 3=agree 2=disagree 1=strongly disagree

You've got to fight to show people you're not a wimp/ 4=strongly agree 3=agree 2=disagree 1=strongly disagree

Carrying a gun makes people feel safe/ 4=strongly agree 3=agree 2=disagree 1=strongly disagree

I have threatened people I know/ 4=strongly agree 3=agree 2=disagree 1=strongly disagree

I get into fights a little more than the average person/ 4=strongly agree 3=agree 2=disagree 1=strongly disagree

Some of my friends think I am a hothead/ 4=strongly agree 3=agree 2=disagree 1=strongly disagree  
I get angry easily/ 4=strongly agree 3=agree 2=disagree 1=strongly disagree  
I am hard to get along with most of the time/ 4=strongly agree 3=agree 2=disagree 1=strongly disagree  
If you mess with me/my friends, you will get hurt/ 4=strongly agree 3=agree 2=disagree 1=strongly disagree  
How many physical fights have you been in within the past year? / 0= none 1= one only 2= two or three 3= four or five  
4=six or more

In Section 12 General Health:

Feel like you have too many problems to deal with right now/ 4=strongly agree 3=agree 2=disagree 1=strongly disagree  
I think I am healthy and in good shape / 4=strongly agree 3=agree 2=disagree 1=strongly disagree 0= I don't care about my health

In Section 17:

I will study further after school/ 4=strongly agree 3=agree 2=disagree 1=strongly disagree  
I Will find a job I will enjoy/ 4=strongly agree 3=agree 2=disagree 1=strongly disagree  
I will have a happy family life/ 4=strongly agree 3=agree 2=disagree 1=strongly disagree  
Will succeed in doing what is most important for you/ 4=strongly agree 3=agree 2=disagree 1=strongly disagree

Ask primary caregiver in section 18:

Has your son ever failed a grade and been forced to repeat? / 1= yes, only once 2=yes, more than once 3= No, never

## Wave 2 Questionnaire



### FIELD STUDY

March – May, 2013

Hello. My name is \_\_\_\_\_. I am part of a team doing research in Khayelitsha and Kagiso on a local violence prevention project in the area. The study is conducted on behalf of the International Committee of the Red Cross (ICRC). In total, we will interview approximately 400 young boys and men, from the ages of 12 years and older, who will be randomly selected from households in the area.

The questions will ask about the neighbourhood in which you live, and how you feel about living here; your home environment; experiences at school; exposure to violence and crime; knowledge of support structures; and the social activities that you participate in.

You may choose to participate, or refuse to participate in the study. **All the information collected will be anonymous and kept completely confidential.** No-one but myself and the ICRC research team will be able to see any of the answers you give me. If you agree to participate in the study, you may stop the interview at any time should you feel uncomfortable with any of the questions being asked.

Should you have any further questions on the study that I cannot answer, please do not hesitate to contact my supervisor, \_\_\_\_\_ (name) on \_\_\_\_\_ (mobile), or Ian Edelstein, the lead ICRC researcher responsible for the project, on 082-559-2046.

Do you have any questions? YES  NO

Do you agree to participate in the study? YES  NO

Signed: (name) \_\_\_\_\_ (date) \_\_\_\_\_

Print complete name: \_\_\_\_\_

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For children UNDER 16 years of age only – complete IN ADDITION TO the above

### CAREGIVER CONSENT

Should you consent to allow your child or the child in your care, to participate in the study, please sign and date the form below.

I, (name) \_\_\_\_\_ consent to allow my child (name) \_\_\_\_\_ to

participate in this baseline study. I understand that my child will be allowed to stop the process at any stage, or may, himself, refuse to participate in the study.

Signed \_\_\_\_\_

(date) \_\_\_\_\_

## HOUSEHOLD SELECTION DATA

<b>Province</b>	1 = Gauteng 2 = Western Cape	
<b>Name of city/community</b>	1 = Khayelitsha 2 = Kagiso 3 = Mannenberg/Lavis	
<b>Area/zone/section name</b>		
<b>Household No. (and street name if available. Give complete details)</b>		
<b>Full contact name / number</b>		
<b>Alternate contact number</b>		
<b>Fieldworker name</b>		

## INTERVIEWER VISITS

	1	2	3
DATE			
INTERVIEWER'S NAME			
*RESULT			
NEXT VISIT:      DATE TIME			
1 = Completed 2 = No suitable respondent at home 3 = No suitable respondent lives in household 4 = Entire household absent for extended period of time 5 = Postponed 6 = Refused 7 = Dwelling not found 8 = Incomplete			

SUPERVISOR	QUALITY CONTROLLER	CAPTURED BY
NAME _____	NAME _____	NAME _____
DATE _____	DATE _____	_____

SECTION 1: DEMOGRAPHICS			
INTERVIEWER TO READ OUT: I'm going to start by asking you a few simple questions about yourself.			
1.1	Race (DO NOT ASK)	1 = White 3 = Indian/Asian	2 = Black 4 = Coloured
1.2	Gender (DO NOT ASK)	1 = Male 2 = Female	
1.3	How old were you at your LAST birthday?		Years
1.4	Please tell me when your birthday is?	dd/mm/yyyy	
1.5	Do you have any biological children? (any children of your own)	1 = Yes 2 = No → <b>SKIP TO 1.6</b>	
1.5.2	If YES, does this child (or any of these children) live with you most of the time?	1 = Yes 2 = No	
1.6	What is your highest level of school education completed thus far?	1 = Grade 1-11 → <b>SKIP TO 1.8</b> 2 = Passed Matric, Grade 12 → <b>SKIP TO 1.7</b> 3 = Failed Matric, Grade 12 → <b>SKIP TO 1.7</b> 4 = Stopped school before Grade 12 → <b>SKIP TO 1.7</b> 99 = Never attended school → <b>SKIP TO 1.9</b>	
1.7	What is the highest <b>post-school</b> (after high school) qualification you have completed (i.e. tertiary education)?	1 = Undergraduate degree (Bachelors) 2 = Postgraduate degree (Honours/Masters) 3 = Diploma	4 = Certificate (not high school) 5 = Still busy studying 99 = Other (specify)
1.8	Are you currently attending classes/courses of any kind?	1 = Yes 2 = No	
1.9	(In addition to your schooling) Have you received any other form of skills training?	1 = Yes 2 = No → <b>SKIP TO 1.10</b>	
1.9.1	If YES, then what was the nature of this training?	1 = Computer literacy 2 = Computer programming 3 = Book keeping	4 = Trade skills (e.g. carpentry, panel work) 5 = Nursing/home-based care 99 = Other (specify)
1.10	What is your employment status?  (school students must choose options 1, 2, or 4, <u>not</u> 99)	1 = Unemployed, seeking work 2 = Unemployed, NOT seeking work, do NOT WANT to work 3 = Temporary or seasonal labour (e.g. fishermen)	4 = Part-time employed 5 = Full-time employed 6 = Self employed 99 = Other (specify)
1.11	Do you have a physical disability that affects your everyday activities?	1 = Yes 2 = No	
SECTION 2: HOME ENVIRONMENT			
INTERVIEWER TO READ OUT: Next I'd like to ask you some questions about your family and home environment			
2.2	How many people live in your household normally (including yourself)?		No.
2.3	How many people in this household have permanent work or a stable source of income (not including government grants)?		No.
2.4	Housing type	1 = Free standing house/townhouse/duplex 2 = Flat, multiple rooms 3 = Flat, single room 4 = Hostel	5 = Backyard shack 6 = Squat/shack/other informal room not in backyard 7 = RDP / low income housing

			8= Other formal housing	
2.5	What kind of toilet does this house use?	1 = None (bush, buckets, sand dunes, etc.) 2 = Flush toilets 3 = Single household pit latrine / ventilated pit latrine (VIPS / portable / chemical toilet 4 = Communal Pit latrines / ventilated pit latrines (VIPS / portable / chemical toilets		
2.6	Which of the following do you or your household have at home? (Please select as many as necessary)	1 = Television 2 = Electricity 3 = Motor car (automobile)	4 = Cell phone 5 = Refrigerator	
2.7	MAIN home language  (only ONE answer)	1=English 2=Afrikaans 3=Xhosa 4 = Zulu	5=Setswana 6=Sesotho 99 = Other (specify)	
2.8	Does anyone in this household receive any form of government grant (e.g. pension, child care, or disability grant etc.)?	1 = Yes 2 = No		
2.9	Is your birth mother alive?	1 = Yes 2 = No		
2.10	Is your birth father alive?	1 = Yes 2 = No		
<b>INTERVIEWER TO READ OUT: In the past 12 months, HAVE YOU</b>				
		<b>In the past 12 months</b> 1 = Often 2 = Sometimes 3 = Never		
	Spent a lot of time with your father?	2.11.1		
	Spent a lot of time with your mother?	2.12.1		
	Received financial support from your mother?	2.13.1		
	Received financial support from your father?	2.14.1		
	Received emotional support from your mother?	2.15.1		
	Received emotional support from your father?	2.16.1		
2.17	Which parent do you think knows the most about you?	1 = Both mother and father 2 = Mother only 3 = Father only 4 = No-one 5 = Other primary caregiver/s		

2.22	When you need money for clothes, shoes and such, where do you get this money from?  (MULTIPLE RESPONSE – CHOOSE MAX 3 ANSWERS)	1 = Employment 2 = Both parents 3 = Partner 4 = Primary caregiver 5 = No-one 6 = Mother only 7 = Father only 8 = Older brother/sister 9 = Grandparent/s	10 = Step-parent(s) 11 = Other relatives 12 = Non-relatives 13 = Friends 14 = Hand-outs/begging 15 = Donations 16 = Allowances 17 = Criminal activity 99 = Other (specify)	
2.23	Has any member of your family ever been in prison?	1 = Yes	2 = No → SKIP TO 2.24	
2.23.1	If YES, is this member currently in prison serving a sentence?	1 = Yes	2 = No	
2.23.2	Who is/was this (these) person(s)?  (MULTIPLE RESPONSE POSSIBLE)	1 = Both parents 2 = Mother only 3 = Father only 4 = Partner	5 = Older brother/sister 6 = Grandparents(s) 7 = Other relatives 99 = Other (specify)	

**INTERVIEWER TO READ OUT: In the last 12 months, how often have you or your household....  
(circle the appropriate response)**

		Never	Once or Twice	A few times	Many times	Always
2.24	Gone without enough food to eat?	0	1	2	3	4
2.25	Gone without medicine or medical treatment that you needed?	0	1	2	3	4
2.26	Gone without a cash income?	0	1	2	3	4
<u>2.28</u>	Gone without shelter?	0	1	2	3	4
2.29	Gone without electricity in your home?	0	1	2	3	4
2.30	Gone without enough fuel (electricity, propane, paraffin, wood, coal) to heat your home or cook with?	0	1	2	3	4

**INTERVIEWER TO READ OUT: How often do you...**

		Never	Sometimes	Many Times	
<u>2.32</u>	Care for younger children in your household or area?	0	1	2	
2.33	Go shopping or run errands for people in your community?	0	1	2	
2.34	Do unpaid housework for people in your community?	0	1	2	
2.35	Make or fix things for people living in your community?	0	1	2	
2.36	Prepare or give food to people in the area or community?	0	1	2	
2.37	Care for sick relatives in your household or area?	0	1	2	

**INTERVIEWER TO READ OUT: During the week, and during term time, how much time do you spend (WHEN NOT AT SCHOOL OR WORK) engaging in the following activities? INDICATE HOURS SPENT PER WEEK.**

		0= none 1 = 1-5 hours 2 = 6-10 hours	3 = 11-15 hours 4 = 16-20 hours 5 = 21+ hours		
Doing homework (school-related)		2.38			
Doing Household chores (e.g. cooking, cleaning, fetching water)		2.39			
Meeting friends (outside of Amandla Edu-Football)		2.41			
Sports activities (outside of Amandla Edu-Football)		2.42			
Other (specify, i.e. after-school programmes, extra lessons, NOT related to Amandla Edu-Football)  (specify)		<b>2.44</b>			
Time spent per week watching TV		<b>2.44.1</b>			
Time spent per week playing video games		<b>2.44.2</b>			
Time spent per week using/playing/chatting with cell phone		<b>2.44.3</b>			
<b>INTERVIEWER TO READ OUT: Now, I would like to ask you some questions about your relationship and interactions with your parents/caregivers...</b>					
2.45	On average, how many nights a week do you go out?	1 = 1 or 2 nights 2 = 3 or 4 nights 3 = 5 to 7 nights 4 = Varies too much to say			
2.46	What time do you usually return home after you've been out at night?	1 = Between 6 and 8 pm 2 = After 8 but before 10 pm 3 = Between 10 and 12 4 = After 12 pm 5 = Varies too much to say			
(response options for 2.47-2.60)		1= often/ always	2= sometimes	3= Hardly ever	4= never
2.47	Do you feel that the rules in your family are clear?	1	2	3	4
2.48	Do you need permission from any of your parents/caregivers when you go out?	1	2	3	4
2.49	Do any of your parents/caregivers know where you are when you are not at home?	1	2	3	4
<b>2.51</b>	How often are you in trouble with any of your parents/ caregivers?	1	2	3	4
<b>2.54</b>	How often do any of your parents/caregivers check or ask whether you have done your homework?	1	2	3	4
2.55	How often do any of your parents/caregivers attend school meetings?	1	2	3	4
2.56	How often do any of your parents/caregivers shout at you?	1	2	3	4
2.57	How often do any of your parents/caregivers hit, slap, beat, or in any other way, physically hurt you?	1	2	3	4

2.58	How often do any of your parents/caregivers lock you into or out of the house?	1	2	3	4	
2.59	How often do any of your parents/caregivers refuse to give you food (when there is food in the house)?	1	2	3	4	
2.60	How often do your parents/caregivers punish you when you do not obey their rules or instructions?	1	2	3	4	
2.61	What do they do when you disobey them?  OPEN-ENDED RESPONSE					
2.62	My parent(s)/caregiver(s) give me good advice	1	2	3	4	
2.63	My parent(s)/caregiver(s) show their love for me	1	2	3	4	
2.64	My parent(s)/caregiver(s) show their interest in my friends	1	2	3	4	
2.65	My parent(s)/caregiver(s) make me feel good when I am with them.	1	2	3	4	
2.66	There is someone in my home who drinks too much wine/alcohol	1	2	3	4	

**SECTION 3: NEIGHBOURHOOD (interviewer to read out):** Next I'd like to ask you some questions about your neighbourhood, and how you feel about living here. *(By neighbourhood, I mean the area in which you live).* Please indicate if you agree or disagree with the following statements.

3.1	How long have you lived in this neighbourhood?				<b>Years</b>
3.2	I like my neighbourhood	1 = Strongly agree 2 = Agree	3 = Disagree 4 = Strongly disagree		
3.3	Most people in my neighbourhood are willing to help if you need it	1 = Strongly agree 2 = Agree	3 = Disagree 4 = Strongly disagree		
3.4	Most people in my neighbourhood can be trusted	1 = Strongly agree 2 = Agree	3 = Disagree 4 = Strongly disagree		
3.5	There are people in my neighbourhood that I can talk to about things that are important to me	1 = Strongly agree 2 = Agree 3 = Disagree → <b>SKIP TO 3.6</b> 4 = Strongly disagree → <b>SKIP TO 3.6</b>			
3.5.1	If AGREE, then who are these people (what organisation are they from)?  (MULTIPLE RESPONSE-MAX 3 ANSWERS)	1 = Police Officer 2 = NGO/volunteer group 3 = School staff or educator 4 = Childline/safeline member 5 = Street committee member	6 = Social worker 7 = Family members 8 = Church or mosque 9 = Amandla Edu-Football staff 99 = Other (please specify)		
3.6	There are people in my neighbourhood or family who I look up to? (role-models)	1 = Strongly agree 2 = Agree 3 = Disagree → <b>SKIP TO 3.7</b> 4 = Strongly disagree → <b>SKIP TO 3.7</b>			
3.6.1	If AGREE, then who are these individuals?	1 = Police officer 2 = NGO/volunteer group member	7 = Family members 8 = Church/religious official 9 = Amandla Edu-Football		

	(MULTIPLE RESPONSE– MAX 3 ANSWERS)	3 = School staff/ educator 4 = Childline/safeline member 5 = Street committee 6 = Social worker	staff 10 = Sporting personality 99 = Other (please specify)	
3.7	I have many friends in my neighbourhood.	1 = Strongly agree 2 = Agree	3 = Disagree 4 = Strongly disagree	
3.8	Have you changed homes in the past 12 months?	1 = Yes 2 = No → <b>SKIP TO 3.9</b>		
3.8.1	If YES, please tell me how many times you have moved homes in the past 12 months.			Times
<b>INTERVIEWER TO READ OUT: Please tell me if any of the following describe the area in which you live...</b>				
3.9	Lots of crime?	1 = All of the time 2 = Most of the time	3 = Sometimes 4 = Never	
3.10	Lots of fights?	1 = All of the time 2 = Most of the time	3 = Sometimes 4 = Never	
3.11	Sometimes living in my neighbourhood is like being in a war zone	1 = All of the time 2 = Most of the time	3 = Sometimes 4 = Never	
3.12	Generally, how safe do you feel in your neighbourhood?	1 = Very safe → <b>SKIP TO 3.13</b> 2 = Somewhat safe → <b>SKIP TO 3.13</b> 3 = Somewhat unsafe 4 = Very unsafe		
3.12.1	IF SOMEWHAT UNSAFE OR VERY UNSAFE, why do you say this?  (MULTIPLE RESPONSE-LIST TOP 3 ANSWERS)	1 = Have been a victim of crime in the past and scared of a repeat 2 = Crime is common in this area 3 = There are bad, dangerous people in this area 4 = I feel alone/isolated 5 = There's so much crime reported, I'm scared of it happening to me 99 = Other (please specify)		
3.13	Generally, at home, school, or anywhere else, what are the things that make you most scared?  (MULTIPLE RESPONSE – RANK TOP 3 ANSWERS)	1 = Murder 2 = Rape/sexual assault 3 = Fighting 4 = Getting a girl pregnant 5 = Theft/mugging 6 = Verbal abuse/being teased	7 = Guns 8 = Getting HIV/AIDS 9 = Gangs (gang) 10 = Nothing 99 = Other (please specify)	
<b>INTERVIEWER TO READ OUT: Now, I'd like to ask you a few questions about people you may know who may or may not be involved in any illicit activities. Without mentioning any names...</b>				
3.21	Do you know where you can buy any drugs at your school or in the community?	1 = Yes 2 = No		
3.22	Has <u>anyone</u> living in your neighbourhood been drunk or high in your presence in the past 12 months?	1 = Every day 2 = Often	3 = Once/twice 4 = Never	
3.23	Have any of your <u>friends</u> bought drugs in the past year?	1 = Every day 2 = Often	3 = Once/twice 4 = Never	
3.24	Have any of your <u>siblings</u> (living in your household) bought drugs in the past year?	1 = Every day 2 = Often	3 = Once/twice 4 = Never	
3.25	Has anyone, in the past year, tried to sell or give you any drugs?	1 = Every day 2 = Often	3 = Once/twice 4 = Never	
3.26	I do not want to know any details but do any of your <u>friends</u> regularly use or sell drugs? (Interviewers please note change in response options!!)	1 = Five+ <u>friends</u> 2 = Three or four	3 = One or two 4 = None of my <u>friends</u>	
3.27	I do not want to know any details but do any of your	1 = Five+	3 = One or two	

	siblings (living in your household) regularly use or sell drugs?	siblings 2 = Three or four	4 = None of my siblings	
3.28	I do not want to know any details but do you know anyone else in your community who regularly uses or sells drugs?	1 = Five+ people 2 = Three or four	3 = One or two 4 = No one I know	
3.28.1	Have any of your friends dropped out of school?	1 = Five+ friends 2 = Three or four	3 = One or two 4 = None of my friends	
3.28.2	Have any of your friends been at court because of their behaviour?	1 = Five+ friends 2 = Three or four	3 = One or two 4 = None of my friends	
3.28.3	Have any of your friends skipped school a lot without permission?	1 = Five+ friends 2 = Three or four	3 = One or two 4 = None of my friends	
3.28.4	Do any of your friends smoke cigarettes on a pretty regular basis?	1 = Five+ friends 2 = Three or four	3 = One or two 4 = None of my friends	
3.28.5	Do any of your friends go out in the evening without their parents' permission?	1 = Five+ friends 2 = Three or four	3 = One or two 4 = None of my friends	
3.28.6	Do any of your friends drink wine/alcohol fairly regularly?	1 = Five+ friends 2 = Three or four	3 = One or two 4 = None of my friends	
3.28.7	I don't mind my friends using drugs around me.	1 = Strongly agree 2 = Agree	3 = Disagree 4 = Strongly disagree	
3.28.8	I have friends who carry weapons sometimes	1 = Five+ friends 2 = Three or four	3 = One or two 4 = None of my friends	
<b>INTERVIEWER TO READ OUT: I don't want to know any names, but do you personally know people who live in your neighbourhood who...</b>				
3.29	Do any other things that could get them into trouble with the police, such as stealing, selling stolen goods, mugging or assaulting others?	1 = Five+ people 2 = Three or four	3 = One or two 4 = No one I know	
3.30	Make a living from crime?	1 = Yes 2 = No → <b>SKIP TO 3.31</b>		
3.30.1	If YES, what type of crime does this person do (MOST, if more than one)?  ONE ANSWER ONLY	1 = Theft 2 = Robbery 3 = Assault 4 = Housebreaking	5 = Vehicular crimes (including hijacking) 6 = Drug-related crimes 99 = Other (specify)	
3.31	Do you personally know anyone living in your area who is or has been in jail?	1 = Yes 2 = No → <b>SKIP TO 3.32</b>		
3.31.1	If YES, is this person(s) older than 22 years?	1 = Yes 2 = No		
3.32	Have any of your friends ever committed any crime such as stealing, selling stolen goods, mugging or assaulting others	1 = Five+ friends 2 = Three or four 3 = One or two	4 = None of my friends → <b>SKIP TO 3.33</b>	
3.32.1	Have any of your friends ever committed any crime such as stealing, selling stolen goods, mugging or assaulting others in the past 12 months?	1 = Five+ friends 2 = Three or four	3 = One or two 4 = None of my friends	
<b>INTERVIEWER TO READ OUT: Do you make use of any of the following facilities in your neighbourhood?</b>				
		In your neighbourhood 1 = Yes 2 = No	If YES, how often do you use this facility? 1 = Daily 2 = Weekly 3 = Monthly 4 = Less than monthly	

Sport grounds?	3.33		3.33.1	
Community hall?	3.34		3.34.1	
Mosque/ church/ other religious facility?	<b>3.36</b>		<b>3.36.1</b>	
Library?	3.37		3.37.1	
Health centre/ clinic?	<b>3.40</b>		<b>3.40.1</b>	
Shebeens/bars/pubs?	<b>3.42</b>		<b>3.42.1</b>	
Other (specify)	3.43		3.43.1	

#### SECTION 4: EXPOSURE TO VIOLENCE

**INTERVIEWER TO READ OUT: Now I'd like to ask you about violence you may have been exposed to in your home. Please tell me whether you agree or disagree with the following statements pertaining to your relationships with other family members.**

		In your lifetime? 1 = Not at all 2 = sometimes 3 = Yes, often	In the past 12 months? 1 = Not at all 2 = Sometimes 3 = All the Time	
	People in my family often lose their temper with each other	<b>4.2</b>		<b>4.2.1</b>
	People in my family argue a lot	4.3		4.3.1
	Arguments in our household sometimes lead to violence	4.4		4.4.1
	Fights and arguments in our household are sometimes influenced by the use of alcohol or drugs	4.5		4.5.1
4.6	How safe do you feel when you are in your home?	1 = Very safe → <b>SKIP TO 4.7</b> 2 = Somewhat safe → <b>SKIP TO 4.7</b>		3 = Somewhat unsafe 4 = Very unsafe
4.6.1	If SOMEWHAT UNSAFE OR VERY UNSAFE, then ask why they feel unsafe?  (MULTIPLE RESPONSES)	1 = Scared of criminals 2 = Scared of parents		3 = Scared of being alone 99 = Other (specify)

**INTERVIEWER TO READ OUT: Please tell me how often you have seen or heard any of the following in your neighbourhood... CIRCLE THE CORRECT RESPONSE!**

(response options for 4.7-4.14)		Never in My life	Once or Twice in My Life	A few times In my life	Many Times in my life	Number of times in the past 12 months? (WRITE-IN)
4.7	I have heard guns being shot (while in my home or in my neighbourhood)	1	2	3	4	4.7.1
4.8	I have seen somebody arrested	1	2	3	4	4.8.1
4.9	I have seen drug deals	1	2	3	4	4.9.1
4.10	I have seen someone being beaten up	1	2	3	4	4.10.1
4.11	I have seen somebody being stabbed or shot	1	2	3	4	4.11.1

4.12	I have seen someone pull a gun or knife on another person ( <i>but not stabbed or shot</i> )	1	2	3	4	4.12.1
4.13	I have seen gangs in my neighbourhood	1	2	3	4	4.13.1
4.14	I have been chased by a gang	1	2	3	4	4.14.1

### SECTION 5: PROFILE OF SUBSTANCE USAGE

**INTERVIEWER TO READ OUT: The next several questions concern alcohol and/or drugs that you may have consumed. Please answer the questions as honestly as possible and remember that everything you tell me is confidential.**

Have you ever...  (If YES, then ask have you done this in the past 12, months AND how often have you done this)		If YES, have you used this in the past 12 months?	If YES, how often in the last 12 months, have you used...	In the past 7 days, how much money did you spend on.... (if used in the last week)  <i>Answer in Rands</i>
	1 = Yes 2 = NO → <b>SKIP TO NEXT SUBSTANCE</b>	1 = Yes 2 = No → <b>SKIP TO NEXT SUBSTANCE</b>	1 = once/twice 2 = monthly 3 = weekly 4 = daily	
Used alcohol	5.1	5.1.1	5.1.2	5.1.3
Used marijuana / dagga	<b>5.3</b>	<b>5.3.1</b>	<b>5.3.2</b>	<b>5.3.3</b>
Sniffed glue, breathed the contents of aerosol spray cans, or inhaled paints, sprays or benzyn to get high?	5.4	5.4.1	5.4.2	5.4.3
Used tik	<b>5.7</b>	<b>5.7.1</b>	<b>5.7.2</b>	<b>5.7.3</b>
Any other drugs? (explain which drugs, Eg. Nyaope, mandrax/white pipes)  (write-in)	5.8	5.8.1	5.8.2	5.8.3

**If the respondent said NO to questions 5.1-5.8, then skip to SECTION 6! If YES to ANY of Q5.1-5.8 then ask...**

5.9	Has your use of these substances ever made you do something that could be considered wrong or against the law?	1 = No, never 2 = Yes, in the past 12 months 3 = Yes, but not in the past 12 months	
5.10	Have you ever used a <u>firearm, knife, or other weapon</u> while under the influence of any of these substances?	1 = No, never 2 = Yes, in the past 12 months 3 = Yes, but not in the past 12 months	
5.11	Have you ever been involved in a physical fight while under the influence of these substances?	1 = No, never 2 = Yes, in the past 12 months 3 = Yes, but not in the past 12 months	
5.12	Has a friend, or relative, or anyone else, EVER expressed concern about your use of these substances?	1 = No, never 2 = Yes, in the past 12 months 3 = Yes, but not in the past 12 months	
5.13	Have you EVER tried and failed to control, cut down, or stop using any of these substances?	1 = No, never 2 = Yes, in the past 12 months 3 = Yes, but not in the past 12 months	

<b>SECTION 6: EXPERIENCES IN SCHOOL</b>					
<b>(IMPORTANT: ONLY ASK IF RESPONDENT HAS EVER ATTENDED SCHOOL)</b>					
<b>INTERVIEWER TO READ OUT: Next, I'd like to ask you some questions about your experiences at school.</b>					
6.3	In the last year (you were at school), how many times have you been absent from school?	1 = Never 2 = 1-3 times 3 = 4-9 times 4 = 10 or more times			
6.4	Have you ever failed a grade <u>and been forced to repeat (a school year)?</u>	1 = Yes, only once 2 = Yes, more than once 3 = No, never			
<b>INTERVIEWER TO READ OUT: Please tell me whether you agree or disagree with the following statements.</b>					
		Strongly Agree	Agree	Disagree	Strongly Disagree
6.5	You like(d) school a lot	4	3	2	1
6.6	School is (was) boring	4	3	2	1
6.7	You usually finish(ed) your homework	4	3	2	1
6.8	You don't (didn't) really belong at school	4	3	2	1
6.9	Homework is (was) a waste of time	4	3	2	1
6.10	You try (tried) really hard at school	4	3	2	1
6.11	You do (did) poorly at school	4	3	2	1
6.12	Getting good grades is (was) very important to you	4	3	2	1
6.12.1	It is (was) important to me to be considered a clever student by my teacher(s)	4	3	2	1
6.12.2	Teachers at my school are (were) willing to help students	4	3	2	1
6.12.3	Most of my teachers notice(-d) when I am (was) doing a good job and let me know about it	4	3	2	1
6.12.4	I feel (felt) safe at my school	4	3	2	1
6.13	If you could choose on your own between studying to get a good grade on a test or going out with your friends, would (did) you...	1 = Definitely go out with friends 2 = Probably go out with friends 3 = Probably study 4 = Definitely study			
<b>INTERVIEWER TO READ OUT: Next, I'd like to ask you about experiences you may or may not have had while at school.</b>					
6.14	Do (did) you ever fear travelling to or from school?	1 = Yes 2 = No → <b>SKIP TO 6.15</b>			
6.14.0	If yes, why did you fear travelling to or from school?  (open-ended response)				
6.14.1	If YES, during the past 30 days, how many days did you not go to school because you felt you would not be safe travelling to school?	1 = 0 days 2 = 1 day 3 = 2 or 3 days	4 = 4 or 5 days 5 = 6 or more days 6 = Not currently attending school		
<b>INTERVIEWER TO READ OUT: Please tell me how many times, in the last year of school, you had....</b>					

		Never	1-2 times	3-5 times	6-9 times	10-19 times	20 + times	
6.15	Been hit by someone at school	1	2	3	4	5	6	
6.16	Been pushed or shoved by someone at school	1	2	3	4	5	6	
6.17	Been yelled at or called mean names by someone at school	1	2	3	4	5	6	
6.18	Someone at school threatened to hit or physically harm you	1	2	3	4	5	6	
6.19	Been injured by someone with a weapon at school	1	2	3	4	5	6	
6.20	Been forced to do something that you felt was wrong and did not want to do	1	2	3	4	5	6	

### SECTION 7: VICTIMISATION

**INTERVIEWER TO READ OUT: Now, I'd like to ask you some questions about crime you might have experienced. Can you tell me if YOU or ANYONE ELSE IN YOUR HOUSEHOLD had personally experienced any of the following...**

	Ever in your life? 1 = Yes 2 = No → <b>SKIP TO the next crime type asked about</b>	If YES, did this/any of these crime(s) occur in the past 12 months? 1 = Yes 2 = No	Who were the victims? 1 = Me 2 = parent(s) 3 = sibling(s) 4 = grandparent(s) 5 = Other relative 6 = Other caregiver 7 = entire household
Assault (attacked, beaten up by someone)	<u>7.2</u>	<u>7.2.1</u>	<u>7.2.3</u>
Threatened with a weapon	<b>7.2.10</b>	<b>7.2.11</b>	<b>7.2.12</b>
Stabbed or shot with a weapon	<b>7.2.20</b>	<b>7.2.21</b>	<b>7.2.22</b>
Robbery	7.3	7.3.1	7.3.3
Home burglary	7.4	7.4.1	7.4.3
Theft of vehicle or bicycle	7.5	7.5.1	7.5.3
Sexual assault/ Rape	<u>7.7</u>	<u>7.7.1</u>	<u>7.7.3</u>
Murder	<u>7.9</u>	<u>7.9.1</u>	<u>7.9.3</u>
7.10	IF YES TO ANY OF THE ABOVE, THEN ASK: After the crime did you ever feel that you wanted to get the perpetrator back for his/ her actions? (i.e. get revenge on the perpetrator?)		1 = Yes 2 = No → <b>SKIP TO SECTION 8</b>
7.10.1	IF YES to 7.10, Did you ever act on these feelings?		1 = Yes 2 = No → <b>SKIP TO SECTION 8</b>
7.10.2	If YES to 7.10.1, what did you do?  (OPEN-ENDED RESPONSE)		

**SECTION 8: ATTITUDES TOWARD GANGS**

**INTERVIEWER TO READ OUT: Now, I'm going to ask you some questions about your attitudes toward gangs. A gang refers specifically to a group of people who commits acts of crime or violence. Please indicate how true the following statements are for you. (PLEASE CIRCLE THE CORRECT RESPONSE)**

		Not true for me	Somewhat true for me	Very true for me
8.1	I think you are safer, and have protection, if you join a gang	0	1	2
8.2	I will probably join a gang	0	1	2
8.3	Some of my friends at school belong to gangs	0	1	2
8.4	I think it's cool to be in a gang	0	1	2
8.5	My friends would think less of me if I joined a gang	0	1	2
8.6	I believe it is dangerous to join a gang	0	1	2
8.7	I think being in a gang makes it more likely that you will get into trouble	0	1	2
8.8	Some people in my family or household belong to a gang, or used to belong to a gang	0	1	2
8.9	I belong to a gang	0	1	2
8.9.1	(If Yes, then why?)  (OPEN-ENDED RESPONSE)			
8.10	People think I'm a gangster	0	1	2
8.11	I feel pressure by other people to join a gang	0	1	2

**SECTION 10: GENERAL BELIEFS AND ATTITUDES TOWARD VIOLENCE**

**INTERVIEWER TO READ OUT: Please tell me how much you agree or disagree with the following statements. (CIRCLE THE APPROPRIATE RESPONSE)**

		Strongly Agree	Agree	Disagree	Strongly Disagree
10.1	If I walk away from a fight, I'd be a coward.	1	2	3	4
10.2	I don't need to fight because there are other ways to deal with being mad.	1	2	3	4
10.3	It is sometimes okay for people to be discriminated against or physically harassed because of their nationality.	1	2	3	4
10.4	A guy shows he really loves his girlfriend if he gets in fights with other guys about her.	1	2	3	4
10.5	It's okay to hit someone who hits you first.	1	2	3	4
10.6	People from other races, sometimes deserve to be discriminated against or physically harassed.	1	2	3	4
10.7	Sometimes a person doesn't have any choice but to fight.	1	2	3	4

