

**THE PSYCHOLOGICAL IMPACT OF RAPE:
A LONGITUDINAL STUDY OF ADULT FEMALE SURVIVORS
IN THE WESTERN CAPE, SOUTH AFRICA**

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Declaration

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

Anastasia Maw

Abstract

THE PSYCHOLOGICAL IMPACT OF RAPE: A LONGITUDINAL STUDY OF ADULT FEMALE SURVIVORS IN THE WESTERN CAPE, SOUTH AFRICA

There is a broad body of research which suggests that rape is highly pathogenic, most commonly described in terms of Post Traumatic Stress Disorder (PTSD). The bulk of this research has been conducted in developed countries. In contrast, despite very high rates of rape in South Africa, there is almost no research in this country on the psychological impact of rape, either in the immediate aftermath or in the longer term. This research sought to investigate whether female survivors of rape, living in a palpably different context to those within which the majority of research has been conducted, present with symptomatology similar to that described in the international literature. Sixty-four adult, female rape survivors presenting with a complaint of rape within the last 72 hours at a post-rape health care facility located within a low socio-economic, urban context, were enrolled into the study. Survivors were interviewed at 1, 4, 12 and 24 weeks post-rape. The quantitative questionnaires assessed pre-assault, assault and post-assault variables and included a psychiatric assessment instrument. There was evidence of a high degree of both psychiatric and psychological distress over a period of six months from the time of the rape in over half of the women taking part in this study. The majority of survivors met a diagnosis of PTSD at the Weeks 4, 12 and 24 interviews. A diagnosis of Acute Stress Disorder (ASD), a prior history of psychiatric illness, negative cognitive appraisals relating to self esteem, self-blame and guilt and unsupportive responses, all appeared to play a role in predicting the development of PTSD over time. In addition, severity of ASD symptomatology post-rape had some predictive power in explaining variance in PTSD symptom severity over time. In the main these findings are in keeping with several of the main trends evident in the literature. The meaning and implications of these findings are considered in light of the disputed and complex history of the study of trauma, and with reference to evidence from this data set of a complicated set of relationships between a number of variables, which precluded any assumption of a simple relationship between any particular variable and PTSD.

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Glossary of Frequently Used Terms

ASD	Acute Stress Disorder
ASDS	Acute Stress Disorder Scale
EVS	Exposure to Violence Scale
DSM	Diagnostic and Statistical Manual
MINI	Mini International Neuropsychiatric Interview
MSPSS	Multidimensional Scale of Perceived Social Support
PDS	Posttraumatic Stress Diagnostic Scale
PTCI	Post Traumatic Cognitions Inventory
PTSD	Post Traumatic Stress Disorder

Criterion A: Definition of a traumatic event

Criterion B: Symptoms characteristic of persistent re-experiencing of traumatic event