10.7.1	If agree, when is it ok to use violence? <i>(OPEN-ENDED RESPONSE)</i>				
		Strongly Agree	Agree	Disagree	Strongly Disagree
10.8	If people do things to make me really mad, they deserve to be beaten up.	1	2	3	4
10.9	It is sometimes okay for people to be discriminated against or physically harassed because of their sexual orientation.	1	2	3	4
10.13	If someone disrespects me, I have to fight them to get my pride back	1	2	3	4
10.14	You've got to fight to show people you're not a wimp	1	2	3	4
10.15	Carrying a gun makes people feel safe	1	2	3	4
10.16	I have threatened people I know	1	2	3	4
10.17	I get into fights a little more than the average person	1	2	3	4
10.18	Some of my friends think I am a hothead	1	2	3	4
10.19	I get angry easily	1	2	3	4
10.20	I am hard to get along with most of the time	1	2	3	4
10.21	If you mess with me/my friends, you will get hurt	1	2	3	4
10.22	How many physical fights have you been in within the past year?	0= none 1=one only	2= two or three 3= four or five 4=six or more		
<b>INTERVIEWER TO READ OUT: Please tell me what your response would most likely be in the following scenarios.</b>					
10.10	If you witnessed one of your friends being attacked by someone of a different nationality or culture, what would you do?	1 = Defend your friend 2 = Try to break up the fight 3 = Try and get an adult to intervene	4 = Help your friend 5 = Walk away 6 = Do nothing 99 = Other (specify)		
10.11	If you witnessed one of your friends physically attacking someone because of their sexual orientation (because they are gay/lesbian), what would your most likely response be?	1 = Try to break up the fight 2 = Try and get an adult to intervene 3 = Help your friend, he/they must have a reason 4 = Walk away 5 = Do nothing 99 = Other (specify)			
10.12	If you witnessed one or more of your friends physically attacking someone because of their nationality (because they are a foreigner), what would your most likely response be?	1 = Try to break up the fight 2 = Try and get an adult to intervene 3 = Help your friend/s, he/they must have a reason 4 = Walk away 5 = Do nothing 99 = Other (specify)			
<b>SECTION 11: SOCIAL CAPITAL</b>					

Do you participate in any of the following activities...?  <b><i>(IF YES to any of the following, THEN ASK, <u>how often</u>)</i></b>	1 = Yes 2 = No→ <b><i>SKIP to next activity</i></b>	If yes, what is the name of this organisation?	If yes, <u>how often</u> ? 1 = Daily 2 = Weekly 3 = Monthly 4 = Less than monthly
Youth group?	11.1	11.1.1	11.1.2
Sports group/ teams?	11.2	11.2.1	11.2.2
Drama/ theatre group?	11.3	11.3.1	11.3.2
Do you participate in any of the following activities...?  <b><i>(IF YES to any of the following, THEN ASK, <u>how often</u>)</i></b>	1 = Yes 2 = No→ <b><i>SKIP to next activity</i></b>	If yes, what is the name of this organisation?	1 = Daily 2 = Weekly 3 = Monthly 4 = Less than monthly
Dance group?	11.4	11.4.1	11.4.2
Choir/singing group?	11.5	11.5.1	11.5.2
Community safety project/ CPF/ block watch/street committee?	11.6	11.6.1	11.6.2
Arts and crafts programme?	11.7	11.7.1	11.7.2
Any other social programme (specify)?	11.8	11.8.1	11.8.2
<b>NB - IF YES TO ANY OF THE ABOVE...THEN ASK 11.9 and 11.10</b>			
11.9	<b>ONLY ASK IF YES TO ANY OF THE ABOVE</b> Which one of the above activities are your favourite?  (ONE answer only)	1 = Youth group 2= Sports group or team 3 = Drama/ theatre group 4 = Dance/cultural group 5 = Choir or singing group	6=Community safety project/ CPF/blockwatch 7 = Amandla Edu-Football programmes 8 = Arts & crafts programme 9 = Other social activity (specify)
11.10	<b>What is the main benefit from participation or membership in this group or activity?</b>	1 = Important in times of emergency 2 = Benefits the community 3 = Enjoyment/ relaxation/ recreation 4 = Spiritual/ social status/ self- esteem 99= Other (specify)	
<b>SECTION 12: GENERAL HEALTH: OVER THE PAST 4 WEEKS, HAVE YOU?</b>			
12.1	Been feeling perfectly well and in good health?	1 = Better than usual 2 = Same as usual	3 = Worse than usual 4 = Much worse than usual
12.2	Had difficulty falling asleep or staying asleep?	1 = Not at all 2 = No more than usual	3 = more than usual 4 = Much more than usual
12.3	Feel calm and can sit still easily?	1 = Better than usual 2 = Same as usual	3 = Worse than usual 4 = Much worse than usual
12.4	Been getting edgy and bad-tempered?	1 = Not at all 2 = No more than usual	3 = more than usual 4 = Much more than usual
12.5	Been getting scared or panicky for no good	1 = Not at all	3 = More than usual

	reason?	2 = No more than usual	4 = Much more than usual	
12.6	Felt that life isn't worth living?	1 = Not at all 2 = No more than usual	3 = More than usual 4 = Much more than usual	
12.7	Feel like you have too many problems to deal with right now	4=strongly agree 3=agree	2=disagree 1=strongly disagree	
12.8	I think I am healthy and in good shape	4=strongly agree 3=agree	2=disagree 1=strongly disagree	
12.9	I don't care about my health	4=strongly agree 3=agree	2=disagree 1=strongly disagree	

### SECTION 13: AMANDLA EDU-FOOTBALL KNOWLEDGE AND PARTICIPATION

13.1	Have you ever heard of Amandla Edu-Football, the org that runs programmes <u>at the field</u> next to Ikhusi Primary School? <i>(In Kagiso: Shongi Field, Soul City)</i>	1 = Yes 2 = No → <b>SKIP TO SECTION 14</b>		
13.1.1	If YES, have you ever participated in any of their activities?	1 = Yes 2 = No → <b>SKIP TO SECTION 14</b>		
13.1.1.1	If Yes, How often did you (do you currently) participate in Amandla Edu-Football activities at Ikhusi Primary School field? <i>(In Kagiso: Shongi Field, Soul City)</i>	1=less than monthly 2=Once/month 3=once/week	4=Twice/week 5=More than twice/week	
13.1.2	If YES (ever participated), are you currently involved in any of their activities?	1 = Yes 2 = No → <b>SKIP TO 13.1.5</b>		
13.1.3	Which Amandla Edu-Football activities are you currently involved in?  (MULTIPLE RESPONSE = MAXIMUM 3 ANSWERS)	1 = After-school soccer league (Under-14 Boys, Under-19 Boys) 2 = Friday night soccer league 3 = Life skills/training sessions 4 = Leadership Programme X = Other (please specify)		
13.1.3.1	Please name any one of the coaches/staff members at Amandla Edu-Football <i>(write-in if know)</i>			
13.1.4	Please tell me WHY you participate in the Amandla Edu-Football programmes?  (OPEN-ENDED RESPONSE) → <b>Then go to 13.1.6</b>			
13.1.5	If NO, is there any particular reason why you have stopped participating in the Amandla Edu-Football programmes? What are these? (OPEN-ENDED RESPONSE)			
13.1.6	How long have you been participating in the Amandla programmes? (or had you participated in...)	1 = Less than 3 months 2 = 3-6 months 3 = 7 months to 1 year 4 = Between 1 and 2 years 5 = 2 or more years		
13.1.7	Do any of your friends participate in the Amandla programmes?	1 = Five or more friends 2 = Three to four friends 3 = One or two friends 4 = No, none of my friends		
13.1.8	(Apart from your friends) Do you socialise with any other Amandla participants outside of the programme activities?	1 = Yes, all of the time 2 = Yes, some of the time 3 = No, never		

### SECTION 14: SELF-REPORTED OFFENDING

**INTERVIEWER TO READ OUT: Now, I'd like to ask you about things that you may or may not have done, ever, and in the past 12 months.**

Have you ever...		If YES, have you	If YES, how many times
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<i>(If YES, then ask have you done this in the past 12, months AND how often have you done this)</i>	1 = Yes 2 = No → <b>SKIP TO NEXT ACTIVITY</b>	<b>done this in the past 12 months?</b> 1 = Yes 2 = No → <b>SKIP TO NEXT ACTIVITY</b>	<b>in the last year?</b> 1 = One time 2 = Two to three times 3 = Four to five times 4 = Six or more times
Stolen money or something else from another person Without them knowing?	14.1	14.1.1	14.1.2
Carried a gun, knife or a weapon for protection?	14.2	14.2.1	14.2.2
Used force, threats or a weapon to steal money or Something else from somebody/said that you would hurt someone if they did not do what you told them to?	14.3	14.3.1	14.3.2
If Yes, for what reason?  (OPEN ENDED)	14.4		
Got into or broken into a house/building to try to steal something?	14.5	14.5.1	14.5.2
Set fire to or tried to set fire to something on purpose	14.6	14.6.1	14.6.2
If yes, under what circumstances?  (OPEN ENDED RESPONSE)	14.7		
<b>Have you ever...</b>  <i>(If YES, then ask have you done this in the past 12, months AND how often have you done this)</i>	1 = Yes 2 = No → <b>SKIP TO NEXT ACTIVITY</b>	<b>Have you done this in the past 12 months?</b> 1 = Yes 2 = No → <b>SKIP TO NEXT ACTIVITY</b>	<b>Number of times in the past year?</b> 1 = One time 2 = Two to three times 3 = Four to five times 4 = Six or more times
Hit, kicked or punched somebody else on purpose?	14.8	14.8.1	14.8.2
IF YES, under what circumstances? Were you provoked?  (OPEN ENDED RESPONSE)	14.9		
Forced anyone to engage in sexual activity with you when they did not want to?	14.10	14.10.1	14.10.2
If yes, for what reason?  (OPEN ENDED RESPONSE)	14.11		
Taken or tried to take a car, van or motorbike and drive it away without the owner's permission?	14.12	14.12.1	14.12.2

Deal in marijuana (dagga), i.e. sell, make or smuggle marijuana?	14.13	14.13.1	14.13.2
Deal in any drugs other than marijuana (dagga), i.e. sell, make or smuggle any other drugs?	14.14	14.14.1	14.14.2
Used a weapon to threaten or injure someone else?	14.15	14.15.1	14.15.2
IF YES, under what circumstances? Were you provoked?  (OPEN ENDED)	14.16		
Driven a vehicle while YOU were under the influence of alcohol?	14.17	14.17.1	14.17.2
Been involved in any gang fights?	14.18	14.18.1	14.18.2
IF YES, under what circumstances (were you involved in gang fight(s)? Were you provoked or forced?  (OPEN ENDED)	14.19		
<b>IF THE RESPONDENT HAS ENGAGED IN ANY OF THESE BEHAVIOURS EVER IN THEIR LIVES, BUT HAVE NOT DONE SO IN THE LAST 12 MONTHS, THEN ASK....</b>			
14.20	Is there any particular reason why you are no longer engaging in this behaviour(s)?	1 = Yes 2 = No → <b>SKIP TO SECTION 15</b>	
14.20.1	If YES, then what was this reason?  (OPEN-ENDED QUESTION)		
<b>SECTION 15: PERCEPTIONS OF AUTHORITY</b>			
15.1	When you have a personal problem you need help with, who is the FIRST person you would go to for help?	1 = Parents 2 = Brothers/sisters 3 = Other relatives 4 = Friends 5 = Amandla Edu-Football Staff	6 = Teachers/principal 7 = Police 8 = No-one 9 = Neighbour 10 = Religious leader 99 = Other (specify)
15.2	If you saw someone committing a crime, such as stealing a cell phone from another person or threatening another person with a gun, would you report it to the police?	1 = Yes → <b>SKIP TO 15.3</b> 2 = No	
15.2.1	If NO or (DON'T KNOW), why would you not report it?	1 = Not my business 2 = Too scared 3 = Don't think it would help	

		4 = I don't trust the police 99 = Other (specify)	
15.3	If you saw someone committing a crime, such as stealing a cell phone from another person or threatening another person with a gun, would you report it to anyone else, such as your parents or neighbours?	1 = Yes 2 = No	

**SECTION 16: ATTITUDES TOWARDS SEX**

**INTERVIEWER TO READ OUT: Next, I'd like to ask you a few questions that explore your attitudes towards sex. (PLEASE CIRCLE THE APPROPRIATE RESPONSE)**

		Agree	Undecided	Disagree
16.1	Most women like to show off their bodies.	3	2	1
16.2	On a date, the man should be expected to pay all expenses.	3	2	1
16.3	Girls should have the same freedoms as boys.	3	2	1
16.4	If a woman wears revealing clothing, then it is her fault if a man forces her to have sex with him.	3	2	1
16.5	If a young man gets an erection, then it is a sign that he <b>Must</b> have sex with someone.	3	2	1
16.6	If I buy somebody a drink or take them on a date, then it is my right to have sex with them.	3	2	1

**SECTION 17: VIEW OF THE FUTURE**

**INTERVIEWER TO READ OUT: I'd like to ask you a few questions on how you feel about your future. Please tell me whether you agree or disagree with the following statements...**

		1 = Strongly Agree	2 = Agree	3 = Disagree	4 = Strongly disagree
17.1	I have specific goals in my life I want to achieve.	1	2	3	4
17.2	I have a good idea of where I am going in my life.	1	2	3	4
17.3	My own efforts and actions are what will determine my future.	1	2	3	4
17.4	I feel that I would be able to cope with difficult situations that may present themselves in the future.	1	2	3	4
17.5	No matter how hard I try I will never be able to achieve my goals in life.	1	2	3	4
17.6	I am good at deciding whether a risk is worth taking.	1	2	3	4
17.7	I am able to survive on my own if I have to.	1	2	3	4
17.8	I feel proud that I have accomplished things in my life.	1	2	3	4
17.9	It is okay if there are people who do not like me.	1	2	3	4
17.10	I am as popular with kids my own age as I want to be.	1	2	3	4
17.11	There are some things I would not do to gain the respect of my friends.	1	2	3	4

17.12	I sometimes think that I am a failure (a loser).	1	2	3	4	
17.13	I am as good a person as I want to be.	1	2	3	4	
17.13.1	I will study further after school	1	2	3	4	
17.13.2	I Will find a job I will enjoy	1	2	3	4	
17.13.3	I will have a happy family life	1	2	3	4	
17.13.4	You will succeed in doing what is most important for you	1	2	3	4	
17.14	I would like to know how you feel about your future opportunities to be successful and prosper, would you say.... READ OUT OPTIONS (ALLOW ONLY ONE RESPONSE)	1 = Your opportunities are limitless 2 = You have many opportunities 3 = Your opportunities are very limited 4 = You have no opportunities at all				
17.15	What do you see as your possible future and how will you get there?  (OPEN-ENDED RESPONSE)					

**INTERVIEWERS PLEASE NOTE!!!!**

**THIS IS THE END OF THE YOUTH QUESTIONNAIRE. PLEASE THANK THE YOUNG PARTICIPANTS FOR THEIR WILLINGNESS TO PARTICIPATE IN THE STUDY.**

**THE NEXT SECTION, SECTION 18, IS FOR THE MOTHERS OR FEMALE CAREGIVERS OF THE MALE PARTICIPANTS INTERVIEWED ONLY!!!!!!**

**SECTION 18: FEMALE PARENT/CAREGIVER ITEMS**

**INTERVIEWER TO READ OUT: If it's okay, I'd like to ask you a few questions about your son and his behaviour within the home. Please tell me how often the following attributes describe your son...**

	(READ OUT THE RESPONSE OPTIONS)	1 = Almost always	2 = Often	3 = Sometimes	4 = Seldom	5 = Never
18.1	Is considerate of other people's feelings?	1	2	3	4	5
18.2	Is generally obedient, usually does what you request?	1	2	3	4	5
18.3	Does not obey our family rules on his own.	1	2	3	4	5
18.4	Has a hot temper?	1	2	3	4	5
18.5	Is very moody and easily upset?	1	2	3	4	5
18.6	Hits parents/caregivers.	1	2	3	4	5
18.7	Is helpful around the house and towards others?	1	2	3	4	5
18.8	Fights with his siblings or other members of the household?	1	2	3	4	5
18.9	Gets into trouble at school, work and/or in the community?	1	2	3	4	5

18.10	How much time do you spend per day doing things with your child/children such as talking, playing a game, or going out? (i.e. during the week)	1 = None 2 = 1 hour or less 3 = 1 - 2 hours 4 = 2 -4 hours 5 = More than 4 hours	
18.11	Do you feel that the rules in your family are clear?	1 = Yes 2 = No	
<b>INTERVIEWER TO READ OUT: How often do you fight with your son about...?</b>			
18.12	What he does when he is out? (not at home)	1 = Often 2 = Sometimes	3 = Hardly ever 4 = Never
18.13	What time he comes home when he has been out?	1 = Often 2 = Sometimes	3 = Hardly ever 4 = Never
18.14	Having bad or dangerous friends?	1 = Often 2 = Sometimes	3 = Hardly ever 4 = Never
18.14.2	Has your son ever failed a grade and been forced to repeat?	1= yes, only once 2=yes, more than once 3= No, never	
18.15	Have you noticed any changes in your son's behaviour in the last 12 months?	1 = Yes 2 = No → <b>END THE INTERVIEW</b>	
18.15.1	If YES, then how has his behaviour changed?  (OPEN-ENDED QUESTION)		
18.15.2	If YES, then why do you think his behaviour has changed?  (OPEN-ENDED QUESTION)		

### Wave 3 Questionnaire



### FIELD STUDY

March – May, 2014

Hello. My name is \_\_\_\_\_. I am part of a team doing follow-up research in Khayelitsha on a local violence prevention project. The study is conducted on behalf of the International Committee of the Red Cross (ICRC). This is a follow-up interview with subjects who were interviewed in March 2013.

You may choose to participate, or refuse to participate in the study. **All the information collected will be anonymous and kept completely confidential.** No-one but myself and the ICRC research team will be able to see any of the answers you give me. If you agree to participate in the study, you may stop the interview at any time should you feel uncomfortable with any of the questions being asked.

Should you have any further questions on the study that I cannot answer, please do not hesitate to contact my supervisor, \_\_\_\_\_ (name) on \_\_\_\_\_ (mobile), or Ian Edelstein, the lead ICRC researcher responsible for the project, on 082-559-2046.

Do you have any questions? YES  NO

Do you agree to participate in the study? YES  NO

Signed: (name) \_\_\_\_\_ (date) \_\_\_\_\_

Print complete name: \_\_\_\_\_

For children UNDER16 years of age only – complete IN ADDITION TO the above

### CAREGIVER CONSENT

Should you consent to allow your child or the child in your care, to participate in the study, please sign and date the form below.

I, (name) \_\_\_\_\_ consent to allow my child (name) \_\_\_\_\_ to

participate in this baseline study. I understand that my child will be allowed to stop the process at any stage, or may, himself, refuse to participate in the study.

Signed \_\_\_\_\_ (date) \_\_\_\_\_

## HOUSEHOLD SELECTION DATA

<b>Province</b>	1 = Gauteng 2 = Western Cape	
<b>Name of city/community</b>	1 = Khayelitsha 2 = Kagiso 3 = Mannenberg/Lavis	
<b>Area/zone/section name</b>		
<b>Household No. (and street name if available. Give complete details)</b>		
<b>Full contact name / number</b>		
<b>Alternate contact number</b>		
<b>Fieldworker name</b>		

## INTERVIEWER VISITS

	1	2	3
DATE	_____	_____	_____
INTERVIEWER'S NAME	_____	_____	_____
*RESULT	_____	_____	_____
NEXT VISIT:      DATE TIME	_____	_____	
1 = Completed 2 = No suitable respondent at home 3 = No suitable respondent lives in household 4 = Entire household absent for extended period of time 5 = Postponed 6 = Refused 7 = Dwelling not found 8 = Incomplete			

SUPERVISOR	QUALITY CONTROLLER	CAPTURED BY
NAME _____	NAME _____	NAME _____
DATE _____	DATE _____	_____

SECTION 1: DEMOGRAPHICS			
INTERVIEWER TO READ OUT: I'm going to start by asking you a few simple questions about yourself.			
1.3	How many years-old are you now?		Years
1.4	Please tell me when your birthday is?	dd/mm/yyyy	
1.5	Do you have any biological children? <i>(any children of your own)</i>	1 = Yes 0 = No → <b>SKIP TO 1.6</b>	
1.5.2	If YES, does this child (or any of these children) live with you most of the time?	1 = Yes 0 = No	
1.6	What is your highest level of school education completed thus far?	1 = In grade 1-11 → <b>SKIP TO 1.8</b> 2 = Passed Matric, Grade 12 → <b>GO TO 1.7</b> 3 = Failed Matric, Grade 12 → <b>GO TO 1.7</b>	4 = Stopped school before Grade 12 → <b>GO TO 1.7</b> 99 = Never attended school → <b>SKIP TO 1.9</b>
1.7	What is the highest <b>post-school</b> (after high school) qualification you have completed (i.e. tertiary education)?	1=Undergraduate degree (Bachelors) 2=Postgraduate degree (Honours/Masters) 3 = Diploma	4=Certificate (not high school) 5 = Still studying at Tertiary 99 = Other (specify)
1.8	Are you currently attending classes/courses of any kind?	1 = Yes 0 = No	
1.9	(In addition to your schooling) Have you received any other form of skills training?	1 = Yes 0 = No → <b>SKIP TO 1.10</b>	
1.9.1	If YES, then what was the nature of this training?	1 = Computer literacy 2 = Computer programming 3 = Book keeping	4 = Trade skills (e.g. carpentry, panel work) 5 = Nursing/home-based care 99 = Other (specify)
1.10	What is your employment status? <b>(school students must choose options 1, 2, or 4, not 99)</b>	1 = Unemployed, seeking work 2 = Unemployed, NOT seeking work, do NOT WANT to 3 = Temporary or seasonal labour (e.g. fishermen)	4 = Part-time employed 5 = Full-time employed 6 = Self employed 99 = Other (specify)
1.11	Do you have a physical disability that affects your everyday activities?	1 = Yes 0 = No	
SECTION 2: HOME ENVIRONMENT			
INTERVIEWER TO READ OUT: Next I'd like to ask you some questions about your family and home environment.			
2.2	How many people live in your household normally (including yourself)?		No.
2.3	How many people in this household have permanent work or a stable source of income (not including government grants)?		No.
2.4	Housing type	1 = Free standing house/townhouse/duplex 2 = Flat, multiple rooms 3 = Flat, single room 4 = Hostel	5 = Backyard shack 6 = Squat/shack/other informal room not in backyard 7 = RDP / low income housing 8= Other formal housing
2.5	What kind of toilet does this house use?	1 = None (bush, buckets, sand dunes, etc.) 2 = Flush toilets 3 = Single household pit latrine / ventilated pit latrine (VIPS / portable / chemical toilet 4 = Communal Pit latrines / ventilated pit latrines (VIPS / portable / chemical toilets	
2.6	Which of the following do you or your household have at home? <b>(Please select as many as necessary)</b>	1 = Television 2 = Electricity 3 = Motor car (automobile)	4 = Cell phone 5 = Refrigerator

2.8	Does anyone in this household receive any form of government grant (e.g. pension, child care, or disability grant etc.)?	1 = Yes 0 = No	
2.9	Is your birth mother alive?	1 = Yes 0 = No	
2.10	Is your birth father alive?	1 = Yes 0 = No	

**INTERVIEWER TO READ OUT: In the past 12 months, HAVE YOU?**

		0 = Never	1 = Sometimes	2 = Often
Spent a lot of time with your father?		2.11.1		
Spent a lot of time with your mother?		2.12.1		
Received financial support from your mother?		2.13.1		
Received financial support from your father?		2.14.1		
Received emotional support from your mother?		2.15.1		
Received emotional support from your father?		2.16.1		
2.17	Which parent do you think knows the most about you?	1 = Both mother and father 2 = Mother only	3 = Father only 4 = No-one	5 = Other primary caregiver/s
2.23	Has any member of your family ever been in prison?	1 = Yes	0 = No → <b>SKIP TO 2.24</b>	
2.23.1	If YES, is this member currently in prison serving a sentence?	1 = Yes	0 = No	
2.23.2	Who is/was this (these) person(s)?  (MULTIPLE RESPONSES POSSIBLE-UP TO 3)	1 = Both parents 2 = Mother only 3 = Father only	4 = Partner 5 = Older brother/sister 6 = Grandparents(s)	7 = Other relatives 8 = me 99 = Other (specify)

**INTERVIEWER TO READ OUT: In the last 12 months, how often have you or your household....**

		Never	Once/Twice	A few times	Many times	Always
2.24	Gone without enough food to eat?	0	1	2	3	4
2.25	Gone without medicine or medical treatment that you needed?	0	1	2	3	4
2.26	Gone without a cash income?	0	1	2	3	4
2.28	Gone without shelter?	0	1	2	3	4
2.29	Gone without electricity in your home?	0	1	2	3	4
2.30	Gone without enough fuel (electricity, propane, paraffin, wood, coal) to heat your home or cook with?	0	1	2	3	4

**INTERVIEWER TO READ OUT: During the week, and during term time, how much time do you spend (WHEN NOT AT SCHOOL OR WORK) engaging in the following activities? INDICATE HOURS SPENT PER WEEK.**

		0= none, less than 1 hr. 1 = 1-5 hours	2 = 6-10 hours 3 = 11-15 hours	4 = 16-20 hours 5 = 21+ hours
Doing homework (school-related)		2.38		
Doing Household chores (e.g. cooking, cleaning, fetching water)		2.39		
Meeting friends (outside of Amandla Edu-Football)		2.41		

Sports activities (outside of Amandla Edu-Football)		2.42			
Other (specify, i.e. after-school programmes, extra lessons, NOT related to Amandla Edu-Football) <i>(specify)</i>		<b>2.44</b>			
Time spent per week watching TV		<b>2.44.1</b>			
Time spent per week playing video games		<b>2.44.2</b>			
Time spent per week using/playing/chatting with cell phone		<b>2.44.3</b>			
<b>INTERVIEWER TO READ OUT: Now, I would like to ask you some questions about your relationship and interactions with your parents/caregivers...</b>					
2.45	On average, how many nights a week do you go out?	1 = 1 or 2 nights 2 = 3 or 4 nights	3 = 5 to 7 nights 4 = Varies too much to say 99= Don't go out, <b>skip to q2.47</b>		
2.46	What time do you usually return home after you've been out at night?	1 = Between 6 and 8 pm 2 = After 8pm but before 10 pm	3 = Between 10pm and 12am 4 = After 12am-midnight 5 = Varies too much to say		
(response options for 2.47-2.60)		1= often/ always	2= sometimes	3=Hardly ever	4= never
2.47	Do you feel that the rules in your family are clear?	1	2	3	4
2.48	Do you need permission from any of your parents/caregivers when you go out?	1	2	3	4
2.49	Do any of your parents/caregivers know where you are when you are not at home?	1	2	3	4
2.51	How often are you in trouble with any of your parents/caregivers?	1	2	3	4
2.54	How often do any of your parents/caregivers check or ask whether you have done your homework?	1	2	3	4
2.55	How often do any of your parents/caregivers attend school meetings?	1	2	3	4
2.56	How often do any of your parents/caregivers shout at you?	1	2	3	4
2.57	How often do any of your parents/caregivers hit, slap, beat, or in any other way, physically hurt you?	1	2	3	4
2.58	How often do any of your parents/caregivers lock you into or out of the house?	1	2	3	4
2.59	How often do any of your parents/caregivers refuse to give you food (when there is food in the house)?	1	2	3	4
2.60	How often do your parents/caregivers punish you when you do not obey their rules or instructions?	1	2	3	4
2.61	What do they do when you disobey them?  (OPEN-ENDED RESPONSE)				
2.62	My parent(s)/caregiver(s) give me good advice	1	2	3	4
2.63	My parent(s)/caregiver(s) show their love for me	1	2	3	4
2.64	My parent(s)/caregiver(s) show their interest in my friends	1	2	3	4
2.65	My parent(s)/caregiver(s) make me feel good when I am with them.	1	2	3	4
2.66	There is someone in my home who drinks too much wine/alcohol	1	2	3	4

<b>2.67</b>	My parent(s) show that they are proud of me	1	2	3	4
<b>2.68</b>	I often feel unwanted at home	1	2	3	4

**SECTION 3: NEIGHBOURHOOD (interviewer to read out):** Next I'd like to ask you some questions about your neighbourhood, and how you feel about living here. *(By neighbourhood, I mean the area in which you live).* Please tell me if you agree or disagree with the following statements.

3.1	How long have you lived in this neighbourhood?				<b>Years</b>
3.2	I like my neighbourhood	1 = Strongly agree 2 = Agree	3 = Disagree 4 = Strongly disagree		
3.3	Most people in my neighbourhood are willing to help if you need it	1 = Strongly agree 2 = Agree	3 = Disagree 4 = Strongly disagree		
3.4	Most people in my neighbourhood can be trusted	1 = Strongly agree 2 = Agree	3 = Disagree 4 = Strongly disagree		
3.5	There are people in my neighbourhood that I can talk to about things that are important to me	1 = Strongly agree 2 = Agree	3 = Disagree → <b>SKIP TO 3.6</b> 4 = Strongly disagree → <b>SKIP TO 3.6</b>		
3.5.1	If AGREE, then who are these people (what organisation are they from)?  (MULTIPLE RESPONSE-MAX 3 ANSWERS)	1 = Police Officer 2 = NGO/volunteer group 3 = School staff or educator 4 = Childline/safeline member 5 = Street committee member 6 = Social worker	7 = Family members 8 = Church or mosque 9 = Amandla Edu-Football staff 10 = Neighbour 99 = Other (please specify)		
3.6	There are people in my neighbourhood or family who I look up to? (role-models)	1 = Strongly agree 2 = Agree	3 = Disagree → <b>SKIP TO 3.7</b> 4 = Strongly disagree → <b>SKIP TO 3.7</b>		
3.6.1	If AGREE, then who are these individuals?  (MULTIPLE RESPONSE– MAX 3 ANSWERS)	1 = Police officer 2 = NGO/volunteer group member 3 = School staff/ educator 4 = Childline/safeline member 5 = Street committee 6 = Social worker	7 = Family members 8 = Church/religious official 9 = Amandla Edu-Football staff 10 = Sporting personality 99 = Other (please specify)		
3.7	I have many friends in my neighbourhood.	1 = Strongly agree 2 = Agree	3 = Disagree 4 = Strongly disagree		
3.8	Have you changed homes in the past 12 months?	1 = Yes 0 = No → <b>SKIP TO 3.9</b>			
3.8.1	If YES, please tell me how many times you have moved homes in the past 12 months.				Times

**INTERVIEWER TO READ OUT: Please tell me if any of the following describe the area in which you live...**

3.9	Lots of crime?	1 = All of the time 2 = Most of the time	3 = Sometimes 4 = Never		
3.10	Lots of fights?	1 = All of the time 2 = Most of the time	3 = Sometimes 4 = Never		
3.11	Sometimes living in my neighbourhood is like being in a war zone	1 = All of the time 2 = Most of the time	3 = Sometimes 4 = Never		
3.12	Generally, how safe do you feel in your neighbourhood?	1 = Very safe → <b>SKIP TO 3.13</b> 2 = Somewhat safe → <b>SKIP TO 3.13</b>	3 = Somewhat unsafe 4 = Very unsafe		
3.12.1	IF SOMEWHAT UNSAFE OR VERY UNSAFE, why do you say this?  (MULTIPLE RESPONSE-LIST TOP 3 ANSWERS)	1 = Have been a victim of crime in the past and scared of a repeat 2 = Crime is common in this area 3 = There are bad, dangerous people in this area 4 = I feel alone/isolated 5 = There's so much crime reported, I'm scared of it happening to me 99 = Other (please specify)			
3.13	Generally, at home, school, or	1 = Murder	7 = Guns		

anywhere else, what are the things that make you most scared? (MULTIPLE RESPONSE – RANK TOP 3 ANSWERS)	2 = Rape/sexual assault 3 = Fighting 4 = Getting a girl pregnant 5 = Theft/mugging 6 = Verbal abuse/being teased	8 = Getting HIV/AIDS 9 = Gangs (gang) 10 = Nothing 99 = Other (please specify)	
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**INTERVIEWER TO READ OUT: Now, I'd like to ask you a few questions about people you may know who may or may not be involved in any illicit activities. Without mentioning any names...**

3.23	Have any of your <u>friends</u> bought drugs in the past year?	4 = Every day 3 = Often	2 = Once/twice 1 = Never
3.24	Have any of your <u>siblings</u> (living in your household) bought drugs in the past year?	4 = Every day 3 = Often	2 = Once/twice 1 = Never
3.25	Has anyone, in the past year, tried to sell or give you any drugs?	4 = Every day 3 = Often	2 = Once/twice 1 = Never
3.26	I do not want to know any details but do any of your <u>friends</u> regularly use or sell drugs? <i>(Interviewers please note change in response options!!)</i>	4 = Five+ <u>friends</u> 3 = Three or four	2 = One or two 1 = None of my <u>friends</u>
3.27	No details but do any of your <u>siblings</u> (living in your household) regularly use or sell drugs?	4 = Five+ <u>siblings</u> 3 = Three or four	2 = One or two 1 = None of my <u>siblings</u>
3.28	No details but do you know <u>anyone</u> else in your community who regularly uses or sells drugs?	4 = Five+ <u>people</u> 3 = Three or four	2 = One or two 1 = No one I know
3.28.1	Have any of your <u>friends</u> dropped out of school?	4 = Five+ <u>friends</u> 3 = Three or four	2 = One or two 1 = None of my <u>friends</u>
3.28.2	Have any of your <u>friends</u> been at court because of their behaviour?	4 = Five+ <u>friends</u> 3 = Three or four	2 = One or two 1 = None of my <u>friends</u>
3.28.3	Have any of your <u>friends</u> skipped school a lot without permission?	4 = Five+ <u>friends</u> 3 = Three or four	2 = One or two 1 = None of my <u>friends</u>
3.28.4	Do any of your <u>friends</u> smoke cigarettes on a pretty regular basis?	4 = Five+ <u>friends</u> 3 = Three or four	2 = One or two 1 = None of my <u>friends</u>
3.28.5	Do any of your <u>friends</u> go out in the evening without their parents' permission?	4 = Five+ <u>friends</u> 3 = Three or four	2 = One or two 1 = None of my <u>friends</u>
3.28.6	Do any of your <u>friends</u> drink wine/alcohol fairly regularly?	4 = Five+ <u>friends</u> 3 = Three or four	2 = One or two 1 = None of my <u>friends</u>
3.28.7	I don't mind my <u>friends</u> using drugs around me.	4 = Strongly agree 3 = Agree	2 = Disagree 1 = Strongly disagree
3.28.8	I have <u>friends</u> who carry weapons sometimes	4 = Five+ <u>friends</u> 3 = Three or four	2 = One or two 1 = None of my <u>friends</u>

**INTERVIEWER TO READ OUT: I don't want to know any names, but do you personally know people who live in your neighbourhood who...**

3.29	Do any other things that could get them into trouble with the police, such as stealing, selling stolen goods, mugging or assaulting others?	4 = Five+ <u>people</u> 3 = Three or four	2 = One or two 1 = No one I know
3.30	Make a living from crime?	1 = Yes 2 = No → <b>SKIP TO 3.31</b>	
3.30.1	If YES, what type of crime does this person do (MOST, if more than one)?  ONE ANSWER ONLY	1 = Theft 2 = Robbery 3 = Assault 4 = Housebreaking	5 = Vehicular crimes (including hijacking) 6 = Drug-related crimes 99 = Other (specify)
3.31	Do you personally know anyone living in your area who is or has been in jail?	1 = Yes 2 = No → <b>SKIP TO 3.32</b>	
3.31.1	If YES, is this person(s) older than 22 years?	1 = Yes 2 = No	
3.32	Have any of your <u>friends</u> ever committed any crime such as stealing, selling stolen goods, mugging or assaulting others	4 = Five+ <u>friends</u> 3 = Three or four 2 = One or two	1 = None of my <u>friends</u> → <b>SKIP TO 3.33</b>

3.32.1	Have any of your <u>friends</u> ever committed any crime such as stealing, selling stolen goods, mugging or assaulting others in the past 12 months?	4 = Five+ <u>friends</u> 3 = Three or four	2 = One or two 1 = None of my <u>friends</u>			
<b>INTERVIEWER TO READ OUT: Do you make use of any of the following facilities?</b>						
	1 = Yes 2 = No	If YES, how often do you use this facility?				
		1 = almost every day 2 = about once per week	3 = about once per month 4 = Less than once per month			
Sport grounds?	3.33		3.33.1			
Community hall?	3.34		3.34.1			
Mosque/ church/ other religious facility?	<b>3.36</b>		<b>3.36.1</b>			
Library?	3.37		3.37.1			
	1 = Yes 2 = No	If YES, how often do you use this facility?				
		1 = almost every day 2 = about once per week	3 = about once per month 4 = Less than once per month			
Health centre/ clinic?	<b>3.40</b>		<b>3.40.1</b>			
Shebeens/bars/pubs?	<b>3.42</b>		<b>3.42.1</b>			
Other (specify)	3.43		3.43.1			
<b>SECTION 4: EXPOSURE TO VIOLENCE</b>						
<b>INTERVIEWER TO READ OUT: Now I'd like to ask you about violence you may have been exposed to in your home. Please tell me whether you agree or disagree with the following statements pertaining to your relationships with other family members.</b>						
In the past 12 months, have?		1 = Never 2 = Once or twice	3 = Sometimes 4 = All the Time			
People in my family often lose their temper with each other		<b>4.2.1</b>				
People in my family argue a lot		4.3.1				
Arguments in our household sometimes lead to violence		4.4.1				
Fights and arguments in our household are sometimes influenced by the use of alcohol or drugs		4.5.1				
4.6	How safe do you feel when you are in your home?	1 = Very safe → <b>SKIP TO 4.7</b> 2 = Somewhat safe → <b>SKIP TO 4.7</b>	3 = Somewhat unsafe 4 = Very unsafe			
4.6.1	If SOMEWHAT UNSAFE OR VERY UNSAFE, then ask why they feel unsafe? (MULTIPLE RESPONSES)	1 = Scared of criminals 2 = Scared of parents	3 = Scared of being alone 99 = Other (specify)			
<b>INTERVIEWER TO READ OUT: Please tell me how often you have seen or heard any of the following in your neighbourhood... CIRCLE THE CORRECT RESPONSE!</b>						
(response options for 4.7-4.14)		Never in My life	Once or Twice in My Life	A few times In my life	Many Times in my life	No. of times in past 12 months (WRITE-IN)
4.7	I have heard guns being shot (while in my home or in my neighbourhood)	0	1	2	3	4.7.1
4.8	I have seen somebody arrested	0	1	2	3	4.8.1

4.9	I have seen drug deals (people buying and selling drugs)	0	1	2	3	4.9.1
4.10	I have seen someone being beaten up	0	1	2	3	4.10.1
4.11	I have seen somebody being stabbed or shot	0	1	2	3	4.11.1
4.12	I have seen someone pull a gun or knife on another person ( <i>but not stabbed or shot</i> )	0	1	2	3	4.12.1
4.13	I have seen gangs in my neighbourhood	0	1	2	3	4.13.1
4.14	I have been chased by a gang	0	1	2	3	4.14.1

### SECTION 5: PROFILE OF SUBSTANCE USAGE

**INTERVIEWER TO READ OUT: The next several questions concern alcohol and/or drugs that you may have consumed. Please answer the questions as honestly as possible and remember that everything you tell me is confidential.**

Have you ever...  (If YES, then ask have you done this in the past 12, months AND how often have you done this)	1 = Yes 0 = NO → <b>SKIP TO NEXT SUBSTANCE</b>	If YES, have you used this in the past 12 months?  1 = Yes 0 = No → <b>SKIP TO NEXT SUBSTANCE</b>	If YES, how often in the last 12 months, have you used... 1 = once/twice 2 = monthly 3 = weekly 4 = daily	In the past 7 days, how much money did you spend on.... (if used in the last week)  <i>Answer in Rands</i>
Used alcohol	5.1	5.1.1	5.1.2	5.1.3
Used marijuana / dagga	<b>5.3</b>	<b>5.3.1</b>	<b>5.3.2</b>	<b>5.3.3</b>
Sniffed glue, breathed the contents of aerosol spray cans, or inhaled paints, sprays or benzyn to get high?	5.4	5.4.1	5.4.2	5.4.3
Used tik	<b>5.7</b>	<b>5.7.1</b>	<b>5.7.2</b>	<b>5.7.3</b>
Any other drugs? (explain which drugs, Eg. Nyaope, mandrax/white pipes, Nyaope)  (write-in)	5.8	5.8.1	5.8.2	5.8.3

### SECTION 6: EXPERIENCES IN SCHOOL

**INTERVIEWER TO READ OUT: Next, I'd like to ask you some questions about your experiences at school.**

6.4	Have you ever failed a grade and been forced to repeat (a school year)?	1 = Yes, only once 2 = Yes, more than once 0 = No, never
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**INTERVIEWER TO READ OUT: Please tell me whether you agree or disagree with the following statements.**

		Strongly Agree	Agree	Disagree	Strongly Disagree
6.5	You like(d) school a lot	4	3	2	1
6.6	School is (was) boring	4	3	2	1

6.7	You usually finish(ed) your homework	4	3	2	1
6.8	You don't (didn't) really belong at school	4	3	2	1
6.9	Homework is (was) a waste of time	4	3	2	1
6.10	You try (tried) really hard at school	4	3	2	1
6.11	You do (did) poorly at school	4	3	2	1
6.12	Getting good grades is (was) very important to you	4	3	2	1
6.12.1	It is (was) important to me to be considered a clever student by my teacher(s)	4	3	2	1
6.12.2	Teachers at my school are (were) willing to help students	4	3	2	1
6.12.3	Most of my teachers notice(-d) when I am (was) doing a good job and let me know about it	4	3	2	1
6.12.4	I feel (felt) safe at my school	4	3	2	1

**INTERVIEWER TO READ OUT: Please tell me how many times, in the last year of school, you had....**

	Never	1-2 times	3-5 times	6-9 times	10-19 times	20 + times	
6.15	Been hit by someone at school	0	1	2	3	4	5
6.16	Been pushed or shoved by someone at school	0	1	2	3	4	5
6.17	Been yelled at or called mean names by someone at school	0	1	2	3	4	5
6.18	Someone at school threatened to hit or physically harm you	0	1	2	3	4	5
6.19	Been injured by someone with a weapon at school	0	1	2	3	4	5
6.20	Been forced to do something that you felt was wrong and did not want to do	0	1	2	3	4	5

**SECTION 7: VICTIMISATION**

**INTERVIEWER TO READ OUT: Now, I'd like to ask you some questions about crime you might have experienced. Can you tell me if YOU or ANYONE ELSE IN YOUR HOUSEHOLD had personally experienced any of the following in the last 12 months...**

	Did you or your family members experience this crime in the past 12 months?  1 = Yes    0 = No	Who were the victims? 1 = Me 2 = parent(s) 3 = sibling(s)	4 = grandparent(s) 5 = Other relative 6 = Other caregiver 7 = entire household
Assault (attacked, beaten up by someone)	7.2.1	7.2.3	
Threatened with a weapon	7.2.11	7.2.12	
Stabbed or shot with a weapon	7.2.21	7.2.22	
Robbery	7.3.1	7.3.3	
Home burglary	7.4.1	7.4.3	
Theft of vehicle or bicycle	7.5.1	7.5.3	

Sexual assault/ Rape	<u>7.7.1</u>	<u>7.7.3</u>
Murder	<u>7.9.1</u>	<u>7.9.3</u>
7.10	IF YES TO ANY OF THE ABOVE, THEN ASK: After the crime did you ever feel that you wanted to get the perpetrator back for his/ her actions? (i.e. get revenge on the perpetrator?)	1 = Yes 2 = No → <b>SKIP TO SECTION 8</b>
7.10.1	IF YES to 7.10, Did you ever act on these feelings?	1 = Yes 2 = No → <b>SKIP TO SECTION 8</b>
7.10.2	If YES to 7.10.1, what did you do?  (OPEN-ENDED RESPONSE)	

**SECTION 8: ATTITUDES TOWARD GANGS**

**A gang refers specifically to a group of people who commits acts of crime or violence. Please indicate how true the following statements are for you. (PLEASE CIRCLE THE CORRECT RESPONSE)**

		Strongly disagree	Disagree	Agree	Strongly Agree
8.1	I think you are safer, and have protection, if you join a gang	0	1	2	3
8.2	I will probably join a gang	0	1	2	3
8.3	Some of my friends at school belong to gangs	0	1	2	3
8.4	I think it's cool to be in a gang	0	1	2	3
8.5	My friends would think less of me if I joined a gang	0	1	2	3
8.6	I believe it is dangerous to join a gang	0	1	2	3
8.7	I think being in a gang makes it more likely that you will get into trouble	0	1	2	3
8.8	Some people in my family or household belong to a gang, or used to belong to a gang	0	1	2	3
8.9	I belong to a gang	0	1	2	3
8.9.1	(If Yes, then why?)  (OPEN-ENDED RESPONSE)				
<b>8.10</b>	People think I'm a gangster	0	1	2	3
<b>8.11</b>	I feel pressure by other people to join a gang	0	1	2	3

**SECTION 10: GENERAL BELIEFS AND ATTITUDES TOWARD VIOLENCE**

**INTERVIEWER TO READ OUT: Please tell me how much you agree or disagree with the following statements.  
(CIRCLE THE APPROPRIATE RESPONSE)**

		Strongly Agree	Agree	Disagree	Strongly Disagree
10.1	If I walk away from a fight, I'd be a coward.	1	2	3	4
10.2	I don't need to fight because there are other ways to deal with being mad.	1	2	3	4
10.3	It is sometimes okay for people to be discriminated against or physically harassed because of their nationality.	1	2	3	4
10.4	A guy shows he really loves his girlfriend if he gets in fights with other guys about her.	1	2	3	4
10.5	It's okay to hit someone who hits you first.	1	2	3	4
10.6	People from other races, sometimes deserve to be discriminated against or physically harassed.	1	2	3	4
10.7	Sometimes a person doesn't have any choice but to fight.	1	2	3	4
10.7.1	If agree, when is it ok to use violence?  <i>(OPEN-ENDED RESPONSE)</i>				
10.8	If people do things to make me really mad, they deserve to be beaten up.	1	2	3	4
		Strongly Agree	Agree	Disagree	Strongly Disagree
10.9	It is sometimes okay for people to be discriminated against or physically harassed because of their sexual orientation.	1	2	3	4
<b>10.13</b>	If someone disrespects me, I have to fight them to get my pride back	1	2	3	4
<b>10.14</b>	You've got to fight to show people you're not a wimp	1	2	3	4
<b>10.14.1</b>	I am confident in my ability to stay out of fights	1	2	3	4
<b>10.15</b>	Carrying a gun makes people feel safe	1	2	3	4
<b>10.16</b>	I have threatened people I know	1	2	3	4
<b>10.17</b>	I get into fights a little more than the average person	1	2	3	4
<b>10.17.1</b>	People usually have a good reason for fighting	1	2	3	4
<b>10.18</b>	Some of my friends think I am a hothead	1	2	3	4
<b>10.19</b>	I get angry easily	1	2	3	4
<b>10.20</b>	I am hard to get along with most of the time	1	2	3	4
<b>10.21</b>	If you mess with me/my friends, you will get hurt	1	2	3	4
<b>10.22</b>	How many physical fights have you been in within the past year?	0= none 1=one only		2= two or three 3= four or five 4=six or more	

**SECTION 11: SOCIAL CAPITAL**

Do you participate in any of the following activities...? <i>(IF YES to any of the following, THEN ASK, <u>how often</u>)</i>		1 = Yes 0 = No → <b>SKIP to next activity</b>	If yes, what is the name of this organisation? (write-in)	If yes, <u>how often</u> ? 1 = every day 2 = once per week 3 = once per month 4 = Less than monthly
Youth group?		11.1	11.1.1	11.1.2
Sports group/ teams?		11.2	11.2.1	11.2.2
Drama/ theatre group?		11.3	11.3.1	11.3.2
Dance group?		11.4	11.4.1	11.4.2
Choir/singing group?		11.5	11.5.1	11.5.2
Community safety project/ CPF/ block watch/ street committee?		11.6	11.6.1	11.6.2
Arts and crafts programme?		11.7	11.7.1	11.7.2
Any other social programme (specify)?		11.8	11.8.1	11.8.2
<b>NB - IF YES TO ANY OF THE ABOVE... THEN ASK 11.9 and 11.10</b>				
11.9	<b>ONLY ASK IF YES TO ANY OF THE ABOVE</b> Which one of the above activities is your favourite?  (ONE answer only)	1 = Youth group 2 = Sports group or team 3 = Drama/ theatre group 4 = Dance/cultural group 5 = Choir or singing group	6 = Community safety project/ CPF/blockwatch 7 = Amandla Edu-Football programmes 8 = Arts & crafts programme 9 = Other social activity (specify)	
11.10	<b>What is the main benefit from participation or membership in this group or activity?</b>	1 = Important in times of emergency 2 = Benefits the community 3 = Enjoyment/ relaxation/ recreation	4 = Spiritual/ social status/ self-esteem 99 = Other (specify)	
<b>SECTION 12: GENERAL HEALTH: OVER THE PAST 4 WEEKS, HAVE YOU?</b>				
12.4	Been getting edgy and bad-tempered?	1 = Not at all 2 = No more than usual	3 = more than usual 4 = Much more than usual	
12.5	Been getting scared or panicky for no good reason?	1 = Not at all 2 = No more than usual	3 = More than usual 4 = Much more than usual	
12.6	Felt that life isn't worth living?	1 = Not at all 2 = No more than usual	3 = More than usual 4 = Much more than usual	
12.7	Feel like you have too many problems to deal with right now	4 = strongly agree 3 = agree	2 = disagree 1 = strongly disagree	
12.8	I think I am healthy and in good shape	4 = strongly agree 3 = agree	2 = disagree 1 = strongly disagree	
12.9	I don't care about my health	4 = strongly agree 3 = agree	2 = disagree 1 = strongly disagree	
<b>SECTION 13: AMANDLA EDU-FOOTBALL KNOWLEDGE AND PARTICIPATION</b>				
13.1	Have you ever heard of Amandla Edu-Football, the org that runs programmes <u>at the field</u> next to Ikhusi Primary School?	1 = Yes 0 = No → <b>SKIP TO SECTION 14</b>		
13.1.1	If YES, have you ever participated in any of their activities?	1 = Yes 0 = No → <b>SKIP TO SECTION 14</b>		
13.1.1.1	If Yes, How often did you (do you currently) participate in Amandla Edu-Football activities at Ikhusi Primary School field?	1 = less than monthly 2 = Once/month 3 = once/week	4 = Twice/week 5 = More than twice/week	
13.1.2	If YES (ever participated), are you currently involved in any of their activities?	1 = Yes 0 = No → <b>SKIP TO 13.1.5</b>		

13.1.3	Which Amandla Edu-Football activities are you currently involved in?  (MULTIPLE RESPONSE = MAXIMUM 3 ANSWERS)	1 = After-school soccer league (Under-14 Boys, Under-19 Boys) 2 = Friday night league	3 = Life skills/training sessions 4 = Leadership Programme X = Other ( <b>please specify</b> )
13.1.3.1	Please name any one of the coaches/staff members at Amandla Edu-Football ( <i>write-in if know</i> )		
13.1.4	Please tell me WHY you participate in the Amandla Edu-Football programmes? (OPEN-ENDED RESPONSE) → <b>Then go to 13.1.6</b>		
13.1.5	If NO longer participating in Amandla Edu-Football, is there any particular reason why you have stopped participating in the Amandla programmes? What are these?  (OPEN-ENDED RESPONSE)		
13.1.6	How long have you been participating in the Amandla programmes? (or had you participated in...)	1 = Less than 3 months 2 = 3-6 months	3 = 7 months to 1 year 4 = Between 1 and 2 years 5 = 2 or more years
13.1.7	Do any of your friends participate in the Amandla programmes?	1 = 5 or more friends 2 = 3-4 friends	3 = One or two friends 4 = No, none of my friends
13.1.8	(Apart from your friends) Do you socialise with any other Amandla participants outside of the programme activities?	1 = Yes, all of the time 2 = Yes, some of the time	0 = No, never

#### SECTION 14: SELF-REPORTED OFFENDING

**INTERVIEWER TO READ OUT: Now, I'd like to ask you about things that you may or may not have done, ever, and in the past 12 months. Your Responses will be kept COMPLETELY CONFIDENTIAL.**

Have you ever...  (If YES, then ask have you done this in the past 12, months AND how often have you done this)	1 = Yes 0 = No → <b>SKIP TO NEXT ACTIVITY</b>	If YES, have you done this in the past 12 months? 1 = Yes 0 = No → <b>SKIP TO NEXT ACTIVITY</b>	If YES, how many times in the last year? 1 = One time 2 = Two to three times 3 = Four to five times 4 = Six or more times
Stolen money or something else from another person Without them knowing?	14.1	14.1.1	14.1.2
Carried a gun, knife or a weapon for protection?	14.2	14.2.1	14.2.2
Used force, threats or a weapon to steal money or Something else from somebody/said that you would hurt someone if they did not do what you told them to?	14.3	14.3.1	14.3.2
If Yes, for what reason?  (OPEN ENDED RESPONSE)	14.4		
Got into or broken into a house/building to try to steal something?	14.5	14.5.1	14.5.2
Set fire to or tried to set fire to something on purpose	14.6	14.6.1	14.6.2
If yes, under what circumstances?  (OPEN ENDED RESPONSE)	14.7		
Hit, kicked or punched somebody else on purpose?	14.8	14.8.1	14.8.2

IF YES, under what circumstances? Were you provoked? (OPEN ENDED RESPONSE)		14.9			
Forced anyone to engage in sexual activity with you when they did not want to?		14.10	14.10.1	14.10.2	
If yes, for what reason? (OPEN ENDED RESPONSE)		14.11			
Taken or tried to take a car, van or motorbike and drive it away without the owner's permission?		14.12	14.12.1	14.12.2	
Deal in marijuana (dagga), i.e. sell, make or smuggle marijuana?		14.13	14.13.1	14.13.2	
Deal in any drugs other than marijuana (dagga), i.e. sell, make or smuggle any other drugs?		14.14	14.14.1	14.14.2	
Used a weapon to threaten or injure someone else?		14.15	14.15.1	14.15.2	
IF YES, under what circumstances? Were you provoked? (OPEN ENDED)		14.16			
Been involved in any gang fights?		14.18	14.18.1	14.18.2	
IF YES, under what circumstances (were you involved in gang fight(s)? Were you provoked or forced? (OPEN ENDED)		14.19			
14.20	If yes to any of the above (ever), Is there any particular reason why you are no longer engaging in this behaviour(s)?	1 = Yes 0 = No → <b>SKIP TO SECTION 15</b>			
14.20.1	If YES, then what was this reason?  (OPEN-ENDED RESPONSE)				
<b>SECTION 15: PERCEPTIONS OF AUTHORITY</b>					
15.1	When you have a personal problem you need help with, who is the FIRST person you would go to for help?	1 = Parents 2 = Brothers/sisters 3 = Other relatives 4 = Friends 5 = Amandla Edu-Football Staff		6 = Teachers/principal 7 = Police 8 = No-one 9 = Neighbour 10 = Religious leader 99 = Other (specify)	
<b>SECTION 16: ATTITUDES TOWARDS SEX</b>					
<b>INTERVIEWER TO READ OUT: Next, I'd like to ask you a few questions that explore your attitudes towards sex. (PLEASE CIRCLE THE APPROPRIATE RESPONSE)</b>					
		<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
16.1	Most women like to show off their bodies.	4	3	2	1
<b>16.1.1</b>	Most men want to go out with women just for sex	4	3	2	1
16.2	On a date, the man should be expected to pay all expenses.	4	3	2	1
16.3	Girls should have the same freedoms as boys.	4	3	2	1
<b>16.3.1</b>	It is sometimes OK for a man to hit his wife	4	3	2	1

16.4	If a woman wears revealing clothing, then it is her fault if a man forces her to have sex with him.	4	3	2	1
16.5	If a young man gets an erection, then it is a sign that he <b>Must</b> have sex with someone.	4	3	2	1
16.6	If I buy somebody a drink or take them on a date, then it is my right to have sex with them.	4	3	2	1

### SECTION 17: VIEW OF THE FUTURE

**INTERVIEWER TO READ OUT: I'd like to ask you a few questions on how you feel about your future. Please tell me whether you agree or disagree with the following statements...**

		1 = Strongly Agree	2 = Agree	3 = Disagree	4 = Strongly disagree
17.1	I have specific goals in my life I want to achieve.	1	2	3	4
17.2	I have a good idea of where I am going in my life.	1	2	3	4
17.3	My own efforts and actions are what will determine my future.	1	2	3	4
17.4	I feel that I would be able to cope with difficult situations that may present themselves in the future.	1	2	3	4
17.5	No matter how hard I try I will never be able to achieve my goals in life.	1	2	3	4
17.6	I am good at deciding whether a risk is worth taking.	1	2	3	4
17.7	I am able to survive on my own if I have to.	1	2	3	4
17.8	I feel proud that I have accomplished things in my life.	1	2	3	4
17.9	It is okay if there are people who do not like me.	1	2	3	4
<b>17.9.1</b>	I sometimes think of myself as a bad person	1	2	3	4
17.10	I am as popular with kids my own age as I want to be.	1	2	3	4
		1 = Strongly Agree	2 = Agree	3 = Disagree	4 = Strongly disagree
17.11	There are some things I would not do to gain the respect of my friends.	1	2	3	4
17.12	I sometimes think that I am a failure (a loser).	1	2	3	4
17.13	I am as good a person as I want to be.	1	2	3	4
<b>17.13.1</b>	I will study further after school	1	2	3	4
<b>17.13.2</b>	I Will find a job I will enjoy	1	2	3	4
<b>17.13.3</b>	I will have a happy family life	1	2	3	4
<b>17.13.4</b>	You will succeed in doing what is most important for you	1	2	3	4
17.14	I would like to know how you feel about your future opportunities to be successful and prosper, would you say.... READ OUT OPTIONS (ALLOW ONLY ONE RESPONSE)	1 = Your opportunities are limitless 2 = You have many opportunities 3 = Your opportunities are very limited 4 = You have no opportunities at all			
17.15	What do you see as your possible future and how will you get there?				

	(OPEN-ENDED RESPONSE)	
<b>THIS IS THE END OF THE YOUTH QUESTIONNAIRE. PLEASE THANK THE YOUNG PARTICIPANTS FOR THEIR WILLINGNESS TO PARTICIPATE IN THE STUDY.</b>		
<b>THE NEXT SECTION, SECTION 18, IS FOR THE MOTHERS OR FEMALE CAREGIVERS OF THE MALE PARTICIPANTS INTERVIEWED ONLY!!!!!!</b>		

<b>SECTION 18: FEMALE PARENT/CAREGIVER ITEMS</b>						
<b>INTERVIEWER TO READ OUT: If it's okay, I'd like to ask you a few questions about your son's behaviour and your own sense of safety. Please tell me how often the following attributes describe your son...</b>						
	(READ OUT THE RESPONSE OPTIONS)	1 = Almost always	2 = Often	3 = Sometimes	4 = Seldom	5 = Never
18.1	HE is considerate of other people's feelings?	1	2	3	4	5
18.2	HE is generally obedient, usually does what you request?	1	2	3	4	5
18.3	HE does not obey our family rules on his own.	1	2	3	4	5
18.4	HE has a hot temper?	1	2	3	4	5
18.5	HE is very moody and easily upset?	1	2	3	4	5
18.6	HE hits parents/caregivers.	1	2	3	4	5
18.7	HE is helpful around the house and towards others?	1	2	3	4	5
18.8	HE fights with his siblings or other members of the household?	1	2	3	4	5
18.9	HE gets into trouble at school, work and/or in the community?	1	2	3	4	5

18.10	How much time do you spend per day doing things with your child/children such as talking, playing a game, or going out? (i.e. during the week)	1 = None 2 = 1 hour or less 3 = 1 - 2 hours 4 = 2 –4 hours 5 = More than 4 hours	
18.11	Do you feel that the rules in your family are clear?	1 = Yes 0 = No	
18.11.a	How safe do you feel when you are in your home?	1 = Very safe 2 = Somewhat safe	3 = Somewhat unsafe 4 = Very unsafe
18.11.b	What makes you feel unsafe in your home? (MULTIPLE RESPONSES POSSIBLE – RANK TOP 3 ANSWERS)	1 = Scared of criminals 2 = Scared of family member(-s) 3 = Scared when I am alone 4 = Scared when using the toilet	5 = Scared of fire 6 = Scared of break-in 10 = Nothing 99 = Other (specify)
18.11.c	Most people in my neighbourhood can be trusted.	1 = Strongly agree 2 = Agree	3 = Disagree 4 = Strongly disagree
18.11.d	There are people in my neighbourhood who help me when I am in need.	1 = Strongly agree 2 = Agree	3 = Disagree 4 = Strongly disagree
18.11.e	How safe do you feel in your neighbourhood?	1 = Very safe 2 = Somewhat safe	3 = Somewhat unsafe 4 = Very unsafe
18.11.f	What makes you feel unsafe in your neighbourhood? (MULTIPLE RESPONSES– RANK TOP 3 ANSWERS)	1 = Scared of criminals 2 = Scared when fetching water 3 = Scared when going to work 4 = Scared when I'm alone	5 = Scared when going to shops 10 = Nothing 99 = Other (specify)
18.11.g	Generally, in Khayelitsha what are the things that make you most scared? (MULTIPLE RESPONSE – RANK TOP 3 ANSWERS)	1 = Murder 2 = Rape/sexual assault 3 = Fighting 4 = Police 5 = Theft/mugging	7 = Guns 8 = Getting HIV/AIDS 9 = Gangs (gang) 10 = Nothing 99 = Other (please specify)
<b>INTERVIEWER TO READ OUT: How often do you fight with your son about...?</b>			
18.12	What he does when he is out? (not at home)	1 = Often 2 = Sometimes	3 = Hardly ever 4 = Never
18.13	What time he comes home when he has been out?	1 = Often 2 = Sometimes	3 = Hardly ever 4 = Never
18.14	Him having bad or dangerous friends?	1 = Often 2 = Sometimes	3 = Hardly ever 4 = Never
18.14.2	Has your son ever failed a grade and been forced to repeat?	1= yes, only once 2=yes, more than once 0= No, never	
18.15	Have you noticed any changes in your son's behaviour in the last 12 months?	1 = Yes 0 = No → <b>END THE INTERVIEW</b>	
18.15.1	If YES, then how has his behaviour changed?  (OPEN-ENDED QUESTION)		
18.15.2	If YES, then why do you think his behaviour has changed?		

	(OPEN-ENDED QUESTION)	
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END of Interview. Please thank them for their willingness to participate.

## APPENDIX

### Kagiso Attrition correlation

		age	faile d grad e	Violen ce expos e	Pro Violen ce att	Neg Future att	Neg schoo l att	Pro gangs att	Devia nt Peers	Harsh Parenti ng	Violent Home	H- hold depriv	Comb substan ce abuse	Aman dla	Comb violenc e past12 mos	Combi ned victimi zation	Religi ous attend
attrit after wave 1	Corr	.245**	.111	.170**	-.136*	-.180**	-.056	.106	.074	-.091	.021	.026	.149*	-.131*	.105	.027	-.147*
	Sig.	.000	.056	.003	.019	.002	.335	.068	.201	.121	.715	.657	.010	.024	.070	.641	.011
	N	296	296	295	294	294	296	296	296	295	296	296	296	296	296	296	296

Figure 4.11. Kagiso Attrition - Correlations between 245 attrits (from wave 1 to wave 2) and key factors.

In Kagiso, there are significant bivariate correlations between attrition and higher age, greater Violence Exposure, lower Pro-Violence Attitude, lower Negative Future Attitude, more Substance Use, less Amandla participation, and less religious participation. Given the small group remaining in the study (n=51), and the difficulty in tracking down study participants and getting them to avail themselves for the interview, it is not surprising that there are some emerging potential group differences. Based on this limited evidence of attrition effects, further bivariate and multivariate analysis of Kagiso Wave 2 data will not be conducted.

### Descriptive statistics – Kagiso

Descriptive statistics. <u>Demographic information.</u> Subjects are all male and African (1 Coloured subject in Khayelitsha Wave 1 only)		Kagiso Wave 1 N=296	Kagiso Wave 2 N=52
Age, mean (SD)		16.0(2.7)	15.6(2.5)
Home language	Xhosa	17%	18%
	Zulu	29%	18%
	Sotho (North+South)	14%	25%
	Tswana	35%	35%
Have heard of Amandla Edu-Football			
Have ever participated at Amandla			
Current Amandla participant (self-reported)		32%	45%
Amandla registered participant		32%	39%
Meeting 75% Amandla target attendance			
% living in informal housing		80%	98%
Family size, mean (SD)		4.6(1.6)	4.8(1.6)
Have own biological child		5.7%	0
Have a disability affecting everyday activities		1%	0
No. family members working	None	23%	14%
	1	51%	51%
	2	25%	35%
	3 or more	1%	0
% - 1+ family member receives grant		58%	71%
Subject employment status	full-time employed	1.4%	2%
	Part-time employed	6%	0
	Temp/seasonal	0	0
	Self-employed	1.4%	4%
	not working, seeking work	10%	10%
	not working, not seeking	81%	82%

Currently attending school or other courses	82%	63%
Failed matric (Grade 12)	0	0
Stopped schooling before Grade 12	0	0
Passed Matric	10%	6%

Descriptive statistics. <u>Family Dynamics.</u>		Kagiso Wave 1 N=296	Kagiso Wave 2 N=52
Birth father is deceased		22%	29%
Never spent a lot of time with father-ever		31%	
Never spent time w/ father-past yr		40%	39%
Birth mother is deceased		7%	6%
Never spent a lot of time with mother-ever		2%	
Never spent time w/ mother-past yr		6%	12%
Family member has been to prison		19%	12%
	Is currently in prison	7%	0
Gone w/out enough food to eat-past yr/	1-2 times	12%	6%
	A few times	16%	14%
	Many time/always	14%	18%
Changed homes in the past year		3%	4%
Arguments @ home lead to violence-sometimes+		6%	10%
	In past year	5%	8%
Fights @ home influenced by drugs/alcohol		7%	8%
	In past year	7%	8%
Someone @ home drinks too much-often/always			10%
Parents hit, slap, cane, punch, beat you	Never	65%	33%
	Sometimes	28%	61%
	Most of the time/always	7%	0
Subjects feel safe in their home	feel very safe	39%	47%
	Feel somewhat safe	40%	28%
	Feel somewhat unsafe	11%	22%
	Feel very unsafe at home	10%	4%

Descriptive statistics. <u>Neighbourhood.</u>		Kagiso Wave 1 N=296	Kagiso Wave 2 N=52
Subjects feel safe in their neighbourhood	feel very safe	16%	18%
	Feel somewhat safe	37%	28%
	Feel somewhat unsafe	23%	26%
	Feel very unsafe	25%	29%
There are people in my neighbourhood/ family I look up to (role models)	strongly agree/agree	54%	45%
	Disagree/strongly disagree	46%	53%
Their area has lots of crime	never	4%	2%
	Sometimes a lot	35%	28%
	All/most of the time	61%	71%
Their area has lots of fights	never	4%	2%
	Sometimes a lot	39%	24%
	all/most of the time	57%	75%
Living in their area is like living in a war zone	never	41%	12%
	Sometimes	34%	33%
	All/most of the time	26%	55%
Have seen someone stabbed or shot	never	73%	45%
	Once/twice in their life	20%	12%
	A few times	5.4%	26%
	Many times	2%	18%
Have seen gangs in neighbourhood	never	51%	20%
	Once/twice in their life	14%	14%

	A few times	21%	12%
	Many times	13%	55%
Have been chased by a gang	never	94%	94%
	Once/twice in their life	6%	6%
	A few times	0.3%	0
	Many times	0	0
Easy to get gun in neighbourhood		20%	
At school		0.4%	
Easy to get knife/other weapon in neighbourhood		66%	
At school		14%	
Know someone who makes a living from crime		67%	69%
Friends have stolen, mugged, assaulted-none		77%	90%
	One or two friends	19%	4%
	3-4 friends	3%	2%
	5+ friends	0.7%	0
Friends- stolen, mugged, assaulted past yr		11%	6%

Descriptive statistics. <u>Subject Behaviour.</u>		Kagiso Wave 1 N=296	Kagiso Wave 2 N=52
Plays team sport daily/weekly		55%	70%
Attends church/mosque daily/weekly		48%	31%
Participate in drama group		2%	10%
Participate in dance group		4%	12%
Participate in choir/singing group		1%	10%
Participate in arts programme		1%	2%
Visit shebeen	daily/weekly	9%	2%
	Monthly	4%	0
	Less than monthly	4%	0
Use alcohol	daily/weekly	9%	6%
	Monthly	6%	0
	Less than monthly	6%	10%
Spent R100 or more on alcohol in past 7 days		10%	12%
Use marijuana	daily/weekly	5%	2%
	Monthly	2%	0
Use tik (methamphetamine) ever		0	0
Use any other drugs ever		1.7%	2%
Have failed grade or more of school	Failed one grade	35%	43%
	Failed twice/more	14%	8%
Maternal caregiver response	son failed 1 grade		35%
	Failed twice/ more		12%
Victim of assault	Subject (ever)	5%	6%
	Family members	11%	8%
	Subject-past 12 mos	5%	6%
Victim of stabbing/shooting-subject (ever)			0
Have been threatened with a weapon			4%
Have been injured with a weapon at school		1.4%	0
Victim of murder of family member(s)		0	0
Victim of rape/sexual assault	subject	0	0
	Family members	0	0
Carried gun, knife, other weapon	ever	4%	4%
	In past year	3%	4%
Used force, threats, or weapon to steal	ever	1%	0
	In past year	1%	0
Used weapon to threaten/injure someone	ever	2.4%	2%
	In past year	2%	2%
Have broken into house/bldg. to steal	ever	1.4%	0
	In past year	0.7%	0

Have forced sex (rape) with someone	ever	0.3%	0
	In past year	0	0
Have been involved in gang fights	ever	4%	0
	In past year	2%	0
"I belong to a gang" is true/somewhat true+		1.4%	2%

Khayelitsha Focus Groups: May-June 2012.

Frequency of responses by age group (numbers indicate repetitions of the same response):

Question Item	Under 14/15 y.o. boys, ages 9-15 (n=39)	Under 18 y.o. boys, ages 14-18 (n=19)	Under 14/15 y.o. girls, ages 8-12 (n=11)	Under 18 y.o. girls, ages 14-18 (n=14)
What is Amandla all about?	Soccer-3 Teach healthy things, development-3 Soccer instead of street-1	Soccer-9 Avoid dangers/gangs-5 Prevent crime-3 Prevent smoking, drugs-3 Build Respect-2 Keep people safe-2 Help to see careers-1	Soccer-3 Life skills-3 Educate to avoid gangs, bad influences-2 Entertain us-1 About our futures-1	Soccer-1 Supporting each other-1 Life skills-1 Local development-1 Mutual respect-1 reducing teen pregnancy-1
Why do you attend?	To play soccer-11 Stay out of trouble/drugs, gangs-6	To play soccer-7 Avoid gangs/trouble/drugs-6 Learn life skills-5 Please parents-3 Spend time in a good place, have fun-2 To share ideas-1	To play-6 Avoid streets/trouble-2 Love soccer-1 Exercise-1 Learn to understand others-1	To play soccer/improve-6 Learn new things—3 Make friends-1 Have fun/relax-1
What else would you be doing?	Gangsterism-3 Sniffing glue-3 Sent to buy drugs/alcohol for others, Taking drugs/alcohol-3 Housebreaking/street robbery-2 Stealing metal for scrap for alcohol/drugs-2 Sit at home/eat-1 Do homework-1 Hijacking cars-1	Gangsterism, fighting-8 Smoking cigarettes, dagga, tik-5 Steal for drugs, alcohol-4 Sit at home-4 Playing on streets-3 Sniffing glue-3 Play soccer elsewhere-2 Cheeking parents-2 Dealing drugs-1 Losing respect-1 Hijacking cars-1 Stabbing people-1 Drinking-1 Skipping school-1 Raping girls-1 Stealing metal for scrap for alcohol/drugs-1 Swim in unsafe water-1	Robbing-3 Drama group-3 In streets-2 Studying-2 Fighting parents-2 Sleeping at home-1 Netball-1 Nothing-1 Bad things-1 Bullying children-1 Smoking/drinking-1	At home, tv, eating-2 Netball-1 Play soccer elsewhere-1 On streets-1 With wrong people-1 Having sex at a young age-1
Has Amandla changed you?	Have more soccer skills-4, Don't fight anymore-1	Avoiding bad things, drugs, gangs-9 Developed soccer skills-5 Received respect, became respectful-3 Stopped drinking-1 Began church-1 Learned how to speak to people-1 Travelled to tournaments-1 Learned how to share when playing soccer-1 Know how to treat soccer injury-1	Learned soccer-3 Respect elders/kids-2 Concentrate better at school-2 Not gossiping in street-1 Not playing on street-1 Not bullying-1	Have more soccer skills-2 Know how to support others-1 Now avoid bad things-1 Travelled with Amandla-1 Played in tournaments-1 More pride in self-1 Improved comm. Skills-1

What future do you want/how will you get there?	Soccer star-7 Be rich, be on TV, be like white people-5 Pilot-2 Policeman-2 Businessman-1 Soldier-1	Soccer star-14 Doctor-4 Radio presenter-2 Social worker-1 School teacher-1 Policeman-1 Pilot-1 Paramedic-1 Chef-1 Electrician-1 News presenter-1	Play for SA Women's team/pro-3 Nurse-2 Doctor-2 Social worker-2 Fashion designer-1 Play soccer with guys-1	Lawyer-2 Scientist-1 Pilot-1 Pro soccer-1 Public relations-1 Social worker-1
	Study hard/learn-11 Respect elders-5 Avoid alcohol/drugs-1	Study hard/learn-14 Respect elders-8 Attend training (on time)-6 Listen to coaches-2 Be serious-1 Read books-1 Teach respect-1 Avoid gangs-2 Avoid alcohol, smoking, drugs-6 Avoid many wives/girlfriends-1 Avoid raping-1 Avoid bullying-1 Avoid staying out late-1 Avoid stress from home-1	Study hard/learn-6 Avoid drinking/smoking-6 Avoid boys-1 Respect elders-5 Learn/play soccer-2 Play fair-1 Not insult others-1 Listen to coach-1 Avoid peer pressure-1	Study hard-4 Avoid bad things-1 Listen to coach, attend training-1 Be passionate, persistent-1
What violence do you experience?	Street robbery-3 Hit by relative-2 Fighting other boys-2 School bullying-1	Gang member, gang fights-10 Stabbed someone-6 Chased by gang-3 Beaten by man in neighbourhood-2 Bully at school-3 Home robbery-2 Forced girlfriend to stay with me-1 Was stabbed in neck-1 robbed on street with gun-1 Drunk, violent father-1 Drunk, violent uncle-1 Mother beat me-1 Forced to smoke, drink-1	House robbery-3 Was Robbed/threatened with knife-3 See stabbings at school/on street-2 Gang fights with knives, weapons-2 Hit by stone-1 Robbery-1 Fighting with kids-1 Relative stabbed-1 Gun altercation in home-1 Bullying at school-1 Abused by parents-1	Gangsterism/violence at school-5 Robbery-1 People can't go to other sections b/c of gangs-1
Who are your role models/why?	Mother-supports me-8 Soccer stars-6 Father-supports me-2 Teacher-2 Brother-supports-1 Sister-must use taxi, not walk-1 Whitey from Amandla-took me out of bad things-1	Soccer stars-13 Father, supports-6 Local pro soccer players who visit Amandla-3 Brother, supports-2 Mother, working-1 Grandfather, respected in community-1 Ryan, Emmy from Amandla-used to take us out, stay at their house-1 Asanda from Amandla-1 Teacher-1 Friends, show right direction-1 Local pool (billiards) player-1	Soccer stars-3 Gospel singer-3 Mother, supports-2 Father, supports-1 Aunt, has money-1 Sister, has money-1 Social workers-1 Art teacher-1	Mother-supports me-3 Amandla coaches-support, give skills-3 Father-supports me-2 Sister, works hard-1 Brother, team coach-1

		Local auto mechanic-1		
What is 'fair play'?	No insults, arguments, fighting-7 Shake hands before match, after kicking someone-3 Make team cheer-2 Don't pressure other players-1 Be good losers-1 Respect others-1 Pick up someone if they fall-1 Whole team must be on time-1	Respect each other-10 Apologize/Pick up someone if they fall-6 Shake hands-2 Know the rules-2 Work together-2 No insults-1 Not bully-1 Not fight on pitch-1	Don't argue/insult-4 Shake hands-3 Respect each other-2 Work as team-2 Apologize/Pick up someone if they fall-2 Lose points if break rules-1	(no answer)-5 No win/lose-1 Respect each other-1 Apologize/Pick up someone if they fall-1 Clap with other team when they score-1 Team cheer-1
What are your biggest challenges/ how do you cope?	No one working at home-4 Single mother-1	Gangsterism-5 Can't go to other sections (school) b/c of gangs-5 Robbed on street-3 Poverty, lack of food-3 Dropped out of school-1 Friends smoked cigarettes, influence-2 Fight on street-1 Nearly hit by bullet from gang-1 Mother not working-1 Some commit Suicide-1	Getting AIDS thru sex or rape-2 Robbery on street-1 Abused by stepfather-1 Chased by boys when going to shop-1 Can't spell well-1 Parents fight-1 Bullied at school-1 Fight with sister-1 People commit suicide-1	Gangsters at school-1 Losing someone close-1 Can't study at home with noise-1 Watch too much TV-1 Like to be with friends instead of study-1
	Team cheer-2 Chase away baddies-1	Report to parents-2 Come to Amandla, play with other kids to relieve stress-2 Make peace-2 Call older friend-2 Report to police-1 Report to teacher-1 Group counselling-1 Report to street committee-1 Family talk-1 Stay at home, play playstation-1	Stay at home-2 Deep breaths, relax-2 Call social worker-1 Used to cry-1 Fight back-1 Drink alcohol-1	Talk to person I trust-1

### Qualitative Analysis Discussion

All groups identify Amandla as being about soccer/fun closely followed by pro-social development broadly (life skills, safety, avoiding dangers). Similarly, the most frequent reasons for participation are to play soccer/have fun with friends while being safe and avoiding dangers on the streets.

If participants were not at Amandla (as in, if Amandla did not exist), most boys would be (more) involved in gang violence, drugs/alcohol and petty theft. Very few boys indicated other safe social spaces where they could spend their free time. For girls, the responses were more varied with some stating they would be involved in theft, drugs, drinking, sex/risky behaviours and others stating they would join drama groups, netball teams, or spend more time at home. While risks of teen pregnancy (through consensual sex or rape) and infection should

not be understated (and several girls were clearly disturbed by these issues), Amandla girls appear more likely to avoid trouble outside of the home than Amandla boys. Boys appear to be heavily influenced by their peers (chosen friends), older youth and adults (in their homes and community), and the need to be accepted (and protected) by a group.

Nearly all subjects indicated that Amandla participation has changed them in some way. They most commonly identify that their soccer skills (and fitness) have improved and this is clearly a point of pride. Many subjects also state that they are avoiding bad things/bad influences. This could be attributed to the safe space that Amandla represents as well as the life skills elements that engender respect for all and health-seeking behaviours.

When asked about future careers, the majority of male respondents (51%) identify pro soccer and tv fame as their intended future. This is clearly an area where few individuals have engaged in career exploration, let alone career/educational planning. Doctor, pilot, and policeman are the more popular careers identified by boys (after soccer). For girls, there is more variety and less tendency to only identify their future in terms of soccer; lawyer, doctor, nurse, and social worker were reported.

When we probed individuals as to how they would achieve their career ambitions, the most common responses were to stay in school, work hard, avoid negative influences and respect adults. Little mention was made of improving their school marks, focusing on maths, sciences or English subjects, or of pursuing tertiary education/training.

#### What violence do you experience?

Given the sensitive nature of the subject, the question was phrased in such a way to allow for violence perpetration and victimization to be discussed (without necessarily full self-disclosure). Boys' groups were, in general, much more willing to share their experiences which often involved group conflict (what may be termed communal or inter-communal violence). All subjects (boys and girls) are clearly affected by gang violence in schools and in their communities. Boys admitted more readily to participating in that violence, often in gang fights with knives, pangas (machetes), and sticks. For some boys, discussing gang violence caused them to laugh and joke about shared experiences and even show off their wounds (two individuals). For others (including those not claiming gang affiliation), they felt deeply affected by the territorial aspect of gang violence, that they could not travel outside of their section (even to walk to school) because other section gangs would target them. School bullying, street crime, assault with knives, and house robbery were commonly reported. Violence in the home (from father, uncle, and mother) was infrequently reported. There is a possible tendency for boys to over-report participation in collective violence (to identify as being tough) while under-reporting individual victimization (appearing weak, especially in reporting sexual abuse). However, the fact that gangsterism was cited as the major source of violence, of negative peer influence, and of general dangers among all focus groups suggests that the problem is significant in their greater area of movement.

Role models are most frequently identified as famous people (especially soccer stars from television, 25+ reports). The question "who do you look up to?" seemed to be less easily understood. When only famous people were identified, we asked them about role models that they knew personally. These were most often

mothers who work and/or provide support (14 reports), fathers who support (11 reports, only 3 from girls), siblings (7 reports), and other relatives (1 aunt, 1 grandfather). Within the community, Amandla staff were identified in 7 reports, teachers (3 reports), and other community members (3 reports), including a social worker. As no Amandla staff were present during this question/discussion, it does suggest that the influence of Amandla staff is positive and has an effect (in frequency of reports, at least) on the order of that of older siblings. This is in line with the age range of Amandla coaches/life skills coordinators. Reasons for identifying their role models related to tangible support (food, clothes, money, gifts, outings) and less frequently to setting a good example and intangible aspects of emotional support, counselling, work ethic, and respect. Several individuals mentioned visits to Amandla from local pro soccer players; this could be an important vector to deliver messages and open up new ideas (particularly around the realities/challenges of pro soccer).

'Fair Play' is the points system Amandla uses to engender principles of mutual respect, support, and cooperation into its soccer matches. Participants were asked "what is fair play?" with no further explanation, in order to understand how this concept has been internalized. Respecting all participants (teammates, opposition, coaches, referees), shaking hands, and helping someone who you've kicked are frequent responses. 'Fair play' seems to be understood by all ages although one group of girls had no answer (possibly due to limited Amandla participation). The link between fair play and the life skills curriculum should be reinforced so that learning takes place within the match environment when a 'controllable conflict' occurs.

The biggest challenges or problems faced by participants relate to gang violence (in streets and at school) and its impact on their movement as well as overarching issues of poverty and unemployment. Among girls, issues of domestic abuse, rape, pregnancy, and contracting AIDS were raised. Several individuals cited suicide as a problem (or a solution). Mechanisms to cope with these problems included reporting incidents to adults, staying at home (avoidance), talking to friends, attending Amandla to relieve stress, and, in some cases (where subjects were causing problems), apologizing and making peace.

Process:

Based on the focus groups conducted in June in Khayelitsha, the same process was followed for 6 groups of 6-10 individuals each.

Translation was provided to and from Sesotho. No Amandla staff were present during the focus groups to ensure that responses were not affected by staff known to the participants.

A total of 50 subjects were interviewed, 33 boys and 17 girls. Total current Amandla-Kagiso participation for Under-14 and Under-18 soccer and life skills programming is 196 boys and 55 girls. Focus groups thus represent 17% of the boys' total and 31% of the girls' total.

Kagiso Wave 1 Focus Groups-August 2012.

Frequency of responses by age group:

<b>Question naire Item</b>	<b>Under 14/15 y.o. boys, ages 9-14 (n=18)</b>	<b>Under 18 y.o. boys, ages 13-17 (n=15)</b>	<b>Girls, all ages 9-18 (n=17)</b>
What is Amandla all about?	Strength, It is the strong one -2 All about soccer-1 Super team-1 Team spirit-1	All about football-2 Football sponsors-1	Power-1 The project of the teams-1
Why do you attend?	To play/learn soccer-11 To keep fit-2 For discipline-1 To get sponsorship-balls, boots, kit-1	Like soccer-9 To play soccer-2 Gain fitness-2 Avoid drugs, nyaope-2 To become talented, want to go far with soccer-2 Get food sometimes-1	Learn soccer-2 Avoid streets/trouble-1 Play soccer-1 Exercise-1 To be Banyana Banyana-1 Learn what coaches teach-1
What else would you be doing?	Studying-2 Gyming at home-1 Gambling ("stick-stick") on 5-a-side soccer-1 Stealing-1	Homework-1 Clean house-1 Watch tv-1 Steal soccer boots-1 Sleeping-1 Training at stadium in Kagiso-1 Playing tennis-1 Playstation-1 Playing rugby-1 On internet at shops-1 Gambling ("stick-stick") on 5-a-side soccer-1	Doing homework-2 Playing with tins-1 Fighting-1 Shouting with each other-1 Cultural dance-1 Sleeping-1 Watching tv-1 Cleaning-1
Has Amandla changed you?	Know soccer skills now-2 Used to play soccer in streets, break windows with ball-1 Not in the streets-1 Not thinking about food because we're staying in shacks-1 Keeping fit-1	Learned football-2 Learned how to trap ball-1 Used to work hard at home (now at soccer instead)-1 Gained fitness-1 Don't smoke anymore-1 Don't fight anymore-1	Listen to the coach, follow instructions-1 Respect elders-1 Coming home on time-1
What future do you want/how will you get there?	Soccer star-10 Doctor-1 Policeman (shooting a gun)-1 Investigating officer-1	Pro soccer-10 Journalist-1 Pro golfer-1 Soccer coach-1	No answers-8 Doctor-2 Pro soccer player-1 Policewoman-1 Teacher-1

	Discipline, respect elders-1 Go to trials and pass-1 Check people in streets, what they're doing-1	Respect other players-3 Practice, work hard-1 Listen to radio, read news, have brains-1 Be fit-1 Play soccer well-1 Respect coach, officials-1 Avoid nyaope, beer-1	No answers-8 Go to tournament, show skills-1 Practice-1 get educated-1 apply for teaching job-1 avoid enemies-1 don't fall pregnant-1
What violence do you experience?	Old people get angry when disrespected-1 Getting food from dustbins-1 Kids abducted at night-1 People jealous because we are coming here to play soccer-1 Robbery-1 Raping-1 Shack fires-1 Scared by bigger kids-1	No electricity-1 No permanent homes-1 Soccer boots stolen (phoned police-came too late)-1 Cellphone robbed-1 Robbery-1 People at hostel ask if we know how to fight-1 Soccer boots stolen at knifepoint (tell coach)-1	No answers-9 Mom & dad shouting-1 Mom has stress-1 Kidnapping-1 Raping-1 Fighting-1 Protests-1
Who are your role models/why?	Soccer stars-4 Coach Tshepo (likes discipline)-1	Soccer stars-11 Taxi owner (makes money)-1 Barak Obama (money nice cars)-1 Indian guy who stays in community, owns taverns, flies to Durban-1 Mom (takes care of me)-1 Friend (I trust him)-1	TV actress-3 Teacher (kind, teaches about life)-2 Social workers-1 Lionel Messi-1 Amanda Dlamini-1 Castor Semenya-1 Social worker (helps sick)-1
What is 'fair play'?	Someone who's disciplined while playing soccer-1 Good heart while playing-1 A disciplined match-1 No fighting between players-1 Apologise after a foul-1	No idea-10 No swearing-1 No muti-1 No beating refs-1	Don't know-16 Play fair soccer, don't fight ea other-1
What are your biggest challenges/how do you cope?	No soccer boots, no socks-1 Coach favours other players-1 Parents can't afford soccer boots, soccer clothes-1 Parents refuse to let some kids play soccer-1	No electricity-1 Housing shortage-1 Water shortage-1 Toilet shortage-1 Want nicer field with grass-1 Want official referees-1 Failing in soccer trials-1 Losing matches-1 Want soccer boots, no money at home-1  Find scrap metal, sell for money-1	Don't have soccer boots, kit-3 Coaches only teach 5-a-side soccer Must use own takkies, shorts No electricity-1 Housing shortage-1 Water shortage-1 Kids hit by cars on road to school-1

	Fetch water, clean house, ask parents for permission to play soccer-1 Run away to play soccer-1 Borrow soccer boots-1		
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Analysis:

No participants have an understanding of Amandla (or of Shongi, when asked). If they have heard the name or read it on shirts, they only understand it as the sponsor of the team. This would suggest that the project is only seen as a football club and nothing further. This perception could extend to the parents and the greater community, as well.

Reasons for participation primarily relate to playing soccer for fun, exercise, or the goal of becoming professional.

If participants were not at Amandla (as in, if Amandla did not exist), some indicate they would be involved in other sports activities (including tennis, rugby, other soccer, and dance for girls). Others would be at home studying, doing chores, sleeping or elsewhere in the community watching tv, playing playstation, or playing in the street. No one made clear mention of engaging in deviant behaviours if they were not at Amandla.

Most subjects indicated that they have changed but struggled to identify clear changes. This may be due to their limited period of participation. They most commonly identify that their soccer skills (and fitness) have improved. Some indicate that they are avoiding bad things, like drugs and smoking but there was little elaboration.

When asked about future careers, the majority identify pro soccer. One older boy recounted attending trials for the Orlando Pirates and learned that they are only interested in tall and talented players yet, he is still convinced that pro soccer is his only career option. This is clearly an area where few individuals have engaged in career exploration, let alone career/educational planning. After soccer, doctor, police, and teacher are the more popular careers identified.

When we probed individuals as to how they would achieve their career ambitions, the most common responses were to work hard and respect adults. Little mention was made of their school success, specific subjects, or of pursuing tertiary education/training.

What violence do you experience?

Responses were quite limited in this category. Some had directly experienced petty robberies of cell phones and soccer boots. Multiple subjects referred to their living conditions, which may have been influenced by the translator, to switch the question from "violence experienced" to "problems experienced".

Role models are most frequently identified as soccer stars from television. When only famous people were identified, we asked them about role models that they knew personally. These included mothers, a social worker, and one soccer coach. One girl indicated clearly that she did not believe there were any role models in her community.

'Fair Play' is the points system Amandla uses to engender principles of mutual respect, support, and cooperation into its soccer matches. Participants were asked "what is fair play?" with no further

explanation, in order to understand how this concept has been internalized. It was clear that no subject had been introduced to the Amandla 'Fair Play' concept. Some guessed at explanations related to good conduct while playing soccer.

The biggest challenges or problems faced by participants relate to living conditions (lack of electricity, water, toilets, permanent housing, limited food) and soccer kit (boots and clothing).

The large variation in ages (up to 5 years apart) within each of the focus groups and within the teams themselves- was problematic. In general, younger subjects had very little to say. This may also impact on the effectiveness of programming. Overall, subjects were more reticent to speak than their counterparts in Khayelitsha and appeared to have a weaker sense of attachment to Amandla.

Oddly, the level of response to the more sensitive questions about victimization and deviant behaviour in the panel study questionnaire was higher in Kagiso than Khayelitsha. This suggested that Kagiso subjects were, at least in the in-home interviews, more comfortable revealing sensitive information. Yet, in the focus groups, the opposite was experienced.

#### Recommendations:

- Improve Amandla programming and branding in Kagiso
- Extend hours of operation when lighting is available
- consider sponsorship of soccer boots, short/shirts for participants (though this could create some challenges).
- be mindful of the barriers to participation: home responsibilities, limited financial means, limited food, possible weak family structure/support
- Provide career exploration opportunities for participants and attempt to address the "limitations" to pro soccer careers

## Khayelitsha Wave 2 Focus Groups

Process:

Based on the focus groups conducted in August 2012 in Khayelitsha, the same process was followed for 4 boys groups, 3 girls groups, and 3 CPL groups of 6-10 individuals each.

Translation was provided to and from Xhosa. No Amandla staff were present during the focus groups to ensure that responses were not affected by staff known to the participants.

A total of 50 subjects were interviewed, 33 boys and 17 girls. Total current Amandla-Khayelitsha participation for Under-14 soccer and life skills programming is 253 boys and 132 girls, for Under-18/19 soccer and life skills programming is 108 boys and 94 girls, and for the Night Crime Prevention League, 218. Focus groups thus represent 10% of the boys' total and 13% of the girls' total and 8% of the Crime Prevention league registered participants.

Frequency of responses by age group:

Question naire Item	Under 14/15 y.o. boys, ages 10-14 (n=18)	Under 18 y.o. boys, ages 14-18 (n=17)	Girls, all ages 9-18 (n=29)	Boys/young men Night League, ages, 16-31 (n=18)
What is Amandla all about?	Life Skills, teach respect-4 Knowledge, right from wrong, growing minds-2 Role models, respect-3 Where you come from Football, skills-3 Away from crime, communities How to communicate, make friends-2	Football Take youth off streets-2 Avoid gangs, drugs-4 How to treat strangers Learn danger of alcohol, drugs Share football skills and ideas Education, life, football	Football, skills-7 Learn new things Life skills Youth empowerment Supporting one another	Football-6 Take youth off streets, away from bad things-2 Reduce crime Avoid substances Respect Build relationships
Why do you attend?	Avoid drugs, gangs, streets-9 Sent by coach, father Improve career Asanda brought us from streets Be like Tshabalala Learn skills Become pro footballer Make friends, play together	Change my life Avoid gangs-2 Like sports Football fanatic Safe from gangs Asanda told me not to leave Teach right things-3	Get support Amandla is my community Meet people-2 Get motivation Gain life skills-4 Play soccer-6	Out of streets Only place to play soccer in Khay at night-2 They provide transport for us Exercise We're the best team here Better than sitting at home, tv
What else would you be doing?	Smoking-2 Sniffing glue-2 Join gangs Homework Watch cartoons, t.v. On cellphone Listen to kwaito musician Play marbles, spinning top Lonely at home Blamed for bad things by other parents	On streets-3 Soccer elsewhere-2 Studying-2 Playstation Avoiding gangs somewhere else In gangs, drugs Soccer in streets Robbing someone Make sure younger kids attend Amandla	Drugs-2 Cigarettes Playing with friends-3 Studying-2 Join gangs Fight other girls Watch t.v., eat food Play other sports-2 Start own team Chores at home-2 sleeping	Play street soccer at night Drinking, smoking-2 Watching tv-2 Chasing girls
Has Amandla changed you?	Not fighting kids Feel happy when here	Stopped tik Stopped glue Was gangster, hard to leave Used to anger easily Learned how to speak with respect	Think before doing wrong Changed view of world, wish kids on streets could come to Amandla More determined with education Want to start own org, improve community Didn't play sports	No answers-5 Not really Play soccer in streets when not here Used to hang out with other friends, drink, smoke Coming here gives discipline, opens mind, see self differently

			before, improved-2 Can say no to pressure to drink now Spend time here instead of streets-4 Learned how to support others Used to be lonely, without friends	
What future do you want/how will you get there?	Amandla director Pro soccer-8 Action movie star News reporter Pilot-2 doctor coach, take kids off streets teacher president	Own business, KFC franchise Radio presenter Help people, guide them Baker-muffins, cakes Pro soccer-2 Pilot (uncle was a pilot, was shot) doctor	Pro soccer-4 Own bakery Business exec Lawyer-3 Scientist Doctor-2 Teacher Judge Police Social worker	Pro soccer-11 Doctor (some unemployed, not sure)
	Help people Respect Be responsible	Respect teachers, classmates Avoid gangs	Respect Focus on football, studies Work hard Study hard-4  Avoid peer pressure, low self-esteem, too much tv, walking around at night, bad friends, drugs	Go to trials Learn Scouts told me I'm too short, better if scouts came to Amandla
What violence do you experience?	Robbed by guy with gun-2 Locked in toilets at school Lunch stolen at school	It's all over, at school, at home, in community Gangsters come to school to stab someone, stab in street and run away, no one does anything Group revenge attacks	Verbal abuse (against lesbians, tomboys) Gangs rob us Don't feel safe at home on weekends Children are kidnapped Gangsterism at school, stabbings Grandmother beats me School bullies-2	Chased by gangs from school Fight over soccer ball Stabbings, murders, youth gang fights with knives, pangas Older ones fight with guns Robbery-give in, don't report Gangsterism-can't go to F section
Who are your role models/why?	Nkazi from Amandla Local singer Livingstone from Amandla School caretaker Weather presenter on tv Class teacher Friend with Cavella shoes Desmond Tutu Mother-2 Father-2 Brother-2	Asanda at Amandla-inspired me to play, avoid streets Father Mother Funny guys	Nkazi at Amandla Wewe at Amandla Mom-2 Usher Mother & father Coaches at Amandla-support, give me skills-2 Aunt is a judge Aunt Sister Grandmother-2 Friend helps fight off boys	Pro soccer players Teacher gives extra maths lessons at his house Mother-2 Don't have, want my own life Parents-fought Apartheid, not ea. other
What is 'fair play'?	Respect coach, ref, captain-3 Shake hands before/after match-2 Pick up someone if tripped-2 Cheer other team if score-2	Respect younger, forgive Pick up someone if tripped, kicked-2 Show respect	Pick up someone if tripped, apologize Points recording Frustration-2 Teamwork	Work with other team, no choosing sides No fighting, shouting-2 No answers-7 Respect game, ea. Other

	Sing team song/cheer-2 No fighting, insulting on field	Don't play rough Don't know what fair play is b/c they didn't tell us	Play fair w/out kicking, shouting, fighting on field Clap for other team-2 when they score Respect opponents-2 Accept losing No answer-5	Unite, Amandla!
What are your biggest challenges/ how do you cope?	Poverty-school/sports fees Conflict with older sister Gansterism-can't cross A & C sections-3 Getting injured at soccer Bullied at school Revenge from school fights turns to gangsterism	Time conflicts-soccer vs. studies Referees at Amandla Gangs-attacked or forced to join Pressure to do drugs, smoke Guy beat sister, community beat him	Lost family member Failed school grade Losing in soccer Train delays affect exams at UWC Gangster at school	Not getting selected at soccer trials Financial problems-2 Staying positive Lack of resources Working but have to support 8 people
	Seek donations Must respect elders Report gang activity to police, get brought home	Play football here If someone upsets me, beat him	Have to cry, accept, move on Talk to someone I trust If upset, supposed to cool down	

Analysis:

**What is Amandla all about?**

New in wave 2 are comments about learning how to communicate with people, making new relationships. Younger girls seem to have less clarity about Amandla.

People primarily **attend Amandla** to play soccer in a safe space and avoid problems at home, in the community.

**If not at Amandla**, some would stay at home and others would be on the streets. Several state they would play sports elsewhere, either on organized teams or casually. The CPL is the only space to play soccer at night in Khayelitsha (according to one team).

Many subjects (outside of CPL) repeat the same ways that **Amandla has changed them**: avoiding streets, bad influences, substances, gangs. When asked as follow-up how they avoided these influences during the days when not at Amandla, it was less clear. Perhaps some stay at home, play soccer/sports elsewhere, only hang out with "safe friends", or, are actually still involved with, or influenced by, deviant peers.

Pro soccer still emerges as the most commonly identified **future** that participants aspire to. It did not appear that any subjects (besides one already studying law at university) have developed clearer ideas about where they want to be and how to get there. Among CPL participants, there was a strong split between high football aspirations, a couple individuals committed to community work, and those unemployed with no ideas about where they're going (or willingness to articulate to the interviewer). This suggests that as boys age (though many CPL participants did not attend Amandla as youth), their future orientations appear to dissolve as unemployment and limited qualifications/proficiencies take root. Too many young men still cling to the notion of becoming pro soccer players despite the fact that they have attended numerous trials and have not been selected (or told directly by scouts that they are too short). While bringing scouts to Amandla or organizing friendly matches with pro clubs would certainly increase Amandla participation and excitement, the final outcome will not affect the vast majority of these unemployed, unskilled young men. Any such pro club partnerships should be matched with talks designed to revise some of the myths around pro soccer as a viable stand-alone career aspiration.

A handful of subjects referenced other **career aspirations**: lawyer, doctor, pilot, baker, KFC owner, radio presenter, journalist, judge, business exec. While encouraging, few have taken any steps to

learn more about these careers and forge a path, despite many of these ideas coming from subjects in their mid or late teens. Career talks from Khayelitsha-bred (or black) professionals could make a difference. It is unclear if any high school students have access to or make use of guidance counsellors.

Territorial **gang violence** remains a serious problem for youth, especially boys traveling from school in other sections. Some gangs are also entering school premises or waiting nearby to target certain students. CPL participants are exposed to stabbings, murders, gun use, especially at night. Girls, in particular, admitted to feeling unsafe in their homes on weekends, fearing armed robbery. There was less direct mention by participants of engaging in group violence themselves. I fear that those subjects (that revealed involvement in wave 1 interviews) may no longer be attending Amandla- a rather serious concern.

Family members were most commonly named as **role models** for supporting, providing, etc. Amandla coaches and coordinators were mentioned with some frequency in this wave (possibly because role models were discussed at Amandla?). CPL participants were more mixed on this question-some identified parents for being resilient through poverty and Apartheid, some still identify local soccer players, while others refuse to answer the question or stated (with some frustration) that they had no role models.

**Fair Play** responses were very similar to wave one: respect on the field, support each other, etc. There remain individuals who do not understand fair play or refuse to respond to the question. This could have also been caused by focus groups that were unintentionally comprised of more than 1 team, silencing participants from the less-vocal team. For CPL, responses were more mixed; it seems that newer participants have not yet understood fair play as an Amandla component. This question no longer seems to reveal much information. Should participants be able to transfer and articulate how fair play can/should relate to the rest of their lives? Is this a sufficient structure to prompt behavioural change in other domains?

Poverty, peer pressure, and territorial gang violence were the most common **challenges** reported by all groups. Bullying at school or gang activity at school were mentioned more often in this wave among younger youth. It appeared that some teams were comprised of more-privileged youth than others.

#### Recommendations:

- Above all, the issue of territorial gang violence, needs better understanding and strategic response-how has this affected participation rates and realities during out-of-Amandla times for remaining participants? Would transport assistance from schools to Amandla be possible (and effective)? Is Amandla poised to engage directly with gang participants over a sustained period of time (to "manage" behavioural change)? Are there credible partners with overlapping objectives (and relative resource stability)? Several subjects referred to talks from former gang members as being memorable, perhaps this can be expanded.
- If opportunities are sought for PSL engagement, via scout visits, friendly matches, etc., ensure that football career realities are presented to ALL age groups
- Revisit career counselling recommendation from wave 1
- Provide or increase transportation assistance for CPL teams who show commitment and have safety concerns
- Revisit fair play framework and objectives as a standalone component (is this sufficient for U-18 boys/girls and CPL?)

## Exploratory Factor Analysis

Construct Validity / Reliability (Cronbach's Alpha) / Mean (Standard Deviation)	Khayelitsha W1 (n=131)	Khayelitsha W2 (n=318)	Khayelitsha W3 (n=318)	
Household Deprivation (scoring range: 0-4)	# of items	5	5	5
	Variance expl	28.6%	35.2%	66.5%
	Goodness-fit	0.093	0.000	0.000
	Reliability	0.56	0.71	0.91
	Mean (SD)	0.27 (0.41)	0.76 (0.65)	0.91 (0.74)
Violent Home (range: 1-3, range: 1-4 in Wave 3)	# items	4	4	4
	Variance expl	73.9%	36.3%	58.9%
	Goodness-fit	0.002	0.000	0.000
	Reliability	0.92	0.69	0.85
	Mean (SD)	1.19 (0.52)	1.31 (0.35)	1.7(0.70)
Harsh Parenting (range: 1-4)	# items	Not Possible	6	7
	Variance expl		22.2%	24.5%
	Goodness-fit		0.000	0.000
	Reliability		0.62	0.67
	Mean (SD)		1.92 (0.49)	1.84 (0.45)
Less parental Involvement (range: 1-4)	# items	Not Possible	9	10
	Variance expl		20.8%	36.7%
	Goodness-fit		0.000	0.000
	Reliability		0.67	0.82
	Mean (SD)		1.40 (0.34)	1.62 (0.45)
Combined Support from Mother (range: 0-6) Factor analysis not possible (only 3 items)	# items	3	3	3
	Variance expl	N/A	N/A	N/A
	Goodness-fit	N/A	N/A	N/A
	Reliability	N/A	N/A	N/A
	Mean (SD)	5.18(1.56)	4.77 (1.78)	5.09 (1.36)
Combined Support from Father (range: 0-6) Factor analysis not possible (only 3 items)	# items	3	3	3
	Variance expl	N/A	N/A	N/A
	Goodness-fit	N/A	N/A	N/A
	Reliability	N/A	N/A	N/A
	Mean (SD)	3.56 (2.39)	2.84(2.31)	3.97(1.95)
More Deviant Peers (range: 1-4)	# items	5	10	13
	Variance expl	45.7%	32.9%	42.0%
	Goodness-fit	0.000	0.002	0.000
	Reliability	0.79	0.82	0.90
	Mean (SD)	1.09 (0.26)	1.61(0.58)	1.63 (0.55)
Combined Substance Use (range: 0-7) Factor analysis not possible with zero-variance variables	# items	5	5	5
	Variance expl	N/A	N/A	N/A
	Goodness-fit	N/A	N/A	N/A
	Reliability	N/A	N/A	N/A
	Mean (SD)	0.11(0.38)	0.52 (0.95)	0.59(1.00)
Pro-Gangs Attitude (range: 0-2) (Wave 3 range: 0-3)	# items	5	6	8
	Variance expl	31.0%	31.7%	39.7%
	Goodness-fit	0.000	0.001	0.000
	Reliability	0.64	0.65	0.82
	Mean (SD)	0.17 (0.33)	0.14 (0.26)	0.68 (0.45)
Combined School Abuse (range: 0-20) Factor analysis not possible due to differential variable weighting	# items	6	6	6
	Variance expl	N/A	N/A	N/A
	Goodness-fit	N/A	N/A	N/A
	Reliability	N/A	N/A	N/A
	Mean (SD)	0.19 (0.37)	0.46(0.64)	0.45(0.54)
Combined Victimization past 12 months (range: 0-6-wave 1, 0-8-wave2 & wave 3) Factor analysis not possible with zero-variance variables	# items	6	8	8
	Variance expl	N/A	N/A	N/A
	Goodness-fit	N/A	N/A	N/A
	Reliability	N/A	N/A	N/A
	Mean (SD)	0.12 (0.43)	0.86 (1.27)	1.64(1.46)
Violence Exposure Count (range: 0-24)	# items	8	8	8
	Variance expl	35.3%	39.6%	42.4%
	Goodness-fit	0.000	0.000	0.000
	Reliability	0.80	0.83	0.84
	Mean (SD)	6.68 (4.3)	10.9 (5.4)	12.6 (5.2)
Negative School Attitude (range: 1-4)	# items	7	9	10
	Variance expl	27.1%	33.4%	44.0%

	Goodness-fit	0.302	0.000	0.000
	Reliability	0.70	0.80	0.88
	Mean (SD)	1.60 (0.43)	1.58 (0.41)	1.80(0.45)
Negative Future Attitude / Low Resiliency (range: 1-4)	# items	10	10	15
	Variance expl	25.9%	33.7%	37.0%
	Goodness-fit	0.002	0.000	0.000
	Reliability	0.77	0.84	0.89
	Mean (SD)	1.97 (0.47)	1.43 (0.37)	1.77 (0.41)
Anomie (range: 1-4)	# items	5	5	4
	Variance expl	38.6%	35.4%	35.5%
	Goodness-fit	0.000	0.000	0.055
	Reliability	0.75	0.72	0.62
	Mean (SD)	1.73 (0.48)	2.08 (0.47)	2.03 (0.43)
Pro-Violence Attitude (range: 1-4)	# items	7	14	19
	Variance expl	20.9%	28.5%	32.3%
	Goodness-fit	0.115	0.000	0.000
	Reliability	0.63	0.84	0.89
	Mean (SD)	1.66 (0.43)	1.85 (0.43)	1.86 (0.39)
Combined serious/violent offending –past 12 months (range: 0-7)	# items	7	7	7
	Variance expl	Not Possible	Not Possible	Not Possible
	Goodness-fit	Not Possible	Not Possible	Not Possible
	Reliability	Not Possible	Not Possible	Not Possible
	Mean (SD)	0.00 (0.06)	0.13 (0.47)	0.29 (0.71)
Maternal assessment-Subject’s Problem Behaviour (range: 1-5)	# items	8	7	10
	Variance expl	37.4%	26.1%	30.4%
	Goodness-fit	0.003	0.000	0.000
	Reliability	0.80	0.70	0.79
	Mean (SD)	1.91 (0.78)	2.16 (0.73)	2.10 (0.67)
		Khayelitsha W1	Khayelitsha W2	Khayelitsha W3
Poor Health and Well-Being (range 1-4)	# items	Not possible	Not possible	5
	Variance expl			39.2%
	Goodness-fit			0.000
	Reliability			0.74
	Mean (SD)			1.41 (0.40)

Figure A.1. Table reporting construct validity and reliability testing for 3 waves of Khayelitsha data.

As seen in the table, a number of wave 1 constructs suffer from poor fit and reliability or proved altogether impossible to construct as item factor loadings were too low and reliability, too inconsistent. For these reasons, Khayelitsha wave 1 data will not be further analyzed. I will now present, in greater detail, the questionnaire items and factor loadings that form the basis for the constructs in waves 2 and 3 along with a test-retest reliability analysis (paired sample correlation) to explore the consistency of subjects’ responses across the waves.

**Household Deprivation** was tested with the following items:

Questionnaire Item (response options: 0=never, 1=once or twice, 2=a few times,3=many times, 4=always)	Factor Loading- wave 2	Factor Loading- wave 3	Comment
q2.24-In the last 12 months, how often have you or your household... Gone without enough food to eat?	.436	.760	kept
q2.25-In the last 12 months, how often have you or your household... Gone without medicine or medical treatment that you needed?	.302	.694	Kept
q2.26-In the last 12 months, how often have you or your household.... Gone without a cash income?	.530	.767	kept
q2.28-In the last 12 months, how often have you or your household.... Gone without shelter?	.334 dropped	.201 dropped	low factor loading, rare occurrence
q2.29-In the last 12 months, how often have you or your household.... Gone without electricity in your home?	.761	.899	kept

q2.30-In the last 12 months, how often have you or your household.... Gone without enough fuel (electricity, propane, paraffin, wood, coal) to heat your home or cook with?	.787	.934	kept
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Figure A.2. Questionnaire items and response options tested for the construct Household Deprivation

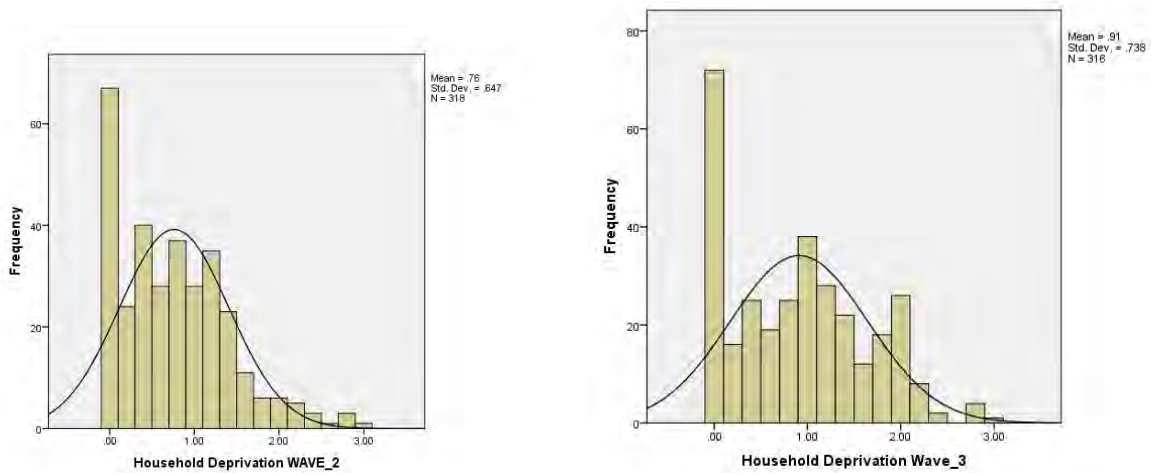


Figure A.3. Histogram frequencies, normal curve, and descriptives for the construct Household Deprivation

Household Deprivation is skewed by the frequency of 0-deprivation responses. Aside from this sub-group, there is relative dispersion across the range of responses. Reliability has not been reported for similar deprivation scales in the literature.

Paired Samples Correlations	N	Correlation	Sig.
Pair Household_deprivation_WAVE_2 & Household_deprivation_W3	316	.063	.265

Figure A.4. Test-Retest Reliability for Household Deprivation.

Paired sample correlation is non-significant, suggesting that either household deprivation, itself, is transient, or that the scale has poor test-retest reliability.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
H-hold deprivation W2 H-hold deprivation W3	-.15063	.95117	.05351	-.25591	-.04536	-2.815	315	.005

Figure A.5. Test for mean difference between waves 2 and 3 for the construct Household Deprivation.

In paired differences analysis, we find evidence that the mean Household Deprivation score has significantly increased from wave 2 to wave 3. However, this increase is not consistent enough across cases to emerge as a significant positive correlation in the paired

sample correlation. This could be reflective of truly increased deprivation among some study subjects or increases in self-disclosure that are not consistent across the cohort.

Item number/wave	Corrected item-total correlation
q2.24_w2	.351
q2.24_w3	.572
q2.25_w2	.193
q2.25_w3	.417
q2.26_w2	.299
q2.26_w3	.493
q2.29_w2	.257
q2.29_w3	.209
q2.30_w2	.369
q2.30_w3	.580

Figure A.6. Reliability analysis with all Wave 2 and Wave 3 Household Deprivation items. Total reliability= 0.75.

Reliability analysis combining all wave 2 and wave 3 items yields a Cronbach's alpha of 0.75, an acceptable reliability score.

**Violent Home Environment** was tested with the following items:

Questionnaire Item: Wave 2, In your lifetime. Wave 3, in the past 12 months. (response options wave 2: 1=not at all, 2=sometimes, 3=often. Response options wave3: 1=never, 2=once or twice, 3=sometimes, 4=all the time	Factor Loading-Wave 2	Factor Loading-wave 3	comment
Q4.2 - People in my family often lose their temper with each other	.667	.761	Kept
Q4.3 - People in my family argue a lot	.746	.876	kept
Q4.4 - Arguments in our household sometimes lead to violence	.437	.719	kept
Q4.5 - Fights and arguments in our household are sometimes influenced by the use of alcohol or drugs	.511	.702	kept
Q4.6 - How safe do you feel when you are in your home?	.159	.056	Dropped, poor factor loading

Figure A.7 Questionnaire items and response options tested for the construct Violent Home Environment

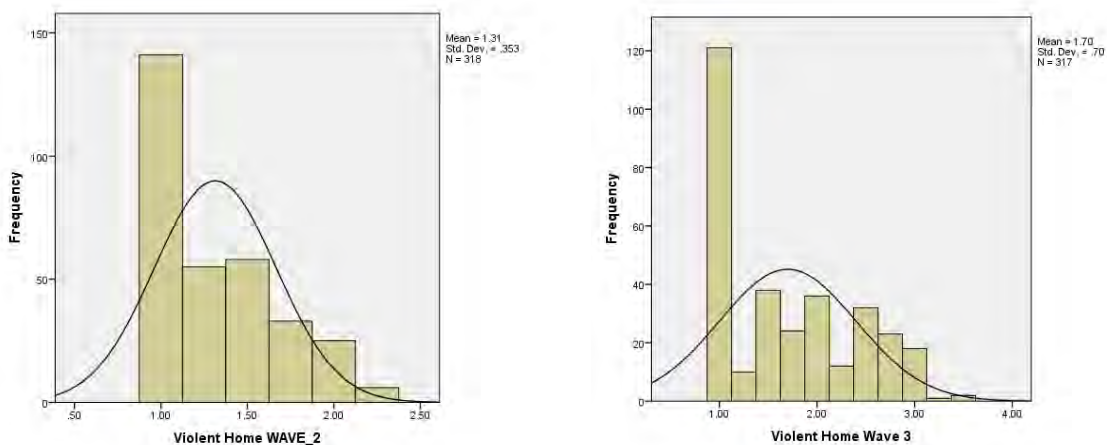


Figure A.8. Histogram frequencies, normal curve, and descriptives for the construct Violent Home.

The frequency of nil responses (scored as one for this construct) is quite high. There is more variability in the remainder of the distribution in wave 3. The range of response options was increased to 4 in wave 3 with the intent of generating greater dispersion. This rebasing will affect the mean difference analysis (we would expect to see a mean increase as the median response of sometimes in wave 2 (scored as 2) is scored as 3 in wave 3).

The increased reliability in wave 3 suggests better construct formation. Reliability for experiencing violence in the home environment was not reported in the literature (Thornberry, Krohn, Lizotte, Smith & Tobin, 2003; Ward et al, 2007).

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Violent_Home_WAVE_2	317	.072	.203
	Violent_Home_Wave_3			

Figure A.9. Test-Retest Reliability for Violent Home Environment.

Paired sample correlation is non-significant. Test-retest reliability is a potential concern.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Violent_Home WAVE_2 Violent_Home Wave 3	-.38486	.76109	.04275	-.46896	-.30075	-9.003	316	.000

Figure A.10. Test for mean difference between waves 2 and 3 for the construct Violent Home.

Mean difference is significant suggesting that violence in the home has increased though some increase may be expected with the increased response range (from 1-3 in wave 2 to 1-4 in wave 3). The mean increase, without a corresponding positive paired sample correlation (also seen with Household Deprivation) suggests that Violent Home scores increased irregularly (for some subjects and not others) or that self-disclosure has increased inconsistently.

Item number/wave	Corrected item-total correlation
Q4.2_w2	.244
Q4.2.1_w3	.590
Q4.3_w2	.270
Q4.3.1_w3	.658
Q4.4_w2	.200
Q4.4.1_w3	.546
Q4.5_w2	.149

Q4.5.1_w3	.567
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Figure A.11. Reliability analysis with all Wave 2 and Wave 3 Violent Home items. Total reliability= 0.72.

Reliability analysis combining all wave 2 and wave 3 Violent Home items yields a Cronbach’s alpha of 0.72, an acceptable reliability score.

**Harsh Parenting** was tested with the following items:

Questionnaire Item (response options: 1=often, 2=sometimes, 3=hardly ever, 4=never)	Factor Loading wave 2	Factor Loading wave 3	Result, analysis
Q2.51 - How often are you in trouble with any of your parents/ caregivers?	.440	.302	kept
Q2.56 -How often do any of your parents/caregivers shout at you?	.381	.393	kept
Q2.57 - How often do any of your parents/caregivers hit, slap, cane, punch, beat, or in any other way, physically hurt you?	.576	.452	Kept
Q2.58 - How often do any of your parents/caregivers lock you into or out of the house?	.441	.702	kept
Q2.59 - How often do any of your parents/caregivers refuse to give you food (when there is food in the house)?	.487	.692	kept
Q2.60 - How often do your parents/caregivers punish you when you do not obey their rules or instructions?	.479	.314	kept
Q2.66– There is someone in my home who drink too much wine / alcohol	.144- dropped	.233 dropped	Dropped, low factor loading
Q2.68 (wave 3 only) – I often feel unwanted at home		.440	Kept

Figure A.12. Questionnaire items and response options tested for the construct Harsh and Inconsistent Parenting

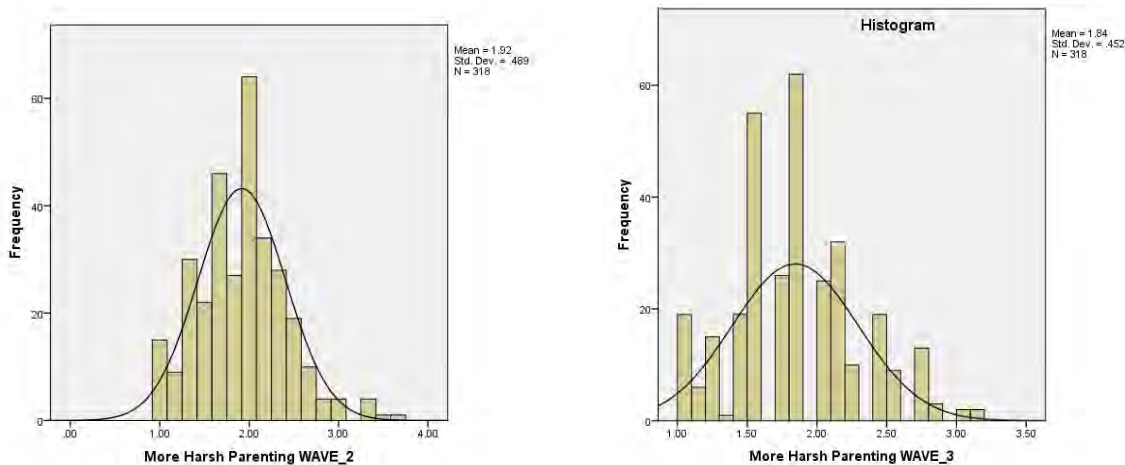


Figure A.13. Histogram frequencies, normal curve, and descriptives for the construct Harsh/Inconsistent Parenting.

The modal response sometimes (scored as 2) is prevalent in wave 2 with somewhat more dispersion in wave 3 (in part because 1 extra item is included in the scale). Reliability increased marginally from wave 2 to wave 3 (from 0.62 to 0.67) but is likely attributable to the additional item. Reliability scores for similar scales have not been found in the literature.

Paired Samples Correlations	N	Correlation	Sig.
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Pair 1	More Harsh_Parenting W2	318	.010	.862
	More Harsh_Parenting_W3			

Figure A.14. Test-Retest Reliability for More Harsh Parenting.

Paired sample correlation is non-significant meaning that test-retest reliability is again unstable or that subject disclosure or actual levels of perceived harsh, inconsistent parenting have changed irregularly.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Harsh_Parenting W2 Harsh_Parenting_W3	.07280	.66320	.03719	-.00037	.14597	1.957	317	.051

Figure A.15. Test for mean difference between waves 2 and 3 for the construct Harsh Parenting.

Mean difference is significant meaning that Harsh Parenting scores are significantly lower in wave 3. A portion of this change could be attributed to subject aging; increased independence, and less direct parenting. In focus group discussion with femal Khayelitsha parents, many expressed having given up on attempts to correct and discipline teenage sons who had begun getting into trouble. This could, therefore, be perceived by subjects as less harsh parenting.

Item number/wave	Corrected item-total correlation
Q2.51_w2	.151
Q2.51_w3	.217
Q2.56_w2	.223
Q2.56_w3	.324
Q2.57_w2	.342
Q2.57_w3	.397
Q2.58_w2	.217
Q2.58_w3	.210
Q2.59_w2	.205
Q2.59_w3	.298
Q2.60_w2	.233
Q2.60_w3	.280
Q2.68 (wave 3 only)	.125

Figure A.16. Reliability analysis with all Wave 2 and Wave 3 Harsh Parenting items. Total reliability= 0.60.

Reliability analysis combining all wave 2 and wave 3 Harsh Parenting items yields a Cronbach's alpha of 0.60, a satisfactory reliability score.

**Less Parental Involvement** was tested with the following items:

Questionnaire Item (response options: 1=often, 2=sometimes, 3=hardly ever, 4=never)	Factor Loading wave 2	Factor Loading wave 3	comment
Q2.47 - Do you feel that the rules in your family are clear?	.427	.550	kept
Q2.48 - Do you need permission from any of your parents/caregivers when you go out?	.452	.452	kept
Q2.49 - Do any of your parents/caregivers know where you are when you are not at home?	.488	.443	kept
Q2.54 - How often do any of your parents/caregivers check or ask whether you have done your homework?	.317	.387	Kept- loading may be lower for those no longer in school (choosing to report NEVER)
Q2.55 - How often do any of your parents/caregivers attend school meetings?	.425	.413	Kept-see above
Q2.62 - My parents/caregivers give me good advice	.404	.809	kept
Q2.63 - My parents/caregivers show their love for me	.550	.832	kept
Q2.64 - My parents/caregivers show their interest in my friends	.487	.489	kept
Q2.65 - My parents/caregivers make me feel good when I am with them	.508	.723	kept
Q2.67 (wave 3 only) - My parent(s) show that they are proud of me		.735	kept

Figure A.17. Questionnaire items and response options tested for the construct Less Parental Involvement

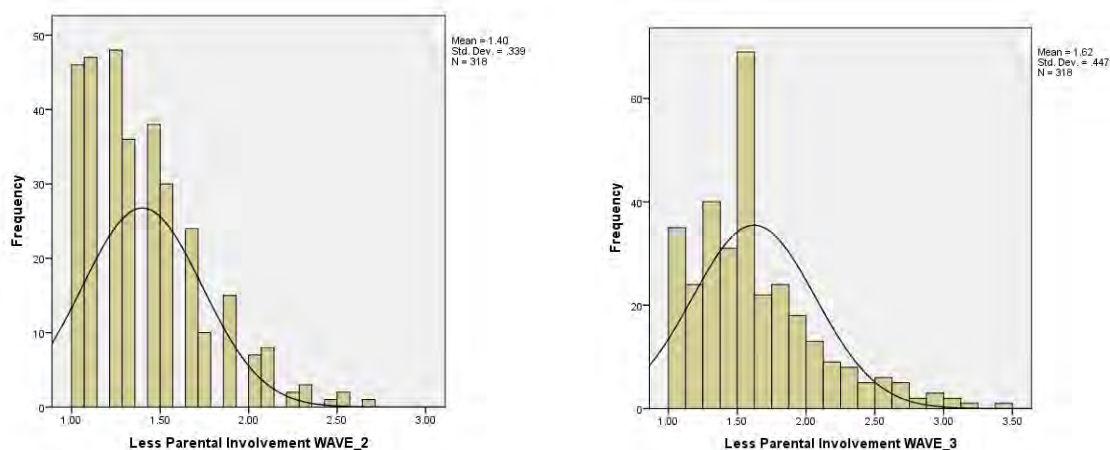


Figure A.18. Histogram frequencies, normal curve, and descriptives for the construct Less Parental Involvement.

Distribution is skewed left, towards more parental involvement, in both waves. The additional item added in wave 3 appears to have improved the dispersion.

Ward et al (2007) reported a reliability of 0.77 for a 6-item scale of parental support administered to approximately 370 Cape Town youth. The wave 3 reliability of 0.82 compares favourably with Ward's measure.

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Less Parental Involvement WAVE_2 Less Parental Involvement WAVE_3	318	.138	.014

Figure A.19. Test-Retest Reliability for Less Parental Involvement.

Paired sample correlation is significant suggesting better test-retest reliability than exhibited in other constructs. This finding suggests that parental involvement may be more stable, as assessed by youth, than harsh/inconsistent parenting.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Less Parental Involvement W_2	-.22212	.52226	.02929	-.27974	-.16450	-7.584	317	.000
Less Parental Involvement W_3								

Figure A.20. Test for mean difference between waves 2 and 3 for the construct Less Parental Involvement.

In this case, Less Parental Involvement has increased significantly meaning, together with the correlation analysis, that most subject scores have significantly increased and parental involvement has decreased. This could be a trend consistent with subject aging and increasing independence.

Item number/wave	Corrected item-total correlation
Q2.47 w2	.230
Q2.47 w3	.406
Q2.48 w2	.242
Q2.48 w3	.518
Q2.49 w2	.278
Q2.49 w3	.402
Q2.54 w2	.206
Q2.54 w3	.519
Q2.55 w2	.325
Q2.55 w3	.493
Q2.62 w2	.167
Q2.62 w3	.471
Q2.63 w2	.207
Q2.63 w3	.482
Q2.64 w2	.254
Q2.64 w3	.237
Q2.65 w2	.178
Q2.65 w3	.390
Q2.67 w3 (wave 3 only)	.460

Figure A.21. Reliability analysis with all Wave 2 and Wave 3 Less Parental Involvement items. Total reliability= 0.76.

Reliability analysis combining all wave 2 and wave 3 Less Parental Involvement items yields a Cronbach's alpha of 0.76, a good reliability score.

**Combined Mother Support** combines the scores on the following questions:

- Q2.12.1 In the past 12 months, have you spent a lot of time with your mother? (often=2, sometimes=1, never=0).
- Q2.13.1 In the past 12 months, have you received financial support from your mother? (often=2, sometimes=1, never=0).
- Q2.15.1 In the past 12 months, have you received emotional support from your mother? (often=2, sometimes=1, never=0).

Scores can range between 0 (no support in the past 12 months) to 6 (full support).

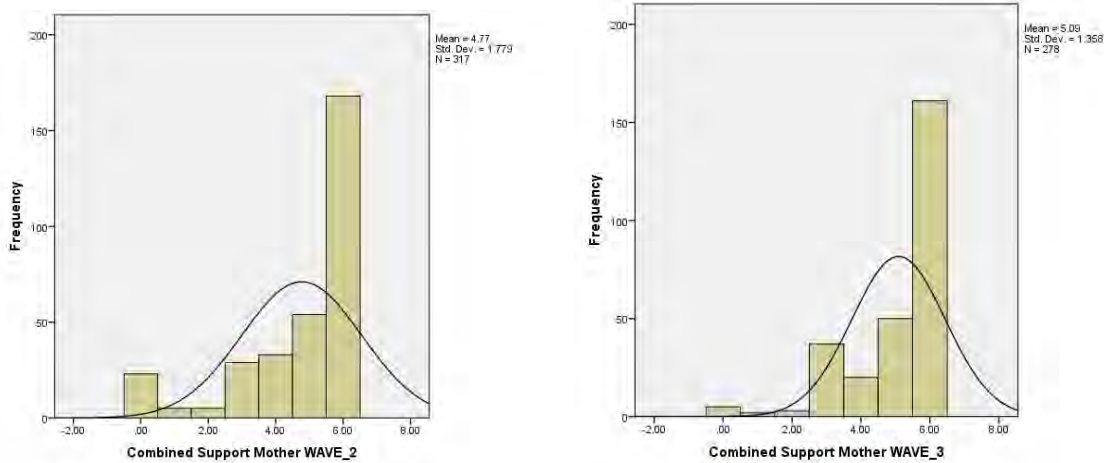


Figure A.22. Histogram frequencies, normal curve, and descriptives for the construct Combined Support from Mother.

Combined Mother support is skewed right towards the highest levels of support and appears similar across waves.

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Comb_Suppt_Mother_w2 Cmb_Suppt_Mother_W3	278	.229	.000

Figure A.23. Test-Retest Reliability for Combined Support from Mother.

The paired-sample correlation is significant between Mother Support in wave 2 and wave 3, meaning that test-retest reliability is high.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Cmb_Suppt_Mother_w2 Cmb_Suppt_Mother_W3	-.10072	1.78560	.10709	-.31154	.11010	-.940	277	.348

Figure A.24. Test for mean difference between waves 2 and 3 for the construct Combined Support from Mother.

Mean difference is non-significant suggesting stability of the measure and of the construct. Thus, support from the subject’s mother has not changed significantly year-to-year.

**Combined Father Support** combines the scores on the following questions:

- *Q2.11.1 In the past 12 months, have you spent a lot of time with your father?* (often=2, sometimes=1, never=0).
- *Q2.14.1 In the past 12 months, have you received financial support from your father?* (often=2, sometimes=1, never=0).
- *Q2.16.1 In the past 12 months, have you received emotional support from your father?* (often=2, sometimes=1, never=0).

Scores can range between 0 (no support in the past 12 months) to 6 (full support).

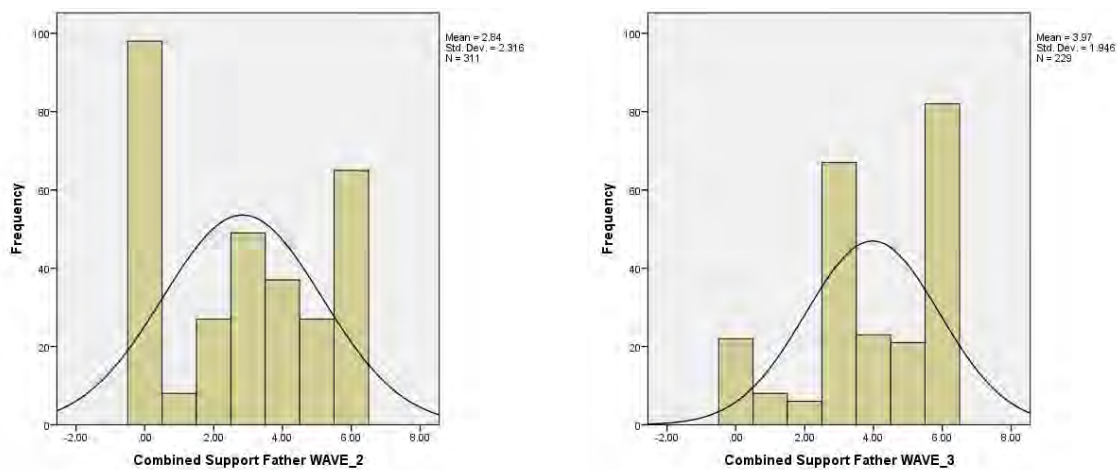


Figure A.25. Histogram frequencies, normal curve, and descriptives for the construct Combined Support from Father.

Combined Father Support appeared to have a bi-modal response pattern in wave 2, a high rate of 0-support responses (likely corresponding with deceased and absentee fathers) and a relatively high rate of full-support responses (equal to 6). In wave 3, the full-support responses increased as did the median response of 3 (an average of some support). Much of the 0-support response was removed when coding deceased fathers as not applicable for these items (not done in wave 2 data capture).

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Cmb_suppt_Father_w2	225	.404	.000
	Cmb_Suppt_Father_W3			

Figure A.26. Test-Retest Reliability for Combined Support from Father.

As with combined support from mother, Combined Support from Father is significantly correlated between waves, suggesting good test-retest reliability (among those subjects with living fathers in wave 2 and wave 3).

	Paired Differences				t	df	Sig. (2-tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower				Upper
Cmb_Suppt_Father_w2	-.66222	2.30520	.15368	-	-.35938	-4.309	224	.000
Cmb_Suppt_Father_W3				.96507				

Figure A.27. Test for mean difference between waves 2 and 3 for the construct Combined Support from Father.

Father support has significantly increased from wave 2 to wave 3, however the sample size (n=225) is much lower than the total number of cases (n=318) due to non-reports for parents who are deceased. In this case, it is likely that more support variables were coded as not applicable in wave 3, rather than no support in wave 2 for parents who are deceased (and, therefore, unable to provide support).

**Deviant Peer Associations or More Deviant Peers** was tested with the following items:

questionnaire item (response options: 1= never/none of my friends, 2=once or twice/1 or 2 of my friends, 3= often/3-4 friends, 4=Every day/5 or more friends)	Factor Loading wave 2	Factor Loading wave 3	Result, analysis
Q3.23 - Have any of your friends bought drugs in the past year?	.525	.784	kept
Q3.24- Have any of your siblings (living in your household) bought drugs in the past year?	.122 dropped	.368 dropped	Dropped- not specifically peers
Q3.25- Has anyone, in the past year, tried to sell or give you any drugs?	.300 dropped	.653 kept	Kept W3 only
Q3.26- I do not want to know any details but do any of your friends regularly use or sell drugs?	.432	.788	kept
Q3.27- I do not want to know any details but do any of your siblings (living in your household) regularly use or sell drugs?	.400 dropped	.392 dropped	Dropped- not specifically peers
Q3.28- I do not want to know any details but do you know anyone else in your community who regularly uses or sells drugs?	.532	.616	kept
Q3.28.1- Have any of your friends dropped out of school?	.477	.626	kept
Q3.28.2- Have any of your friends been at court because of their behaviour?	.397 dropped	.627 kept	Kept w3 only
Q3.28.3- Have any of your friends skipped school a lot without permission?	.493	.623	kept
Q3.28.4- Do any of your friends smoke cigarettes on a pretty regular basis?	.882	.722	kept
Q3.28.5- Do any of your friends go out in the evening with their parents' permission?	.520	.681	kept
Q3.28.6_w3- Do any of your friends drink wine/alcohol fairly regularly?	.722	.618	kept
Q3.28.7_w3- I don't mind friends using drugs around me.	.326 dropped	.610	Kept w3 only

Q3.28.8_w3- I have friends who carry weapons sometimes	.509	.599	kept
Q3.29_w3- Do any of your friends do any other things that could get them into trouble with the police, such as stealing, selling stolen goods, mugging or assaulting others?	.180 dropped	.445 kept	Kept w3 only
Q3.32_w3- Have any of your friends ever committed any crime such as stealing, selling stolen goods, mugging or assaulting others?	.493	.600	kept

Figure A.28. Questionnaire items and response options tested for the construct Deviant Peer Associations.

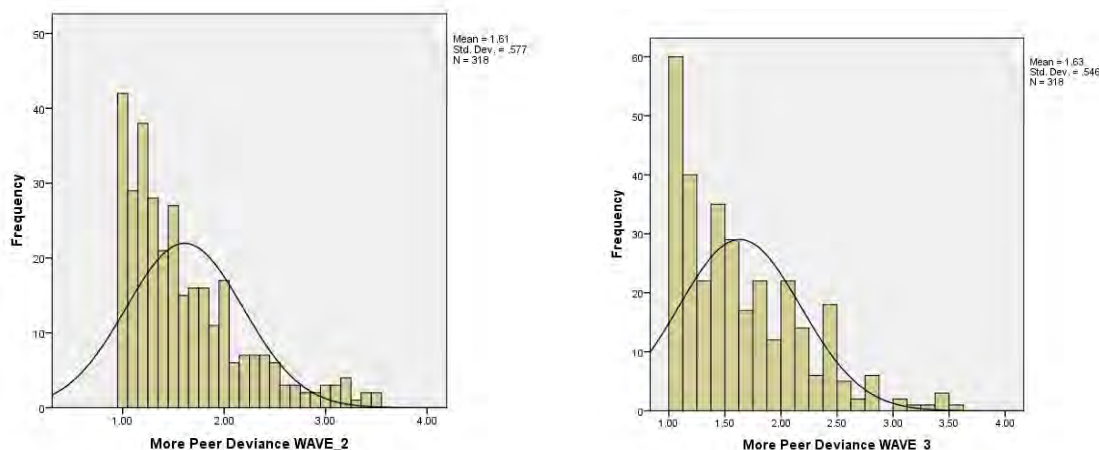


Figure A.29. Histogram frequencies, normal curve, and descriptives for the construct Deviant Peer Associations.

Distributions are fairly similar across both waves, skewed left toward less deviant peer associations with a relatively long tail of few subjects with high rates of deviant peer association. In the Multisite Violence Prevention Project (2004) in the U.S.A a 10-item peer deviance scale yielded a reliability of 0.85 with a much larger sample size. The Ward et al (2007) study found a reliability of 0.84 for an 8-item scale among Cape Town youth. Thus, the reliability scores of 0.82 in wave 2 and 0.90 in wave 3 of this study compare favourably.

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	More Peer_Deviance_w2	318	.204	.000
	More Peer_Deviance_W3			

Figure A.30. Test-Retest Reliability for Deviant Peer Associations or More Peer Deviance.

Correlation is significant supporting test-retest reliability for More Peer Deviance. This is an important finding suggesting both the stability of the scales (even with item adjustments) and the ‘persistency’ of the construct, that deviant friends in one year are likely to result in deviant friends in the next year.

	Paired Differences				t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference			

				Lower	Upper			
More Peer Deviance w2	-.02218	.70916	.03977	-.10042	.05606	-.558	317	.577
More Peer Deviance W3								

Figure A.31. Test for mean difference between waves 2 and 3 for the construct Peer Deviance.

Mean differences are not significant which, coupled with the significant paired sample correlation, supports the validity and stability of the Peer Deviance measure, even with changes to the number of items between waves.

Item number/wave	Corrected item-total correlation
Q3.23_w2	.280
Q3.23_w3	.460
Q3.25_w3	.447
Q3.26_w2	.272
Q3.26_w3	.533
Q3.27_w3	.111
Q3.28_w2	.440
Q3.28_w3	.196
Q3.28.1_w2	.362
Q3.28.1_w3	.368
Q3.28.2_w3	.209
Q3.28.3_w2	.393
Q3.28.3_w3	.300
Q3.28.4_w2	.395
Q3.28.4_w3	.194
Q3.28.5_w2	.501
Q3.28.5_w3	.181
Q3.28.6_w2	.362
Q3.28.6_w3	.494
Q3.28.7_w3	.216
Q3.28.8_w2	.410
Q3.28.8_w3	.210
Q3.29_w3	.360
Q3.32_w2	.280
Q3.32_w3	.460

Figure A.32. Reliability analysis with all Wave 2 and Wave 3 More Deviant Peers items. Total reliability= 0.77.

Reliability analysis combining all wave 2 and wave 3 Peer Deviance items yields a Cronbach's alpha of 0.77, a good reliability score.

**Substance use/Abuse** is a combination of regular alcohol use and multiple drug use. Regular alcohol use was derived from the question: *How often in the last 12 months have you used alcohol?* Monthly use was coded as 1, Weekly use coded as 2, daily use coded as 3, and the rest, coded as 0.

Multiple drug use combined affirmative responses (coded as 1) to using any of the following drugs in the past 12 months: *marijuana, sniffed glue or other inhalants to get high, tik* (methamphetamine), *any other drugs (eg. Mandrax/white pipes, Nyaope)*. Combined

scores can range from 0 (no substance use) to 7 (daily alcohol use+dagga use+inhalants use+tik use+any other drug use).

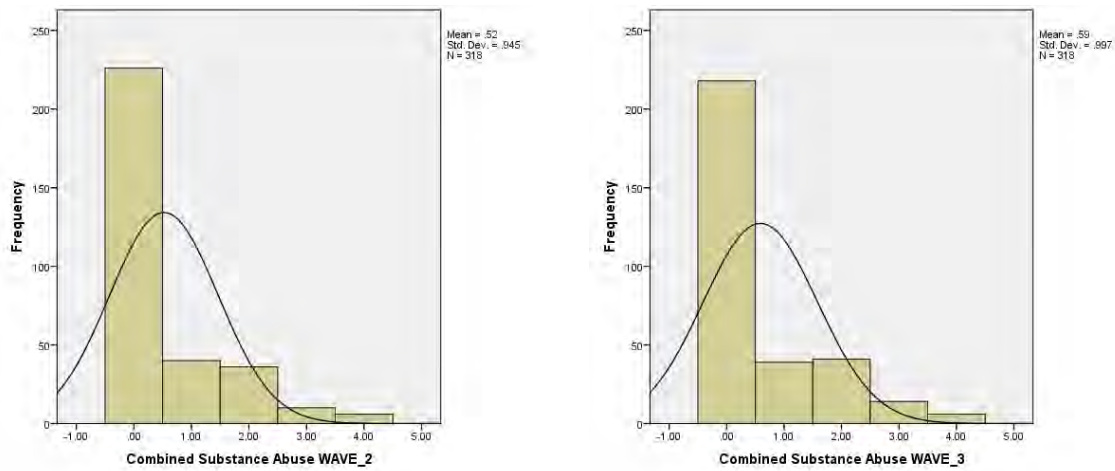


Figure A.33. Histogram frequencies, normal curve, and descriptives for the construct Combined Substance Abuse

Distributions are very similar between waves and highly skewed to 0-reports.

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Comb_substance_abuse_w2	318	.045	.426
	Comb_Substance_Use_w3			

Figure A.34. Test-Retest Reliability for Combined Substance Abuse.

Though the distributions look similar, paired sample correlation between waves is non-significant, meaning that substance usage has shifted in different directions among subjects.

	Paired Differences				t	df	Sig. (2-tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower				Upper
Cmb_substance_abuse_w2 Comb_Substance_Use_w3	-.06604	1.34283	.07530	-.21419	.08212	-877	317	.381

Figure A.35. Test for mean difference between waves 2 and 3 for the construct Combined Substance Abuse.

Mean difference is non-significant though reports have slightly increased in wave 3. The prevalence of alcohol use is far greater than the reported use of other drugs. In all cases where dagga and or tik use is reported, monthly, weekly or daily alcohol use is also reported suggesting that it functions as a gateway substance. While sniffing glue was reportedly

common within focus group discussions with Khayelitsha youth there were no affirmative reports of sniffing glue or other fumes to get high in wave 3.

**Positive Attitude toward Gangs wave 3** was tested with the following items:

questionnaire item (response options wave 2: 0=not true for me, 1=somewhat true for me, 2=very true for me. Response option wave 3: 0=strongly disagree, 1=disagree, 2=agree, 3=strongly agree)	Factor Loading wave 2	Factor Loading wave 3	Result, analysis
Q8.1 - I think you are safer, and have protection, if you join a gang	.719	.697	kept
Q8.2 - I will probably join a gang	.777	.708	kept
Q8.3 - Some of my friends at school belong to gangs	.385	.737	kept
Q8.4 - I think it's cool to be in a gang	.537	.807	kept
Q8.5 - My friends would think less of me if I joined a gang	-.061	.233	Drop, low factor loading
Q8.6 - I believe it is dangerous to join a gang	-.042	-.399	Drop, low factor loading
Q8.7 - I think being in a gang makes it more likely that you will get into trouble	-.039 dropped	-.472	Kept, wave 3 only, re-coded
Q8.8 - Some people in my family or household belong to a gang, or used to belong to a gang	.253 dropped	.457	Kept, w3 only
Q8.9 - I belong to a gang	.410	.511	kept
Q8.10_w3- People think I'm a gangster	.421	.548	kept
Q8.11_w3- I feel pressure by other people to join a gang	(.217-initial)	(.320-initial)	Drop, low factor loading

Figure A.36. Questionnaire items and response options tested for the construct Positive Attitude Toward Gangs

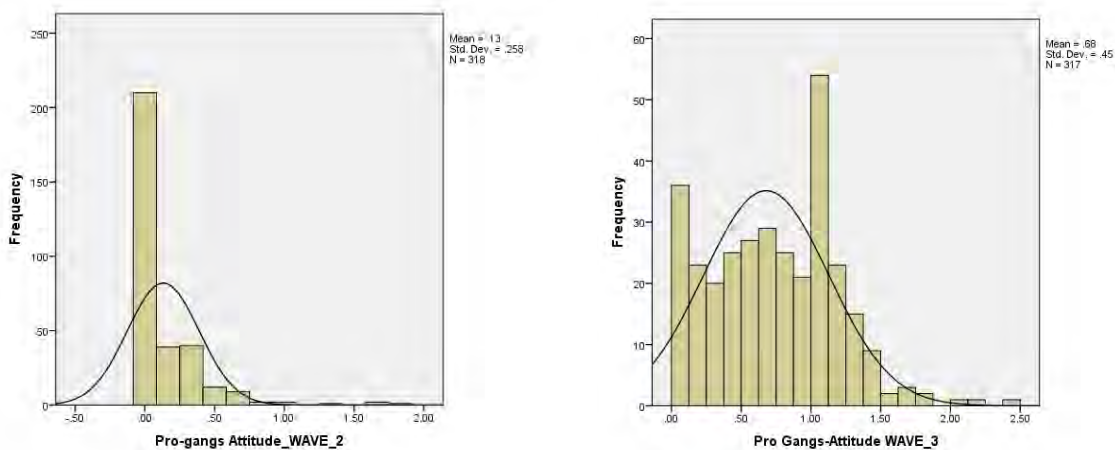


Figure A.37. Histogram frequencies, normal curve, and descriptives for the construct Pro-Gangs Attitude.

In Wave 2, distribution was very narrow, with a high modal response of 0=not true for me. Inclusion of 4 response options in wave 2, perhaps complemented by more subject disclosure, seems to have resulted in much more dispersion, though the modal response remains 1=disagree (though with far less frequency). Reliability of the scale also improved substantially from 0.65 in wave 2 to 0.82 in wave 3. Experience with scales with only 3

response options suggests that this inherently leads to poor reliability, as compared with using a 4-item likert scale.

In a 9-item Attitudes Toward Gangs scale, Nadel et al (1996) measured a reliability of 0.74. Inherent in much gang culture is a ‘code of silence’ requiring that participants do not talk about their involvement nor activities. This code of silence was also revealed in focus groups with Khayelitsha subjects, and even among those trusting enough to reveal their own gang affiliation. Thus, achieving a reliability of 0.82 with some variation of scores on a pro-gang attitude scale seems significant. Further testing will be conducted with subscales of Pro-Gangs Attitude in the Violence Scorecard section (later in the chapter).

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Pro_gangs_attitude_W2	317	.131	.020
	Pro_Gangs_Att_W3			

Figure A.38. Test-Retest Reliability for Pro-Gangs Attitude.

Correlation is significant supporting test-retest reliability, even with adjustment of the response range from 3 to 4. This correlation may, in part, be influenced by the frequency of ‘anti-gang attitude’ responses (those at the low end of the scale).

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Pro_gangs_attitude_W2 Pro_Gangs_Att_W3	-.54636	.48848	.02744	-.60034	-.49238	-19.914	316	.000

Figure A.39. Test for mean difference between waves 2 and 3 for the construct Pro-Gangs Attitude.

Mean difference is significant with scores significantly higher in wave 3. This is anticipated with the increased response range.

Item number/wave	Corrected item-total correlation
Q8.1 w2	.252
Q8.1 w3	.501
Q8.2 w1	.268
Q8.2 w3	.565
Q8.3 w2	.228
Q8.3 w3	.583
Q8.4 w2	.219
Q8.4 w3	.622
Q8.7 w3 (wave 3 only)	.399
Q8.8 w3 (wave 3 only)	.440

Q8.9_w2	.152
Q8.9_w3	.510
Q8.10_w2	.211
Q8.10_w3	.508

Figure A.40. Reliability analysis with all Wave 2 and Wave 3 Pro-Gangs Attitude items. Total reliability= 0.78.

Reliability analysis combining all wave 2 and wave 3 Pro-Gangs Attitude items yields a Cronbach’s alpha of 0.78, a good reliability score.

**Combined School Abuse** is an average of affirmative reports of *how many times in the last year of school, you had:*

- q6.15-been hit by someone at school;
- q6.16-ben pushed or shoved by someone at school;
- q6.17-Been yelled at or called mean names by someone at school;
- q6.18-Someone at school threatened to hit you or physically harm you;
- q6.20-been forced to do something that you felt was wrong and did not want to do.

The average of these 5 items is added to the response to q6.19-been injured by someone with a weapon at school as this represents the most serious form of abuse or victimisation at school, it is given a weight equal to the other items combined. Combined School Abuse is constructed as a composite scores ranging between 0 (no school abuse in the last year of school) and 20 (school abuse 20 or more times in every category).

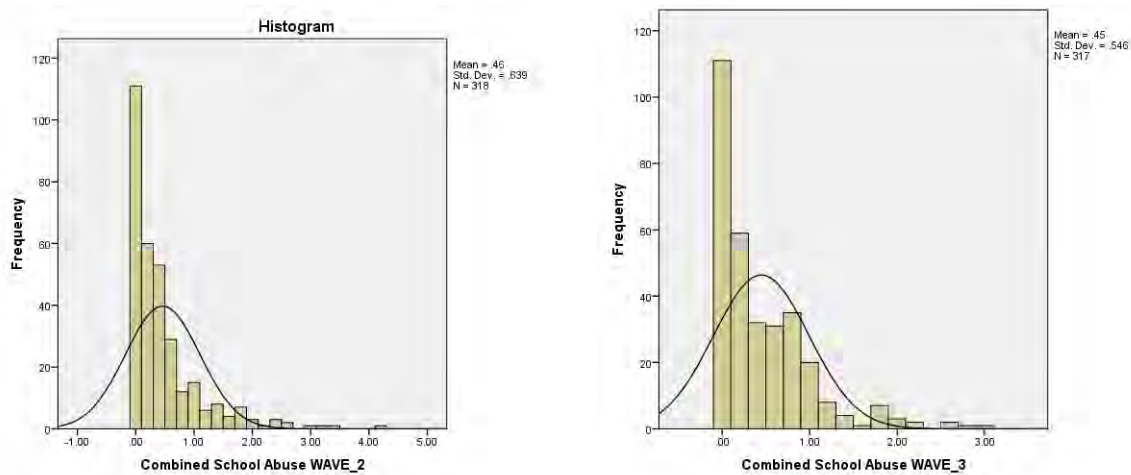


Figure A.41. Histogram frequencies, normal curve, and descriptives for the construct Combined School Abuse.

In both cases, distribution of Combined School Abuse is highly skewed left with a modal response of 0 reports. It is possible that disclosure of school abuse is limited because it may suggest weakness in relation to one’s peers.

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Cmb_School_Abuse_w2	317	.106	.060
	Comb_School_abuse_w3			

Figure A.42. Test-Retest Reliability for Combined School Abuse.

Correlation is approaching significance at the  $p \leq 0.05$  level suggesting some degree of test-retest reliability.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Cmb_School_Abuse_w2 Comb_School_abuse_w3	.01009	.79246	.04451	-.07748	.09767	.227	316	.821

Figure A.43. Test for mean difference between waves 2 and 3 for the construct Combined School Abuse.

There is no significant change to the mean score for Combined School Abuse.

**Combined Victimization ever** is a combination of affirmative reports of *you or anyone else in your household ever*:

- *q7.2\_w3-being assaulted (attacked, beaten up by someone);*
- *q7.2.11\_w3-been threatened with a weapon*
- *q7.2.21\_w3-been stabbed or shot with a weapon; q7.3\_w3-been robbed;*
- *q7.4\_w3-home burgled; q7.5\_w3-theft of vehicle or bicycle;*
- *q7.7\_w3-been raped or sexually assaulted;*
- *q7.9\_w3-been murdered.*

Combined Victimization EVER is constructed as a composite scores ranging between 0 (no victimization ever) and 8 (victimization in every category).

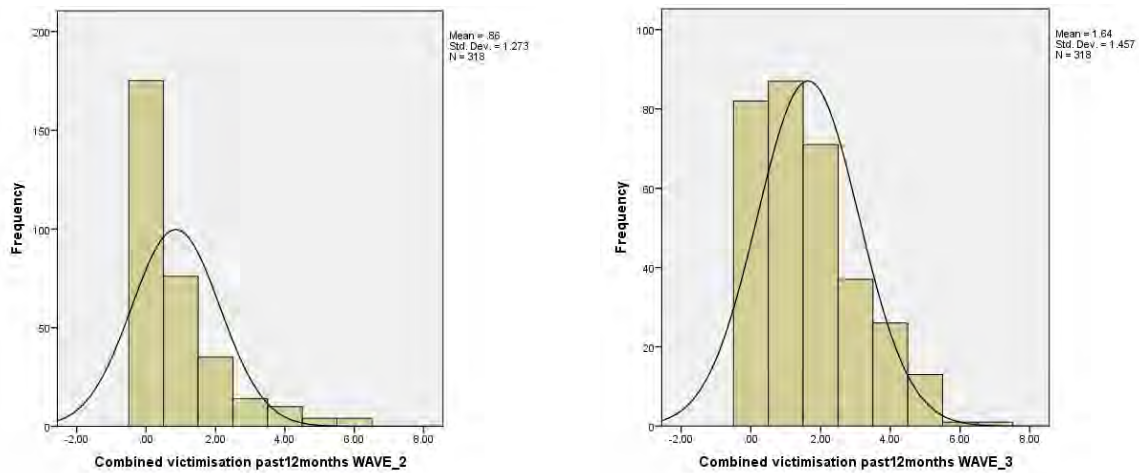


Figure A.44. Histogram frequencies, normal curve, and descriptives for the construct Combined Victimization in past 12 months.

Reported victimization of subject or family in the preceding 12 months appears to have increased significantly from wave 2 to wave 3.

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Cmb_victim_past12mos_w2	318	.008	.892
	Cmb_victim_past12mos_w3			

Figure A.45. Test-Retest Reliability for Combined Victimization in past 12 months.

The relationship is non-significant suggesting that wave 2 victimization is not correlated with wave 3 victimization. As this variable is comprised of actual reports of incidents in the previous 12 months (and less conditioned on attitudes or opinions), we can infer that victimization (year-to-year) is fairly randomly distributed.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Cmb_victim_past12mos_w2 Cmb_victim_past12mos_w3	-.78616	1.92727	.10808	-.99880	-.57353	-7.274	317	.000

Figure A.46. Test for mean difference between waves 2 and 3 for the construct Combined Victimization past 12 months.

Mean reported victimization has increased significantly from wave 2 to wave 3. This may be indicative of greater trust and disclosure from subjects or actual increases in crime and victimization in the area. Based on Khayelitsha police precinct crime statistics (SAPS, 2013),

there was a significant increase in reported contact crimes. However, the relationship between reported and unreported crimes is unknown.

**Violence Exposure** was tested with the following items:

questionnaire item (response options: 0=never in my life, 1=once or twice, 2=a few times, 3=many times)	Factor loading wave 2	Factor Loading Wave 3	Result, analysis
Q4.7 - I have heard guns being shot (while in my home or in my neighbourhood).	.612	.611	Kept
Q4.8 - I have seen somebody arrested	.692	.751	Kept
Q4.9 - I have seen drug deals	.532	.446	Kept
Q4.10 - I have seen someone being beaten up	.687	.767	Kept
Q4.11 - I have seen somebody being stabbed or shot	.720	.805	Kept
Q4.12 - I have seen someone pull a gun or knife on another person	.722	.751	Kept
Q4.13 - I have seen gangs in my neighbourhood	.625	.606	Kept
Q4.14 - I have been chased by a gang	.353	.298	Kept

Figure A.47. Questionnaire items and response options tested for the construct Violence Exposure

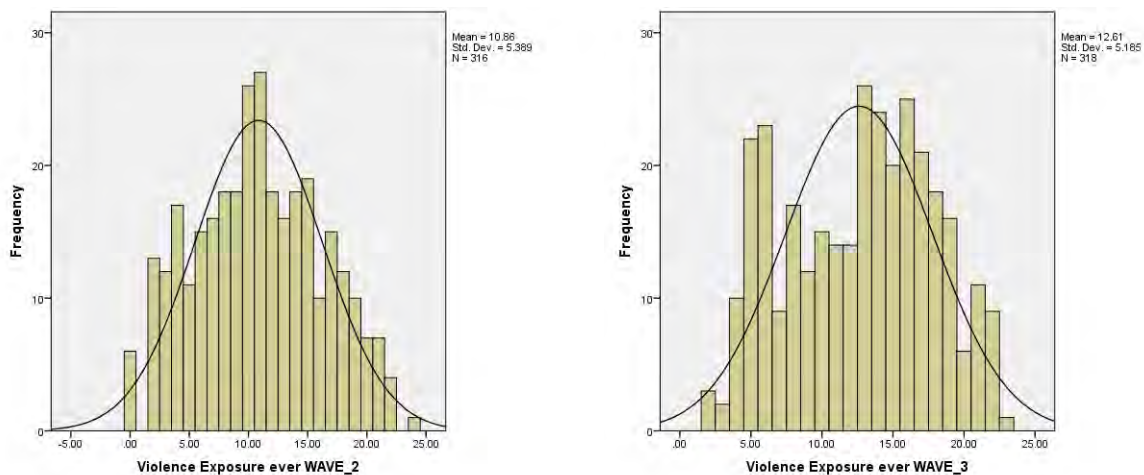


Figure A.48. Histogram frequencies, normal curve, and descriptives for the construct Violence Exposure.

Distribution is fairly normal in wave 2 but becomes skewed toward higher levels in wave 3. Reliability was consistently high across all 3 waves of the Violence Exposure measure (including wave 1) at 0.83 in wave 2 and 0.84 in wave 3. This reliability is in line with the 0.84 reliability of a 12-item exposure to community violence scale administered to 12-16 year-old African Americans by Richters and Martinez (1990).

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Violence_Exposure_ever_w2	316	.093	.097
	Violence_exposure_ever_w3			

Figure A.49. Test-Retest Reliability for Violence Exposure.

Correlation is non-significant resulting in less than expected test-retest reliability, especially when Violence Exposure Ever measured in wave 3 would be, theoretically, inclusive of the violence exposure reported by the subject in wave 2. This suggests the degree to which a young subject's recollection of events (and the frequency of events) may become distorted over time.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Violence_Exposure_ever_w2 Violence exposure ever w3	-1.77532	7.11962	.40051	-2.56333	-.98730	-4.433	315	.000

Figure A.50. Test for mean difference between waves 2 and 3 for the construct Violence Exposure.

Reported violence exposure has significantly increased from wave 2 to wave 3, according with the significant increases in victimization (and reported crime). This may be the result of real, randomized increases in exposure to violent incidences (which would accord with the increased crime reports) that would not result in a consistent, systematic increase (that would be picked up in the paired-sample correlation analysis).

Item number/wave	Corrected item-total correlation
Q4.7 w2	.362
Q4.7 w3	.375
Q4.8 w2	.444
Q4.8 w3	.439
Q4.9 w2	.392
Q4.9 w3	.297
Q4.10 w2	.390
Q4.10 w3	.472
Q4.11 w2	.500
Q4.11 w3	.512
Q4.12 w2	.436
Q4.12 w3	.475
Q4.13 w2	.405
Q4.13 w3	.400
Q4.14 w2	.336
Q4.14 w3	.241

Figure A.51. Reliability analysis with all Wave 2 and Wave 3 Violence Exposure items. Total reliability= 0.81.

Reliability analysis combining all wave 2 and wave 3 Violence Exposure items yields a Cronbach's alpha of 0.81, a very good reliability score.

**Negative Attitude toward School/Low School Attachment** was tested with the following items:

questionnaire item response options: 4=strongly disagree, 3=disagree, 2=agree, 1=strongly agree	Factor Loading wave 2	Factor Loading wave 3	Result, analysis
Q6.5 - You like(d) school a lot	.505	.823	Kept, re-coded for direction

Q6.6- School is (was) boring	-.395	-.764	kept
Q6.7- You usually finish(ed) your homework	.536	.635	Kept, re-coded for direction
Q6.8- You don't (didn't) really belong at school	-.393 dropped	-.534	kept
Q6.9- Homework is (was) a waste of time	-.360 dropped	-.644	kept
Q6.10- You try (tried) really hard at school	.580	.530	kept, re-coded for direction
Q6.12- Getting good grades is (was) very important to you	.691	.758	kept, re-coded for direction
Q6.12.1- It is (was) very important to me to be considered a clever student by my teacher(s)	.711	.610	kept, re-coded for direction
Q6.12.2- Teachers at my school are (were) willing to help students	.638	.588	Kept, re-coded for direction
Q6.12.3- Most of my teachers notice(d) when I am (was) doing a good job and let me know about it	.621	.678	kept, re-coded for direction
Q6.12.4- I feel (felt) safe at my school	.373 dropped	.317 dropped	dropped
Q6.13- If you could choose on your own between studying to get a good grade on a test or going out with your friends, would you: 1 = Definitely go out with friends/ 2 = Probably go out with friends/ 3 = Probably study/ 4 = Definitely study	.439 kept	Not asked in wave 3	Kept, wave 2 only, re-coded for direction

Figure A.52. Questionnaire items and response options tested for the construct Negative Attitude toward School

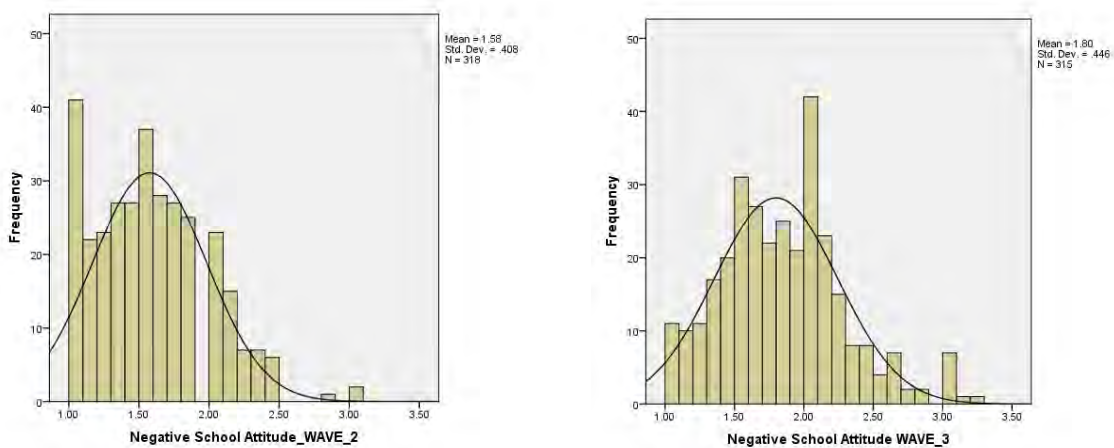


Figure A.53. Histogram frequencies, normal curve, and descriptives for the construct Negative School Attitude.

Distribution of Negative School Attitude appears more normalized in wave 3. Ward et al (2007) reported a reliability of 0.69 for an 8-item school attitude scale administered to the same 370 Cape Town youth. In the Rochester Youth Development Study, Thornberry et al (1991) found an internal consistency of 0.81 for a 10-item Commitment to School scale. In this study, reliability increased from 0.75 in wave 2 to 0.88 in wave 3.

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Neg_school attitude_W2	315	.009	.870
	Neg_School_Att_W3			

Figure A.54. Test-Retest Reliability for Negative School Attitude.

The correlation is non-significant, indicating questionable test-retest reliability. It is also possible that attitude and attachment to school is quite subjective and temporal, in relation to a subject's current mood and immediate issues, with less (consistent across cohort) stability over time.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Neg_school_attitude_W2	-.22299	.60227	.03393	-.28975	-.15622	-6.571	314	.000
Neg_School_Att_W3								

Figure A.55. Test for mean difference between waves 2 and 3 for the construct Negative School Attitude.

Means comparison shows a significant increase in Negative School Attitude in wave 3, suggesting potentially increased disclosure.

Item number/wave	Corrected item-total correlation
Q6.5 w2	.330
Q6.5 w3	.546
Q6.6 w2	.266
Q6.6 w3	.528
Q6.7 w2	.306
Q6.7 w3	.451
Q6.8- w3 (w3 only)	.329
Q6.9- w3 (w3 only)	.440
Q6.10 w2	.279
Q6.10 w3	.383
Q6.12 w2	.313
Q6.12 w3	.518
Q6.12.1 w2	.295
Q6.12.1 w3	.404
Q6.12.2 w2	.390
Q6.12.2 w3	.418
Q6.12.3 w2	.342
Q6.12.3 w3	.445
Q6.13 w2 (w2 only)	.178

Figure A.56. Reliability analysis with all Wave 2 and Wave 3 Negative School Attitude items. Total reliability= 0.80.

Reliability analysis combining all wave 2 and wave 3 Negative School Attitude items yields a Cronbach's alpha of 0.80, a very good reliability score.

**Negative Attitude toward the Future/Low Resiliency** was tested with the following items:

questionnaire item response options: 4=strongly disagree, 3=disagree, 2=agree, 1=strongly agree	Factor Loading wave 2	Factor Loading Wave 3	Result, analysis
Q17.1- I have specific goals in my life I want to achieve.	.637	.674	Kept
Q17.2- I have a good idea of where I am going in my life.	.682	.709	Kept

Q17.3- My own efforts and actions are what will determine my future.	.564	.621	Kept
Q17.4- I feel that I would be able to cope with difficult situations that may present themselves in the future.	.548	.609	Kept
Q17.5- No matter how hard I try I will never be able to achieve my goals in life.	-.185	-.078	Drop-Low factor loading
Q17.6- I am good at deciding whether a risk is worth taking.	.389	.546	kept
Q17.7- I am able to survive on my own if I have to.	.231 dropped	.441	Kept w3 only
Q17.8- I feel proud that I have accomplished things in my life.	.514	.491	kept
Q17.9- It is okay if there are people who do not like me.	-.099	-.117	Drop-Low factor loading
Q17.9.1 (wave 3 only) - I sometimes think of myself as a bad person.		-.292 dropped	Low factor loading
Q17.10 - I am as popular with kids my own age as I want to be.	.564	.452	Kept
Q17.11- There are some things I would not do to gain the respect of my friends.	.199	.078	Dropped
Q17.12- I sometimes think that I am a failure (a loser).	-.321 dropped	-.425	Kept w3 only, re-coded for direction
Q17.13- I am as good a person as I want to be.	.564	.678	Kept
Q17.13.1-I will study further after school	.557	.616	kept
Q17.13.2- I will find a job I will enjoy	.581	.726	kept
Q17.13.3- I will have a happy life	.598	.739	kept
Q17.13.4- You will succeed in doing what is most important for you	.708	.768	kept
Q17.14- I would like to know how you feel about your future opportunities to be successful and prosper, would you say your opportunities are: ( limitless/many/very limited/none at all)	.142 dropped	.458	Kept wave 3 only

Figure A.57. Questionnaire items and response options tested for the construct Negative Attitude towards the Future.

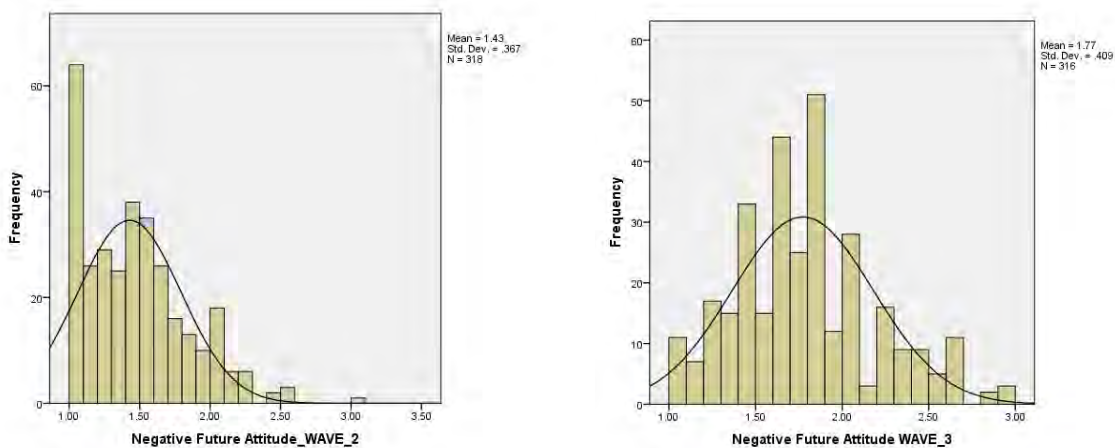


Figure A.58. Histogram frequencies, normal curve, and descriptives for the construct Negative Future Attitude.

The wave 2 distribution is skewed to the left with a modal response of 1. The wave 3 distribution appears more normal. Ward et al (2007) found a reliability of 0.81 for a 5 items scale of future orientation. In this study, the reliability increased from 0.84 in wave 2 to 0.89 in wave 3, while the number of items in the Negative Future Attitude scale increased from 10 items in wave 2 to 15 items in wave 3.

Paired Samples Correlations	N	Correlation	Sig.
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Pair 1	Neg_Future_attitude_W2	316	.002	.974
	Neg_Future_Att_W3			

Figure A.59. Test-Retest Reliability for Negative Future Attitude.

The paired sample correlation is non-significant suggesting poor test-retest reliability between waves for Negative Future Attitude. The increased number of items could have an influence, along with the subjective, temporal nature of this attitudinal measure.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Neg_Future_attitude_W2	-.34257	.54812	.03083	-.40324	-.28191	-11.110	315	.000
Neg_Future_Att_W3								

Figure A.60. Test for mean difference between waves 2 and 3 for the construct Negative Future Attitude.

Negative Future Attitude in wave 3 is significantly greater than in wave 2. As seen with other constructs, this could be a result of increased disclosure or the possibility that, as subjects age out of school and (mostly, but not consistently) into unemployment, that their view of the future becomes less positive.

Item number/wave	Corrected item-total correlation
Q17.1 w2	.326
Q17.1 w3	.575
Q17.2 w2	.308
Q17.2 w3	.575
Q17.3 w2	.306
Q17.3 w3	.468
Q17.4 w2	.227
Q17.4 w3	.535
Q17.6 w2	.093
Q17.6 w3	.413
Q17.7 w3 (w3 only)	.318
Q17.8 w2	.318
Q17.8 w3	.437
Q17.10 w2	.266
Q17.10 w3	.352
Q17.12 w3 (w3 only)	.368
Q17.13 w2	.275
Q17.13 w3	.444
Q17.13.1 w2	.297
Q17.13.1 w3	.421
Q17.13.2 w2	.322
Q17.13.2 w3	.438
Q17.13.3 w2	.300
Q17.13.3 w3	.462
Q17.13.4 w2	.414
Q17.13.4 w3	.547

Q17.14_w3 (w3 only)	.350
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Figure A.61. Reliability analysis with all Wave 2 and Wave 3 Negative Future Attitude items. Total reliability= 0.84.

Reliability analysis combining all wave 2 and wave 3 Negative Future Attitude items yields a Cronbach’s alpha of 0.84, an excellent reliability score.

**Anomie/Social Distance** was tested with the following items:

questionnaire item response options: 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree	Factor loading Wave 2	Factor Loading Wave 3	Result, analysis
Q3.2- I like my neighbourhood.	.598	.349	Kept
Q3.3- Most people in my neighbourhood are willing to help if you need it.	.805	.907	Kept
Q3.4- Most people in my neighbourhood can be trusted.	.668	.628	Kept
Q3.5- There are people in my neighbourhood that I can talk to about things that are important to me.	.411	(.085-initial)	Dropped, low factor loading
Q3.6- There are people in my neighbourhood or family who I look up to? (role-models)	.383	.287	Kept

Figure A.62. Questionnaire items and response options tested for the construct Anomie/Social Distance

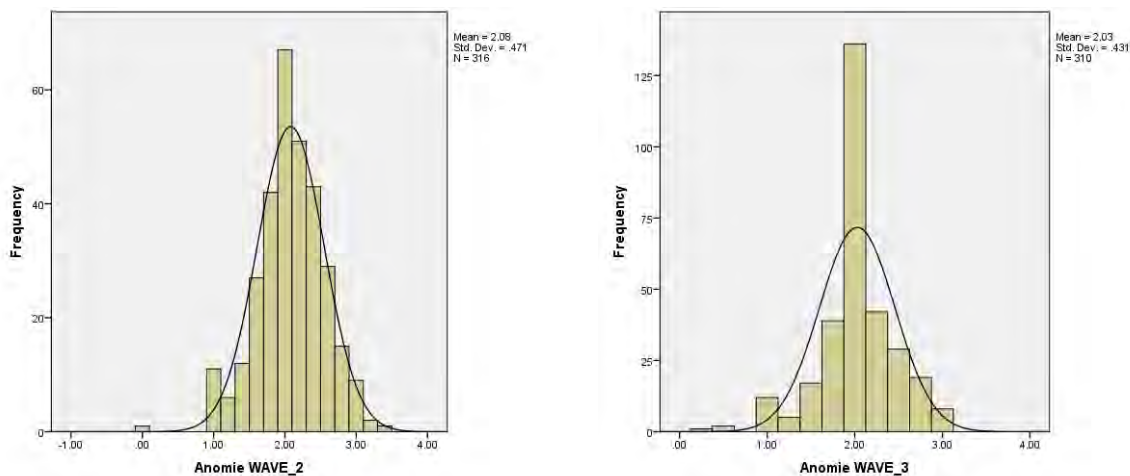


Figure A.63. Histogram frequencies, normal curve, and descriptives for the construct Anomie.

The distribution is narrower in wave 3 due to fewer items in the scale (4 in wave 3 vs. 5 in wave 2). The reliability for this scale has actually worsened across waves, from 0.72 in wave 2 to 0.62 in wave 3. It does not appear that Anomie or Social Distance is a reliable, useful measure in this context and will, therefore, be interpreted with discretion in further analysis.

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Anomie_W2	308	.115	.043
	Anomie_w3			

Figure A.64. Test-Retest Reliability for Anomie.

The paired sample correlation is significant at the  $p \leq 0.05$  level suggesting test-retest reliability, despite the fact that the scale has been truncated from 5 items in wave 2 to 4 items in wave 3.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Anomie_w2	.05162	.60196	.03430	-.01587	.11912	1.505	307	.133
Anomie_w3								

Figure A.65. Test for mean difference between waves 2 and 3 for the construct Anomie.

There is no significant change in mean scores between waves for anomie.

Item number/wave	Corrected item-total correlation
Q3.2_w2	.349
Q3.2_w3	.295
Q3.3_w2	.465
Q3.3_w3	.314
Q3.4_w2	.412
Q3.4_w3	.211
Q3.5_w2 (w2 only)	.350
Q3.6_w2	.357
Q3.6_w3	.238

Figure A.66. Reliability analysis with all Wave 2 and Wave 3 Anomie items. Total reliability= 0.66.

Reliability analysis combining all wave 2 and wave 3 Anomie items yields a Cronbach's alpha of 0.66, an acceptable reliability score.

**Positive Attitude toward the use of Violence** was tested with the following items:

questionnaire item response options: 4=strongly disagree, 3=disagree, 2=agree, 1=strongly agree	Factor Loading wave 2	Factor Loading wave 3	Result, analysis
Q10.1- If I walk away from a fight, I'd be a coward.	.479	.526	Kept, re-coded
Q10.2- I don't need to fight because there are other ways to deal with being mad.	-.133 dropped	-.535	Kept w3 only
Q10.3- It is sometimes okay for people to be discriminated against or physically harassed because of their nationality.	.573	.700	Kept, re-coded
Q10.4- A guy shows he really loves his girlfriend if he gets in fights with other guys about her.	.489	.559	Kept, re-coded
Q10.5- It's okay to hit someone who hits you first.	.367	.616	kept, re-coded
Q10.6- People from other races, sometimes deserve to be discriminated against or physically harassed.	.533	.697	kept, re-coded
Q10.7- Sometimes a person doesn't have any choice but to fight.	.210 dropped	.476	Kept w3, re-coded
Q10.8- If people do things to make me really mad, they deserve to be beaten up.	.573	.684	kept, re-coded
Q10.9- It is sometimes okay for people to be discriminated	.698	.686	kept, re-coded

against or physically harassed because of their sexual orientation.			
Q10.13- If someone disrespects me, I have to fight them to get my pride back	.730	.649	Kept, re-coded
Q10.14- You've got to fight to show people you're not a wimp	.612	.552	Kept, re-coded
Q10.14.1 (wave 3 only)- I'm confident in my ability to stay out of fights		-.548	Kept
Q10.15- Carrying a gun makes people feel safe	.486	.417	Kept, re-coded
Q10.16- I have threatened people I know	.484	.364	Kept, re-coded
Q10.17- I get into fights a little more than the average person	.497	.573	Kept, re-coded
Q10.17.1 (wave 3 only)- People usually have a good reason for fighting		.483	Kept, re-coded
Q10.18- Some of my friends think I am a hothead	.370	.062 dropped	Kept, w2 only
Q10.19- I get angry easily	.262 dropped	.409	kept, w3 only, re-coded
Q10.20- I am hard to get along with most of the time	.255	.258	dropped
Q10.21- If you mess with me/my friends, you will get hurt	.446	.702	Kept, re-coded
Q10.22- How many physical fights have you been in within the past year?	-.012 dropped	-.430	Kept, w3 only

Figure A.67. Questionnaire items and response options tested for the construct Pro-Violence Attitude

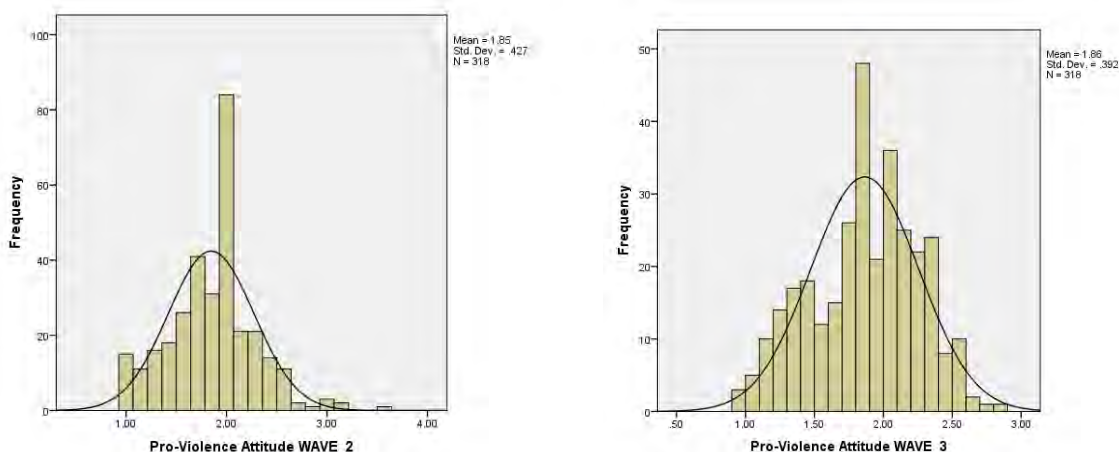


Figure A.68. Histogram frequencies, normal curve, and descriptives for the construct Pro-Violence Attitude.

It appears from the histograms that the distribution became more normalized in wave 3, with a less severe spike in the modal distribution at the score of 2.

The internal consistency found with other attitude toward violence scales is somewhat poor. In U.S. studies, the Houston Community Demonstration Project (1993) found a reliability of 0.67 for a 6 items scale with middle school students; the Multisite Violence Prevention Project (2004), a reliability of 0.72 for a 12-item scale, also with middle school students; and, Prothrow-Stith, 0.70 for a 7-item scale on impulse control administered to 12-16 year-old African-American males. From the breadth of scales of attitudes toward violence and their inclusion in youth studies, it is clear that there is a need for such measures in the analysis of youth violence. However, the low internal consistencies (let alone any evidence of

test-retest reliability) in the aforementioned studies speaks to the challenge of measuring attitudes favorable to the use of violence and triangulating this measure with real acts of violence, with either a prospective or retrospective approach.

In this study, a number of new items were tested with each wave in an attempt to improve reliability, which appears to have been successful. Reliability of the Pro-Violence measure improved from 0.84 in wave 2 to 0.89 in wave 3, while the % of variance explained by the factor increased from 28.5% in wave 2 to 32.3% in wave 3.

		N	Correlation	Sig.
Pair 1	Pro_Violence_attitude_W2	318	.094	.093
	Pro_Violence_Att_W3			

Figure A.69. Test-Retest Reliability for Pro-Violence Attitude.

Paired correlation reliability is non-significant at the  $p \leq 0.05$  level though it is significant at the  $p \leq 0.1$  level. Given the temporal nature of attitude measures and the challenges (described above) in establishing a valid and reliable measure, a near-significant paired sample correlation is encouraging.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Pro_Violence_attitude_W2 Pro_Violence_Att_W3	-.01790	.55205	.03096	-.07881	.04301	-.578	317	.563

Figure A.70. Test for mean difference between waves 2 and 3 for the construct Pro-Violence Attitude.

Mean difference is non-significant suggesting that increased age nor other fieldwork effects resulted in an overall increase in pro-violence attitude.

Item number/wave	Corrected item-total correlation
Q10.1_w2	.250
Q10.1_w3	.410
Q10.2_w3 (w3 only)	.382
Q10.3_w2	.268
Q10.3_w3	.475
Q10.4_w2	.332
Q10.4_w3	.376
Q10.5_w2	.242

Q10.5_w3	.534
Q10.6_w2	.366
Q10.6_w3	.462
Q10.7_w3 (w3 only)	.433
Q10.8_w2	.362
Q10.8_w3	.528
Q10.9_w2	.350
Q10.9_w3	.471
Q10.13_w2	.422
Q10.13_w3	.436
Q10.14_w2	.395
Q10.14_w3	.396
Q10.14.1 (wave 3 only)	.386
Q10.15_w2	.256
Q10.15_w3	.369
Q10.16_w2	.261
Q10.16_w3	.282
Q10.17_w2	.264
Q10.17_w3	.419
Q10.17.1 (wave 3 only)	.478
Q10.18_w2 (w2 only)	.237
Q10.19_w3 (w3 only)	.303
Q10.21_w2	.289
Q10.21_w3	.576
Q10.22_w3 (w3 only)	.412

Figure A.71. Reliability analysis with all Wave 2 and Wave 3 Pro-Violence Attitude items. Total reliability= 0.86.

Reliability analysis combining all wave 2 and wave 3 Pro-Violence Attitude items yields a Cronbach's alpha of 0.86, an excellent reliability score.

**Combined Serious Violent Offending past 12 months** is a combination of affirmative reports of engaging in the following acts in the past 12 months:

- *q14.2.1-carrying a gun, knife or weapon for protection;*
- *q14.3.1-using force threats or a weapon to steal money or something else from somebody or said that you would hurt somebody if they did not do what you told them to;*
- *q14.5.1-got into or broke into a house/building to try to steal something;*
- *q14.6.1-set fire or tried to set fire to something on purpose;*
- *q14.10.1-forced anyone to engage in sexual activity with you when they did not want to;*
- *q14.15.1-used a weapon to threaten or injure someone else;*
- *q14.18.1-been involved in any gang fights.*

Scores can range between 0 (no offending ever) and 7 (offending in every category).

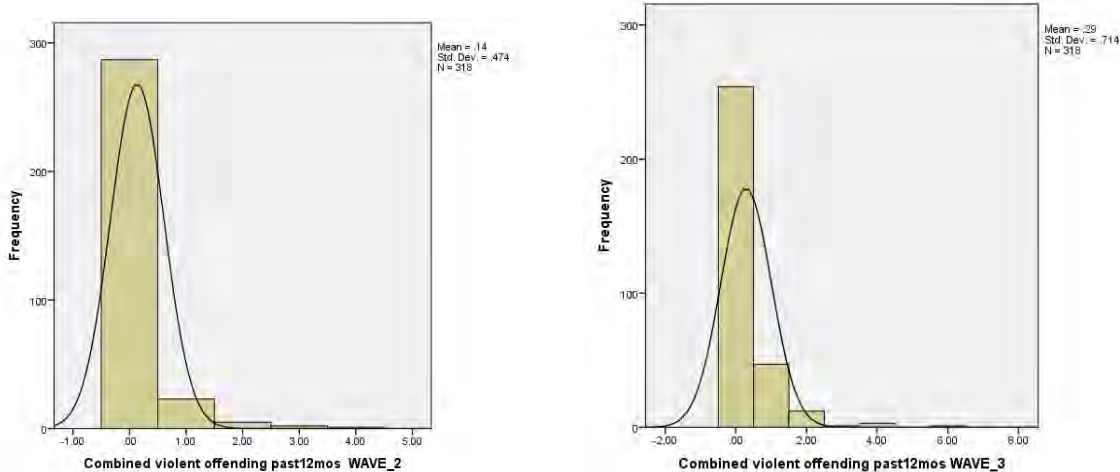


Figure A.72. Histogram frequencies, normal curve, and descriptives for the construct Combined Serious Violent Offending in past 12 months.

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Comb violent offend past12mos_w2	318	.052	.357
	Cmb Offend past12mos_w3			

Figure A.73. Test-Retest Reliability for Combined Serious/Violent Offending in past 12 months.

Correlation is non-significant. The low overall rate of response (or disclosure) for these categories add to the challenge of producing test-retest reliability.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Comb offend_past12mos_w2 Cmb Offend_past12mos_w3	-.15409	.83581	.04687	-.24630	-.06187	-3.288	317	.001

Figure A.74. Test for mean difference between waves 2 and 3 for the construct Combined Serious/Violence Offending in past 12 months.

Combined offending in the past 12 months is significantly higher in wave 3, suggesting that disclosure and/or prevalence (of the most sensitive information, on violent offending) has indeed increased. Given that the mean score has doubled from wave 2 to wave 3, it seems improbable that actual rates of offending have increased by 200% across this Khayelitsha demographic in one year. I would conclude, therefore, that, overall, subjects have disclosed more sensitive information in wave 3 than wave 2 (or wave 1).

**Maternal Assessment of child’s dangerous behaviour** was tested with the following items:

questionnaire item “How often do the following attributes describe your son?” (response options: 1= almost always, 2=often, 3=sometimes, 4=seldom, 5=never)	Factor Loading Wave 2	Factor Loading Wave 3	Result, analysis
Q18.1- Is considerate of other people’s feelings?	.257 Dropped	-.781	kept
Q18.2- Is generally obedient, usually does what you request?	.296 Dropped	-.869	kept
Q18.3- Does not obey our family rules on his own.	-.087 dropped	(-.113-initial)	Dropped, low factor loading
Q18.4- Has a hot temper?	.485	.317	Kept, re-coded direction
Q18.5- Is very moody and easily upset?	.508	.313	Kept, re-coded direction
Q18.6- Hits parents/caregivers.	-.083 dropped	(.107-initial)	Dropped, low factor loading
Q18.7- Is helpful around the house and towards others?	.229 dropped	-.710	Kept
Q18.8- Fights with his siblings or other members of the household?	.408	.421	Kept, re-coded direction
Q18.9- Gets into trouble at school, work and/or in the community?	.492	.435	Kept, re-coded direction
Q18.12- How often do you fight with your son about what he does when he is out (not at home)? (Response options: often/sometimes/hardly ever/never)	.430	.438	Kept, re-coded direction
Q18.13- How often do you fight with your son about what time he comes home when he has been out?	.530	.525	Kept, re-coded direction
Q18.14- How often do you fight with your son about having bad or dangerous friends?	.677	.365	Kept, re-coded direction

Figure A.75. Questionnaire items and response options tested for the construct Maternal Assessment of Subject’s Dangerous/Risky Behaviour.

Items Q18.12, Q18.13, and Q18.14 were on a scale of 1-4 vs. a scale of 1-5 for items Q18.1-Q18.9. To balance the scoring, items Q18.12-Q18.14 were recoded to: often=5, sometimes=4, hardly ever=2, never=1 in order to preserve responses at the extremes.

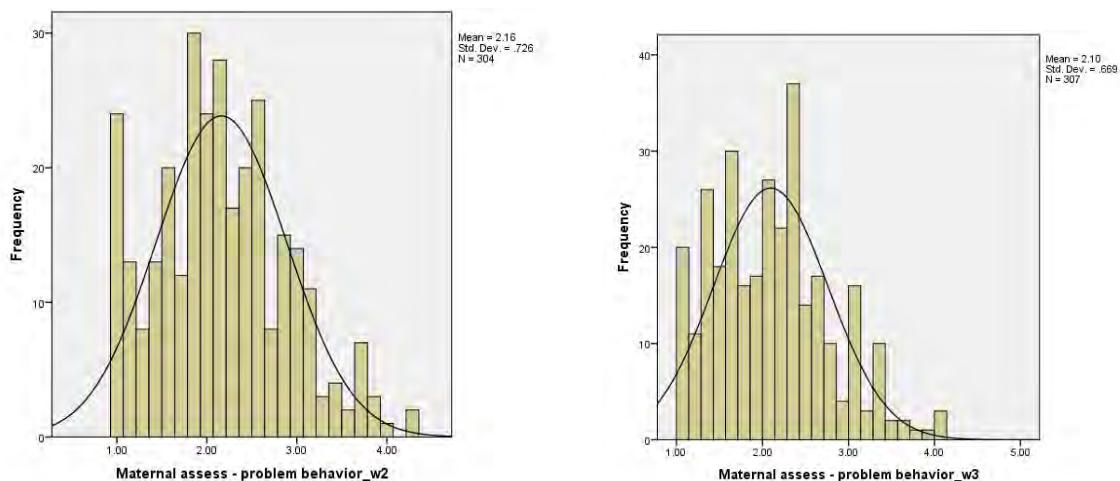


Figure A.76. Histogram frequencies, normal curve, and descriptives for the construct Maternal Assessment of Subject’s Dangerous/Risky Behaviour.

Both distributions are skewed towards less problem behavior but still show a broad distribution. No reliability analysis of similar scales have been found, in South African or

international studies. Parent assessments are more frequently used in studies of younger subjects.

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Matern_problem_Behav_w2	293	.102	.082
	Matrnl_Prblm_Behav_w3			

Figure A.77. Test-Retest Reliability for Maternal Assessment of Subject’s Dangerous/Risky Behaviour.

Paired-sample correlation is approaching significance though 50% of the items are not in common between both waves.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference				
				Lower	Upper			
Matern_problem_Behav_w2	.06147	.94046	.05494	-.04667	.16960	1.119	292	.264
Matrnl_Prblm_Behav_w3								

Figure A.78. Test for mean difference between waves 2 and 3 for the construct Maternal Assessment of Subject’s Dangerous/Risky Behaviour.

There is no significant difference between means for the maternal report of the subject’s problem behavior.

Item number/wave	Corrected item-total correlation
Q18.1_w3 (w3 only)	.428
Q18.2_w3 (w3 only)	.506
Q18.4_w2	.267
Q18.4_w3	.274
Q18.5_w2	.311
Q18.5_w3	.277
Q18.7_w3 (w3 only)	.423
Q18.8_w2	.233
Q18.8_w3	.336
Q18.9_w2	.274
Q18.9_w3	.347
Q18.12_w2	.253
Q18.12_w3	.354
Q18.13_w2	.293
Q18.13_w3	.439
Q18.14_w2	.333
Q18.14_w3	.427

Figure A.79. Reliability analysis with all Wave 2 and Wave 3 Maternal Assessment of Subject’s Risk Behaviour items. Total reliability= 0.75.

Reliability analysis combining all wave 2 and wave 3 Maternal Assessment of Subject’s Risky Behaviour items yields a Cronbach’s alpha of 0.75, a good reliability score.

**Health-Well-Being** was tested with the following items:

questionnaire item response options: not at all/no more than usual/more than usual/much more than usual)	Factor loading Wave 2	Factor Loading Wave 3	Result, analysis
Q12.2(wave 2 only)- Had difficulty falling asleep or staying asleep?			
Q12.3 (wave 2 only) -Feel calm and can sit still easily?	.303- dropped		
Q12.4 - Over the past 4 weeks, have you been getting edgy and bad-tempered.		.664	Kept
Q12.5- Over the past 4 weeks, have you Been getting scared or panicky for no good reason?		.826	Kept
Q12.6- Over the past 4 weeks, have you Felt that life isn't worth living?		.720	Kept
Q12.7- Over the past 4 weeks, do you Feel like you have too many problems to deal with right now	.344 dropped	.169- initial	Dropped, low factor loading
Q12.8- Over the past 4 weeks, I think I am healthy and in good shape	-.234 dropped	-.381	Kept, recoded for direction
Q12.9- Over the past 4 weeks, I don't care about my health	.161 dropped	.414	Kept

Figure A.80. Questionnaire items and response options tested for the construct Poor Health/Well-Being

Goodness of fit for wave 2 data was too poor to establish a factor.

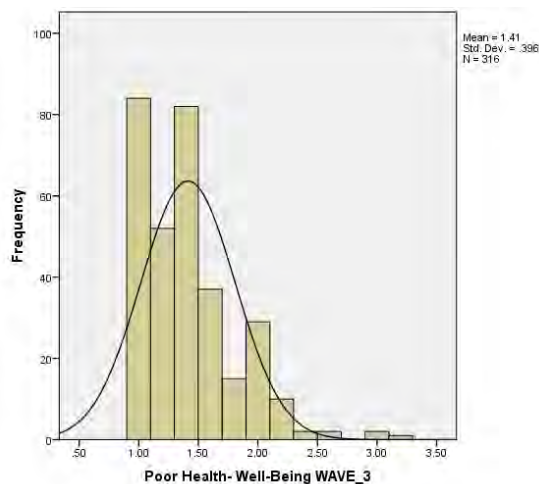


Figure A.81. Histogram frequencies, normal curve, and descriptives for the construct Poor Health/Well-Being.

## Bivariate Correlation Analysis

The key constructs theorized in Chapter 2 and tested in the preceding confirmatory factor analysis are tested for two-tailed bivariate correlation (Pearson's Correlation) with the other key constructs as well as several additional constructs theorized to have an influence on deviant peers, substance use, self-reported offending, violence exposure and victimisation, and the attitudinal measures, namely age, frequency of religious place of worship attendance, living in a shack, parents who have been to prison (1 or both), having a biological child of one's own, failing a grade of school, and self-identification as an Amandla participant. Wave 2 correlations are presented below with correlations significant at the  $p \leq 0.05$  level highlighted for readability.

	H-hold deprv W_2	Violent Home W_2	Harsh Pamtnng W_2	Less Parent Involv W_2	Deviant Peers W2	Combnd substance abuse w2	Pro gangs att W2	Cmb victim past12mos w2	Neg school att W2	Neg Future atti W2	Pro Violence atti W2	Combnd serious offend 12mos w2	Matern Prob Behav W2
** Correlation is significant at the 0.01 level (2-tailed).													
* Correlation is significant at the 0.05 level (2-tailed).													
Religion Attendance w2	Cor .064	-.052	.112*	-.127*	-.078	-.093	.009	.166**	-.180**	-.181**	-.069	-.069	.036
	Sig .255	.360	.046	.024	.168	.097	.872	.003	.001	.001	.223	.221	.527
	N 318	318	318	318	318	318	318	318	318	318	318	318	304
Current Amandla Participant w2	Cor .044	.041	.122*	-.124*	-.044	-.097	-.041	.066	-.196**	-.108	-.133*	-.058	.046
	Sig .439	.465	.030	.027	.437	.083	.470	.239	.000	.055	.017	.305	.424
Age	Cor .115*	.081	-.127*	.308**	.377**	.336**	.123*	.111*	.166**	.066	.064	.159**	.027
	Sig .040	.151	.023	.000	.000	.000	.028	.048	.003	.244	.252	.005	.633
	N 318	318	318	318	318	318	318	318	318	318	318	318	304
H-hold deprv W_2	Cor 1	.111*	.139*	.129*	.232**	.189**	.016	.220**	.124*	-.029	.087	.106	.158**
	Sig .049	.013	.022	.000	.001	.770	.000	.026	.604	.123	.060	.006	.006
live in shack w2	Cor .210**	.127*	.156**	.118*	.125*	.260**	.123*	.093	.089	.122*	.155**	.130*	.025
	Sig .000	.024	.005	.036	.026	.000	.029	.099	.114	.030	.006	.021	.667
Violent Home W_2	Cor .111*	1	.144*	.343**	.256**	.320**	.153**	.175**	.164**	.186**	.220**	.127*	.085
	Sig .049		.010	.000	.000	.006	.002	.003	.001	.000	.024	.137	.137
Harsh Pamtnng W_2	Cor .139*	.144*	1	.016	.116*	.120*	.077	.138*	.047	.047	.245**	.053	.196**
	Sig .013	.010		.782	.038	.033	.173	.014	.402	.401	.000	.346	.001
Less Parental Invlv W_2	Cor .129*	.343**	.016	1	.420**	.330**	.102	.063	.303**	.226**	.270**	.173**	.177**
	Sig .022	.000	.782		.000	.000	.070	.266	.000	.000	.000	.002	.002
Cmbnd Mother sup w2	Cor -.057	.034	-.023	-.173**	-.091	.010	.003	.019	-.016	-.003	.069	-.034	-.023
	Sig .314	.544	.684	.002	.105	.862	.955	.740	.782	.953	.221	.545	.694
Cmbnd Father sup w2	Cor -.060	.025	.043	-.056	-.028	.059	.053	-.111	-.018	.026	.009	-.032	-.081
	Sig .288	.657	.445	.323	.619	.296	.351	.051	.753	.644	.871	.568	.163
Cmb parents2 prison w2	Cor .128*	.148**	.175**	.054	.115*	.105	.013	.069	.056	-.043	.054	.084	.100
	Sig .023	.008	.002	.336	.041	.062	.816	.217	.320	.443	.334	.136	.080
Deviant Peers W2	Cor .232**	.256**	.116*	.420**	1	.516**	.431**	.295**	.282**	.169**	.312**	.376**	.329**
	Sig .000	.000	.038	.000		.000	.000	.000	.000	.002	.000	.000	.000
Cmbnd sub abuse w2	Cor .189**	.320**	.120*	.330**	.516**	1	.307**	.294**	.219**	.159**	.228**	.455**	.174**
	Sig .001	.000	.033	.000	.000		.000	.000	.000	.004	.000	.000	.002
Pro gangs att W2	Cor .016	.153**	.077	.102	.431**	.307**	1	.118*	.274**	.123*	.335**	.529**	.245**
	Sig .770	.006	.173	.070	.000	.000		.036	.000	.028	.000	.000	.000
Own biological child w2	Cor .008	.075	-.057	.158**	.206**	.205**	.161**	.198**	.150**	.084	.098	.277**	.141*
	Sig .893	.182	.310	.005	.000	.000	.004	.000	.007	.133	.081	.000	.014
Subject failed school grade once or more w2	Cor .219**	.088	.115*	.174**	.224**	.227**	.206**	.093	.168**	.039	.230**	.129*	.059
	Sig .000	.118	.041	.002	.000	.000	.000	.097	.003	.490	.000	.022	.303
School Abuse w2	Cor .102	.262**	.041	.098	.322**	.296**	.266**	.306**	.061	.074	.206**	.308**	.185**
	Sig .070	.000	.465	.080	.000	.000	.000	.280	.188	.000	.000	.001	.001
Cmbnd victim ever w2	Cor .220**	.175**	.138*	.063	.295**	.294**	.118*	1	.019	.017	.127*	.200**	.203**
	Sig .000	.002	.014	.266	.000	.000	.036		.734	.759	.023	.000	.000
Violence exposure Count W2	Cor .290**	.238**	.138*	.115*	.498**	.271**	.305**	.354**	.061	-.040	.166**	.246**	.221**
	Sig .000	.000	.014	.040	.000	.000	.000	.000	.277	.477	.003	.000	.000
Neg school att W2	Cor .124*	.164**	.047	.303**	.282**	.219**	.274**	.019	1	.501**	.494**	.187**	.091
	Sig .026	.003	.402	.000	.000	.000	.000	.734		.000	.000	.001	.115
Neg Future att W2	Cor -.029	.186**	.047	.226**	.169**	.159**	.123*	.017	.501**	1	.339**	.189**	-.007

	Sig	.604	.001	.401	.000	.002	.004	.028	.759	.000		.000	.001	.908
Anomie W2	Cor	.029	.016	-.073	.163**	.143*	.124*	.060	-.039	.202**	.189**	.182**	.130*	-.086
	Sig	.613	.781	.193	.004	.011	.027	.284	.490	.000	.001	.001	.021	.134
Pro Violence att W2	Cor	.087	.220**	.245**	.270**	.312**	.228**	.335**	.127*	.494**	.339**	1	.260**	.244**
	Sig	.123	.000	.000	.000	.000	.000	.000	.023	.000	.000		.000	.000
Cmbnd offend –past 12mos w2	Cor	.106	.127*	.053	.173**	.376**	.455**	.529**	.200**	.187**	.189**	.260**	1	.277**
	Sig	.060	.024	.346	.002	.000	.000	.000	.000	.001	.001	.000		.000
Matern Problm Behave W2	Cor	.158**	.085	.196**	.177**	.329**	.174**	.245**	.203**	.091	-.007	.244**	.277**	1
	Sig	.006	.137	.001	.002	.000	.002	.000	.000	.115	.908	.000	.000	

Figure A.82. Bivariate two-tailed Pearson correlations-Kkayelitsha Wave 2 (n=318)

		H-hold deprv W_3	Violent Home W_3	Harsh Parntng W_3	Less Parent Involv W_3	Deviant Peers W3	Comb substance abuse w3	Pro gangs att W3	Cmb victim past 12mos w3	Neg school att W3	Neg Future atti W3	Pro Violence atti W3	Cmbnd serious offend 12mos w3	Matern Prob Behav W3	Poor health well being w3
* . Correlation is significant at the 0.05 level (2-tailed). ** . Correlation is significant at the 0.01 level (2-tailed).	Cor	-.291**	-.177**	.180**	-.120*	-.146**	-.174**	-.141*	-.117*	-.275**	-.284**	-.067	-.045	-.333**	-.277**
	Sig	.000	.002	.001	.033	.009	.002	.012	.038	.000	.000	.234	.420	.000	.000
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Current Amandla registered w3	Cor	.023	-.073	-.017	-.130*	-.100	-.048	-.036	-.123*	-.045	-.046	.016	-.087	-.034	-.074
	Sig	.687	.192	.758	.021	.075	.391	.525	.028	.430	.420	.773	.122	.558	.187
Age	Cor	-.065	.016	-.210**	.242**	.292**	.194**	.032	.131*	.008	-.021	-.030	.156**	-.082	-.057
	Sig	.249	.776	.000	.000	.000	.001	.570	.020	.894	.706	.595	.005	.152	.309
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
H-hold deprv W3	Cor	1	.265**	.355**	.264**	.223**	.229**	.155**	.267**	.209**	.173**	.032	.093	.347**	.202**
	Sig		.000	.000	.000	.000	.000	.006	.000	.000	.002	.568	.101	.000	.000
live in shack	Cor	.047	-.017	-.031	.031	-.152**	-.091	-.015	.043	-.061	-.068	.027	-.040	-.029	-.133*
	Sig	.403	.759	.577	.585	.007	.106	.787	.447	.283	.229	.628	.477	.616	.018
Violent Home W3	Cor	.265**	1	.394**	.361**	.266**	.169**	.371**	.396**	.303**	.260**	.451**	.167**	.330**	.274**
	Sig	.000		.000	.000	.000	.003	.000	.000	.000	.000	.000	.003	.000	.000
Harsh Parntng W3	Cor	.355**	.394**	1	.308**	.228**	.190**	.284**	.309**	.178**	.288**	.151**	.237**	.496**	.341**
	Sig	.000	.000		.000	.000	.001	.000	.000	.002	.000	.007	.000	.000	.000
Less Parental Involv W3	Cor	.264**	.361**	.308**	1	.502**	.340**	.466**	.376**	.506**	.408**	.352**	.349**	.335**	.367**
	Sig	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Cmbnd Mother sup w3	Cor	-.122*	-.194**	-.194**	-.359**	-.305**	-.186**	-.178**	-.111	-.174**	-.189**	-.129*	-.207**	-.157**	-.193**
	Sig	.042	.001	.001	.000	.000	.002	.003	.065	.004	.002	.032	.001	.009	.001
Cmbnd Father sup w3	Cor	-.206**	-.148*	-.044	-.244**	-.168*	-.182**	-.055	-.199**	-.115	.021	-.127	-.050	-.194**	-.112
	Sig	.002	.025	.505	.000	.011	.006	.409	.002	.085	.758	.055	.453	.004	.090
Cmb parents2 prison w3	Cor	-.015	.026	.005	-.034	.040	.013	.017	.107	-.021	-.065	.082	.011	-.011	.004
	Sig	.791	.648	.932	.548	.476	.811	.761	.056	.708	.250	.145	.851	.843	.945
Deviant Peers W3	Cor	.223**	.266**	.228**	.502**	1	.644**	.377**	.417**	.382**	.232**	.306**	.523**	.385**	.271**
	Sig	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000
Cmbnd sub abuse w2	Cor	.229**	.169**	.190**	.340**	.644**	1	.235**	.324**	.360**	.236**	.236**	.518**	.377**	.217**
	Sig	.000	.003	.001	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
Pro gangs att W3	Cor	.155**	.371**	.284**	.466**	.377**	.235**	1	.395**	.610**	.416**	.628**	.330**	.301**	.422**
	Sig	.006	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000
Own biological child	Cor	-.005	.080	-.012	.016	.081	.077	.035	.045	.131*	.017	.001	.055	.043	.023
	Sig	.934	.157	.824	.779	.150	.170	.531	.428	.020	.758	.989	.325	.452	.689
Subject failed school grade once or more	Cor	.247**	.122*	.100	.179**	.287**	.294**	.119*	.094	.300**	.117*	.094	.163**	.233**	.072
	Sig	.000	.030	.074	.001	.000	.000	.034	.094	.000	.037	.095	.004	.000	.203
School Abuse w3	Cor	.096	.295**	.205**	.235**	.377**	.286**	.205**	.427**	.235**	.154**	.217**	.274**	.270**	.210**
	Sig	.089	.000	.000	.000	.000	.000	.000	.000	.000	.006	.000	.000	.000	.000
Cmbnd victim past 12mos w3	Cor	.267**	.396**	.309**	.376**	.417**	.324**	.395**	1	.299**	.271**	.365**	.279**	.284**	.257**
	Sig	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
Violence exposure Count W3	Cor	-.051	.067	-.045	.323**	.471**	.280**	.281**	.345**	.100	-.040	.203**	.244**	-.041	-.022
	Sig	.370	.231	.423	.000	.000	.000	.000	.000	.076	.481	.000	.000	.476	.698
Neg school att W3	Cor	.209**	.303**	.178**	.506**	.382**	.360**	.610**	.299**	1	.581**	.521**	.342**	.389**	.438**
	Sig	.000	.000	.002	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
Neg Future att W3	Cor	.173**	.260**	.288**	.408**	.232**	.236**	.416**	.271**	.581**	1	.356**	.210**	.397**	.547**
	Sig	.002	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000
Anomie W3	Cor	.010	-.075	-.025	.266**	.231**	.175**	.198**	.134*	.251**	.177**	.053	.169**	.038	.128*
	Sig	.865	.187	.661	.000	.000	.002	.000	.019	.000	.002	.351	.003	.514	.024

Pro Violence att W3	Cor	.032	.451**	.151**	.352**	.306**	.236**	.628**	.365**	.521**	.356**	1	.263**	.275**	.350**
	Sig	.568	.000	.007	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Cmbnd offend - 12mos w3	Cor	.093	.167**	.237**	.349**	.523**	.518**	.330**	.279**	.342**	.210**	.263**	1	.300**	.246**
	Sig	.101	.003	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Matern Problm Behave W3	Cor	.347**	.330**	.496**	.335**	.385**	.377**	.301**	.284**	.389**	.397**	.275**	.300**	1	.414**
	Sig	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Poor health well being w3	Cor	.202**	.274**	.341**	.367**	.271**	.217**	.422**	.257**	.438**	.547**	.350**	.246**	.414**	1
	Sig	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Figure A.83. Bivariate two-tailed Pearson correlations-Kkayelitsha Wave 3 (n=318)

### Correlation between wave 2 factors and wave 3 constructs

I now present bivariate correlations between all wave 2 measures and the key wave 3 constructs. Strong bivariate correlations across waves would support the possibility of building solid multivariate models for the prediction of violence-related outcomes.

		H-hold deprv W_3	Violent Home W_3	Harsh Pamtnng W_3	Less Parent Involv W_3	Deviant Peers W3	Comb substance abuse w3	Pro gangs att W3	Cmb victim past12mos w3	Neg school att W3	Neg Future atti W3	Pro Violence atti W3	Combnd serious offend 12mos w3	Matern Prob Behav W3	Poor health well being w3
Religion Attendance	Cor	.029	.009	.074	-.123	-.106	-.085	-.058	-.012	-.044	.032	.005	-.133	.069	.002
	Sig	.603	.869	.188	.028	.059	.131	.306	.829	.437	.575	.934	.017	.230	.974
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Current Amanda Participant w2	Cor	.067	-.015	.082	-.009	-.026	.012	.012	-.095	.060	.069	.089	.008	.050	.020
	Sig	.236	.791	.142	.877	.647	.825	.834	.091	.289	.219	.112	.888	.386	.722
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
H-hold deprv W_2	Cor	.063	-.014	-.010	.058	.116*	.160**	.013	.119	.096	.028	.111*	.083	.021	.006
	Sig	.265	.802	.857	.306	.038	.004	.815	.034	.087	.623	.048	.139	.719	.922
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
live in shack w2	Cor	-.096	-.142*	-.107	-.078	-.191**	-.154**	-.150**	-.086	-.196**	-.134*	-.049	-.107	-.138*	-.196**
	Sig	.090	.012	.057	.166	.001	.006	.008	.125	.000	.017	.380	.056	.016	.000
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Violent Home W_2	Cor	.016	.072	.094	.061	.041	.062	.070	.054	-.009	-.049	-.018	.004	-.021	.049
	Sig	.771	.203	.095	.279	.465	.268	.213	.334	.867	.389	.743	.943	.718	.382
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Harsh Pamtnng W_2	Cor	-.048	-.066	.010	-.105	-.137*	-.074	-.046	-.045	-.069	-.002	-.005	-.037	-.004	-.002
	Sig	.399	.242	.862	.063	.015	.185	.419	.427	.219	.977	.926	.516	.950	.979
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Less Parental Involv W_2	Cor	-.063	.109	.048	.138*	.160**	.074	.043	.090	-.039	-.048	-.035	.030	.031	.059
	Sig	.262	.052	.395	.014	.004	.186	.441	.110	.489	.398	.532	.594	.586	.292
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Cmbnd Mother sup w2	Cor	-.076	-.002	.019	-.164**	-.039	-.008	-.011	-.031	-.060	-.040	.029	.038	-.062	-.070
	Sig	.177	.973	.740	.003	.486	.889	.845	.585	.291	.475	.605	.502	.279	.217
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Cmbnd Father sup w2	Cor	-.150**	-.096	-.031	-.229**	-.160**	-.137*	-.035	-.044	-.073	-.014	-.048	-.103	-.142*	-.151**
	Sig	.008	.093	.586	.000	.005	.016	.536	.439	.203	.811	.400	.070	.013	.008
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Cmb parents2 prison w2	Cor	-.090	.024	.030	.003	.023	-.007	-.034	.054	.019	-.035	.037	-.048	.011	-.038
	Sig	.109	.675	.596	.954	.677	.895	.546	.340	.740	.536	.516	.390	.851	.502
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Deviant Peers W2	Cor	-.055	.028	-.048	.090	.204**	.212**	.008	.233**	-.037	.021	.029	.077	.081	-.006
	Sig	.328	.614	.394	.109	.000	.000	.883	.000	.508	.713	.601	.171	.157	.920
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Cmbnd sub abuse w2	Cor	-.115*	-.032	-.100	-.026	.086	.045	-.079	.072	-.143*	-.124*	-.122*	-.014	-.145*	-.139*
	Sig	.041	.567	.074	.641	.124	.426	.161	.199	.011	.027	.029	.802	.011	.014
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Pro gangs att W26	Cor	-.024	.080	.060	.067	.091	.135*	.131*	.173**	.050	.162**	.097	.017	.150*	.013
	Sig	.671	.154	.284	.236	.105	.016	.020	.002	.378	.004	.085	.757	.008	.822
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Own biological child w2	Cor	-.113*	-.025	.026	.079	.061	.006	-.047	.062	-.028	-.041	-.093	.005	-.013	-.031
	Sig	.045	.656	.645	.160	.281	.920	.405	.272	.616	.470	.097	.925	.818	.581
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Subject failed school grade once or more w2	Cor	.034	-.041	.034	.037	.098	.087	-.025	.111*	.007	-.093	-.029	.010	-.084	-.077
	Sig	.545	.466	.547	.508	.082	.120	.660	.048	.896	.101	.605	.858	.142	.172
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
School Abuse w2	Cor	-.014	.056	.081	.004	.075	.100	.034	.200**	-.013	.051	.069	-.042	.003	.012
	Sig	.803	.321	.149	.943	.182	.075	.551	.000	.815	.368	.218	.451	.961	.829
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Cmbnd victim ever w2	Cor	.032	.014	.022	-.017	.077	.045	-.024	.008	-.059	-.033	.017	-.086	-.034	-.008
	Sig	.575	.801	.693	.762	.171	.425	.676	.892	.296	.559	.765	.127	.557	.894
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Violence exposure Count W2	Cor	-.040	.004	.038	.036	.133*	.170**	.006	.098	.036	-.020	.097	.005	.062	-.001
	Sig	.484	.938	.497	.520	.018	.002	.917	.083	.521	.721	.086	.929	.279	.987
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Neg school att W2	Cor	-.028	.031	-.078	.092	.087	.091	.135*	.056	.009	.044	.057	-.006	-.015	.023
	Sig	.624	.577	.166	.102	.121	.105	.016	.321	.870	.436	.312	.920	.797	.687
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Neg Future att W2	Cor	-.039	-.008	-.027	.051	-.005	.003	.058	-.020	-.044	.002	.013	-.039	.035	.016
	Sig	.484	.883	.630	.360	.923	.954	.306	.722	.435	.974	.819	.490	.546	.777
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316
Anomie W2	Cor	-.064	.035	-.103	.117*	.147**	.043	.061	.026	.026	-.036	-.019	.070	-.021	-.007
	Sig	.568	.869	.188	.028	.059	.131	.306	.829	.437	.575	.934	.017	.230	.974
	N	316	317	318	318	318	318	317	318	315	316	318	318	307	316

	Sig	.256	.531	.068	.038	.009	.447	.277	.647	.646	.523	.730	.216	.717	.901
Pro Violence att W2	Cor	-.005	-.013	-.012	.011	.002	.105	.145*	.063	-.022	-.044	.094	-.021	.019	.018
	Sig	.929	.823	.838	.848	.972	.062	.010	.261	.699	.434	.093	.704	.746	.753
Cmbnd offend - 12mos w2	Cor	-.144*	-.018	.002	.022	.102	.125*	.039	.043	-.034	-.016	.007	.052	.018	-.060
	Sig	.011	.753	.975	.702	.070	.026	.489	.445	.544	.773	.898	.357	.754	.286
Matern Problm Behave W2	Cor	-.076	-.039	.058	-.028	.013	.111	-.026	.072	-.009	-.001	.013	.004	.102	-.003
	Sig	.188	.502	.315	.630	.827	.054	.649	.212	.870	.983	.818	.938	.082	.962

Figure A.84. Bivariate two-tailed Pearson correlations-Kkayelitsha Wave 2 and Wave 3 variables (n=318)

Very few correlations emerge as significant between waves 2 and 3, with the highest correlations seen between Peer Deviance Wave 2 and Peer Deviance Wave 3 (corr = 0.204), Substance Abuse wave 3 (cor = 0.212), and Victimization wave 3 (cor=0.233). The lack of more and stronger correlations is, perhaps, not a surprise after the limited test-retest reliability seen among the individual constructs and the temporal nature of youth attitudinal measures. Predictive models will be further developed and analysed in chapters 6 and 7.

Bivariate correlation analysis by Low / Medium / High Violence Propensity Scores in Wave 2 and Wave 3. There is little indication that ‘risk factors’ influenced a Violence Propensity increase or decrease from wave 2 to wave 3 among these ‘risk groups’. Group sizes are small, varying between 19 and 45 subjects.

Pearson's 2-tailed bivariate correlations. P<.05 = *. P<.01=**		Low violence w2 - low w3 (n=42)	Low violence w2 - medium w3 (n=40)	Low violence w2 high w3 (n=19)	Medium violence w2 - low w3 (n=38)	Medium violence w2 - medium w3 (n=34)	Medium violence w2 - high w3 (n=32)	High violence w2 - low w3 (n=30)	High violence w2 - medium w3 (n=31)	High violence w2 - high w3 (n=45)
		Corr.	Sig.	Corr.	Sig.	Corr.	Sig.	Corr.	Sig.	Corr.
Household deprivation WAVE_2	Corr.	-.154**	-.174**	.000	.078	.019	.021	.048	.123*	.063
	Sig.	.006	.002	.993	.171	.739	.711	.401	.029	.268
	N	311	311	311	311	311	311	311	311	311
Violent Home WAVE_2	Corr.	-.160**	-.209**	.046	.010	-.050	.090	.057	.125*	.125*
	Sig.	.005	.000	.419	.857	.383	.111	.315	.028	.028
Harsh Parenting WAVE_2	Corr.	.033	-.182**	-.032	.072	-.024	-.020	.028	.067	.053
	Sig.	.558	.001	.577	.203	.680	.721	.621	.242	.354
Less Parental Involv W2	Corr.	-.272**	-.210**	-.063	.010	.038	.116*	.130*	.081	.187**
	Sig.	.000	.000	.271	.867	.507	.041	.022	.152	.001
Subst Use W2	Corr.	-.172**	-.222**	-.102	-.086	.023	-.022	.190**	.241**	.162**
	Sig.	.002	.000	.074	.130	.684	.696	.001	.000	.004
Neg school attitude W2	Corr.	-.109	-.182**	-.042	-.112*	.034	.081	.085	.078	.175**
	Sig.	.054	.001	.466	.047	.553	.152	.136	.170	.002
School failure w2	Corr.	-.115*	-.169**	.016	.009	.006	.060	.100	-.008	.119*
	Sig.	.043	.003	.778	.876	.917	.295	.078	.881	.036
Neg Future Att W2	Corr.	.023	-.095	.029	-.085	-.070	.011	-.006	.018	.170**
	Sig.	.682	.095	.607	.133	.218	.846	.913	.756	.003
Violence Exp revise w2	Corr.	-.263**	-.202**	.009	-.028	.025	-.033	.157**	.185**	.186**
	Sig.	.000	.000	.878	.629	.662	.569	.006	.001	.001
Victimization past12mos w2	Corr.	-.133*	-.161**	-.003	.034	-.123*	.029	.070	.205**	.103
	Sig.	.019	.004	.954	.554	.030	.607	.216	.000	.070
School Abuse_w2	Corr.	-.108	-.064	.048	-.096	-.104	-.057	.061	.241**	.108
	Sig.	.058	.257	.397	.090	.066	.318	.285	.000	.057
Matern	Corr.	-.234**	-.125*	-.154**	.068	.069	-.061	.096	.198**	.127*
	Sig.	.001	.011	.001	.608	.607	.607	.607	.001	.001

problem Behav w2	Sig.	.000	.031	.008	.239	.237	.295	.100	.001	.029
Serious violent offend past12mos w2	Corr.	.112*	-.109	-.072	-.106	-.034	-.052	.045	.289**	.152**
	Sig.	.048	.055	.203	.062	.545	.364	.433	.000	.007
Religious attend w2	Corr.	-.015	.013	-.031	.143*	-.059	-.056	.023	.024	-.047
	Sig.	.786	.823	.583	.012	.297	.321	.686	.674	.408
Amandla W2- How Long W2	Corr.	.003	.070	.021	.027	-.031	-.014	-.002	-.049	-.026
	Sig.	.954	.221	.706	.639	.587	.803	.976	.390	.647

Figure A. 85. Bivariate correlation analysis by Low / Medium / High Violence Propensity Scores in Wave 2 and Wave 3

**Alternative Regression Analyses:**

**WITH PRO-GANGS REMOVED**

Multiple Linear Regression Model for dependent variable:  
Pro-Violence Attitude-Khayelitsha Wave 3

Variable	Population Weighted N=311	Un-Weighted N=311	14-16 year-olds. Un-weighted N=102	17-19 year-olds. Un-weighted N=122	20-24 year-olds. Un-weighted N=78
	Model 1 <i>B</i>	Model 2 <i>B</i>	Model 3 <i>B</i>	Model 4 <i>B</i>	Model 5 <i>B</i>
(Constant)	-0.87	0.584	1.44	-1.65	-3.18
Age	-.096	-.110			
Household Deprivation	.040	-.024	-.026	-.213*	.157
Violent Home	.302**	.313**	.373**	.309**	.253*
More Harsh Parenting	-.037	-.064	-.213*	.002	.098
Less Parent Involve	-.005	.002	-.101	.098	-.062
More Deviant Peers	.016	.059	.337**	-.021	-.114
Substance Abuse	-.097	-.013	-.095	.161	-.211
Pro-gangs Attitude					
Neg School Attitude	.378**	.319**	.305**	.193	.468**
Failed school 1+ grade	.020	.001	.018	-.023	.033
Negative Future Attitude	.117	.113	.127	.085	.110
<i>R</i> <sup>2</sup>	0.36	0.32	0.46	0.31	0.46
<i>F</i>	16.82**	14.03**	8.55**	5.42**	6.38**

Figure A. 86. Cross-sectional multiple linear regression models for the dependent variable, Pro-Violence Attitude wave 3. Standardized coefficients reported. No collinearity tolerance < 0.26, or VIF > 3.81. Note. \*p ≤ .05. \*\*p ≤ .01. Weighting based on 12-24 year old male population demographics of Khayelitsha Wards 90 and 91, South Africa Census 2011.

Longitudinal Multiple Linear Regression Model for dependent variable: Violence Scorecard-Khayelitsha Wave 3

Variable	Population	Un-	Un-	Un-	Un-	14-16	17-19	20-24
	n weighted N=311	weighted N=311	Weighted N=311	Weighted N=311	Weighted N=311	year-olds N=102	year-olds N=122	year-olds N=78
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
	<i>B</i>	<i>B</i>	<i>B</i>	<i>B</i>	<i>B</i>	<i>B</i>	<i>B</i>	<i>B</i>
(Constant)	-3.88	-7.65	-5.51	-4.84	-2.55	13.27	3.23	24.58
Age	.213**	.162*	.151*	.155*	.143*			
Household Deprivation w2	.083	.033	.033	.038	.039	.055	.008	.081
Violent Home w2	.169**	.125*	.125*	.123*	.124*	.098	.037	.250
More Harsh Parenting w2	-.078	-.069	-.071	-.060	-.062	.043	-.108	-.140
Less Parent Involvement w2	-.003	.012	.010	.007	-.004	-.056	.058	-.014
Substance Abuse w2	-	-.153*	-.153*	-.157*	-.157*	.114	-.162	-.330*
Negative School Attitude w2	.222**							
Failed school 1+ grade w2	.080	.139*	.135*	.128	.123	.118	.195	.029
Negative Future Attitude w2	.028	.043	.046	.044	.048	.077	.033	.048
Violence Scorecard w2	.014	-.002	.002	-.008	-.004	.001	-.064	-.044
Amandla	.050	.089	.083	.094	.088	.083	.163	.005
Wave3%thruJunex-how long	-.061		-.078		-.081	<b>-.203*</b>	-.014	.040
Religion Participation w2	-.095			-.084	-.087	-.142	.010	-.148
<i>R</i> <sup>2</sup>	0.13	0.10	0.10	0.11	0.11	0.18	0.10	0.14
$\Delta R^2$			.006	.007				
<i>F</i>	3.75**	3.28*	3.17*	3.19*	3.11**	1.81	1.13	0.99
$\Delta F$			1.96	2.21				

Figure A. 87. Longitudinal multiple linear regression models for the dependent variable, Violence Scorecard Wave 3. Standardized coefficients reported. No collinearity tolerance < 0.35, or VIF > 2.82. Note. \*p≤ .05. \*\*p≤ .01. Weighting based on 12-24 year old male population demographics of Khayelitsha Wards 90 and 91, South Africa Census 2011.

Multiple Linear Regression Model for dependent variable:  
Attrition from Wave 1 to wave 2 (130 attrit subjects)

Un  
 Weighted  
 N=270

Variable	Model 1 B
(Constant)	1.48
Age	.033
Household Deprivation wave 1	-.024
Violent Home wave 1	.140
More Harsh Parenting wave 1	-.015
Pro-Gangs Attitude wave 1	.026
More Deviant Peers wave 1	-.133
Negative School Attitude wave 1	-.034
Negative Future Attitude wave 1	-.041
Pro-Violence Attitude wave 1	-.039
Multiple Offending wave 1	-.035
Combined Victimization wave 1	-.004
Amandla Participant wave 1	-.335**
Religion Attendance wave 1	.013
$R^2$	0.39
$F$	2.72**

Figure A. 88. Cross-sectional multiple linear regression models for the dependent variable, Attrition from wave 2. Standardized coefficients reported.

Note. \* $p \leq .05$ . \*\* $p \leq .01$ .

Multiple Linear Regression Model for dependent variable:  
Attrition from Wave 2 to wave 3 (82 attrit subjects)

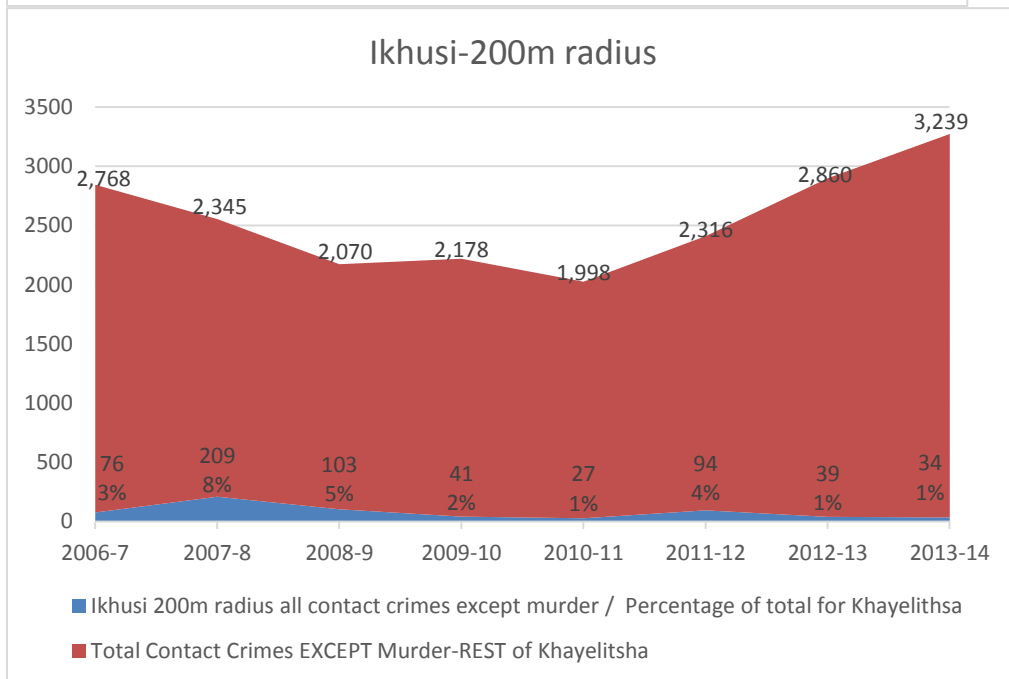
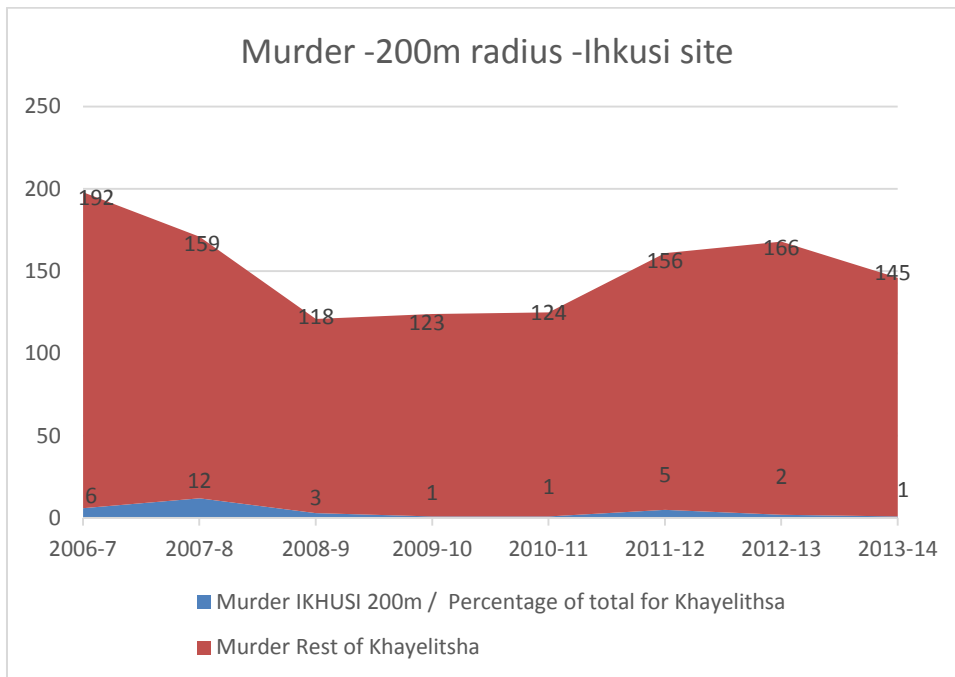
Un-Weighted  
 N=396

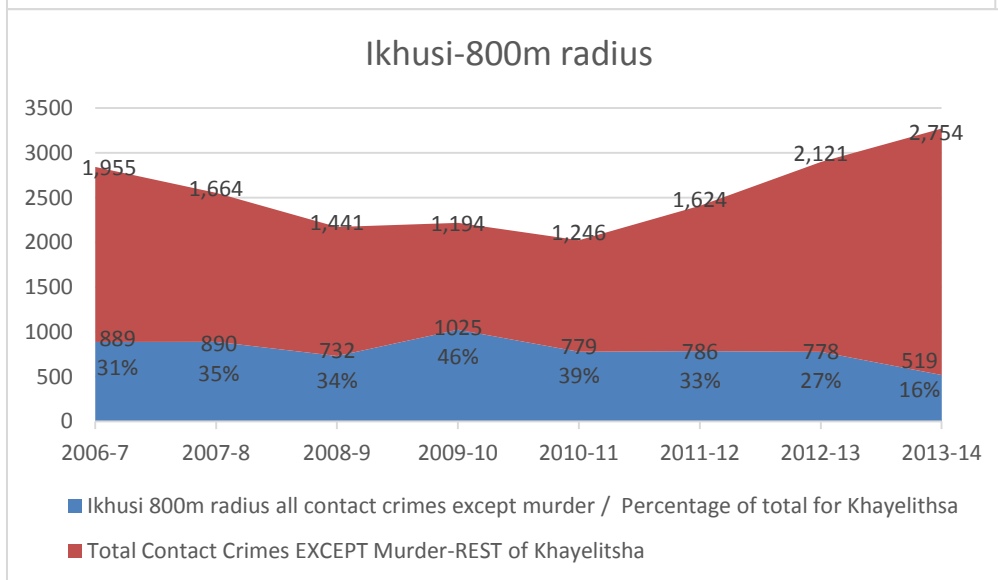
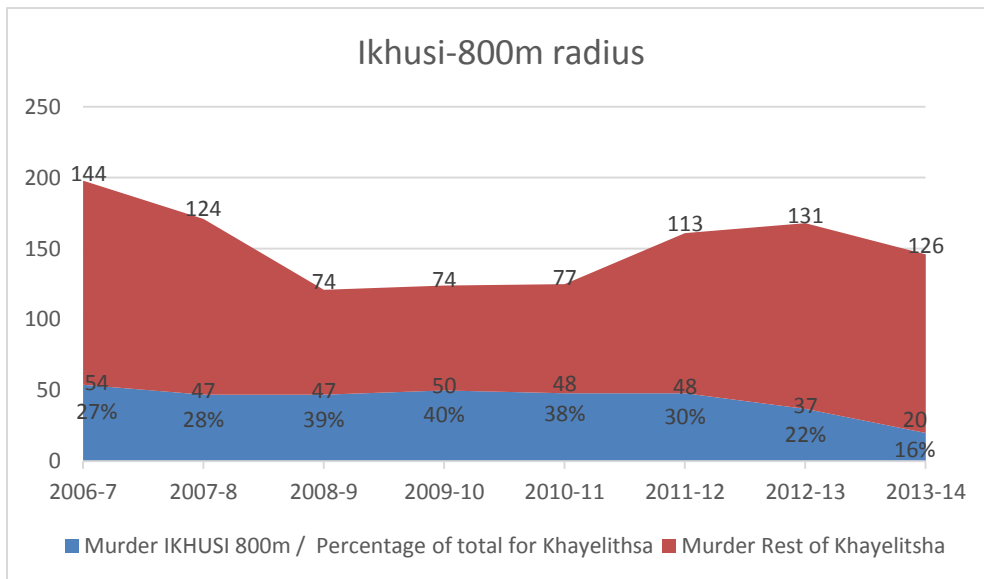
Variable	Model 1 B
(Constant)	-.173
Age	.033
Household Deprivation wave 2	.004
Violent Home wave 2	.058
More Harsh Parenting wave 2	.065
Less Parental Involvement wave 2	.026
Negative School Attitude wave 2	-.027
School Failure wave 2	.014
Negative Future Attitude wave 2	.146*
Violence Scorecards wave 2	.016
Multiple Offending wave 2	.030
Amandla Participant wave 2	-.194**
Religion Attendance wave 2	.050
$R^2$	0.08
$F$	3.23**

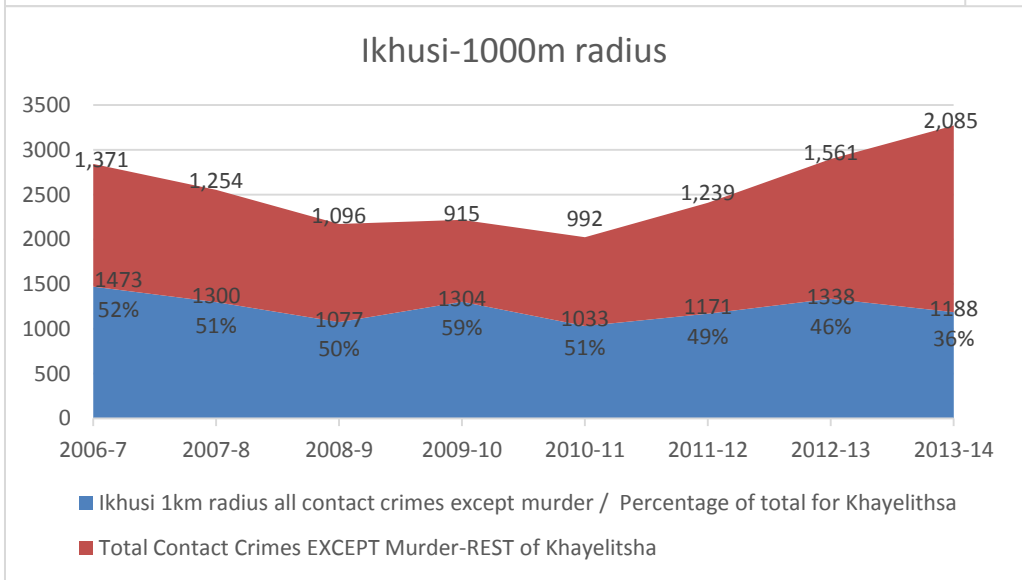
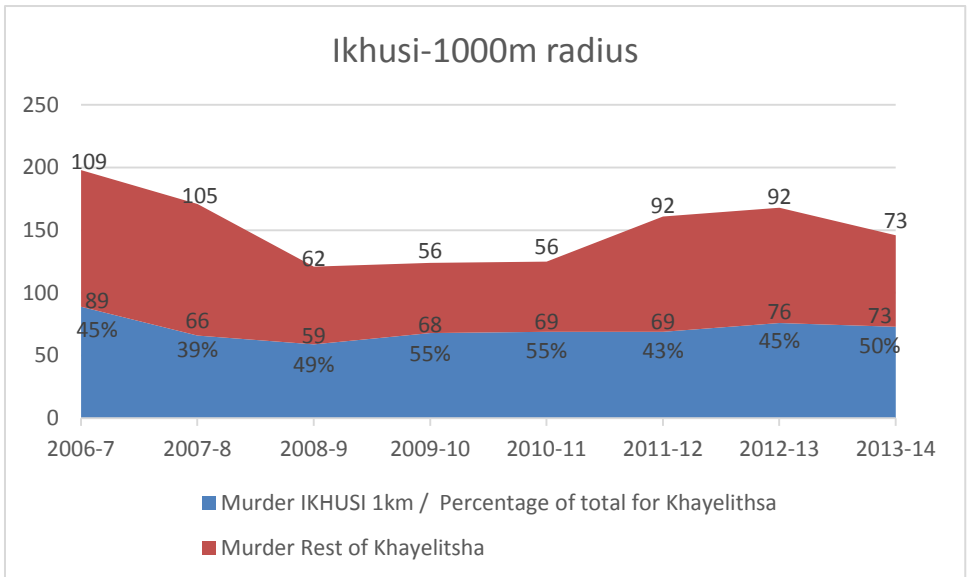
Figure A. 89. Cross-sectional multiple linear regression models for the dependent variable, Attrition from wave 3. Standardized coefficients reported.

Note. \* $p \leq .05$ . \*\* $p \leq .01$ .

**Customized Crime data-alternative radii analyses-Khayelitsha-Ikhusi site**







**Customized Crime data-alternative radii analyses-Harare-Football for Hope site**

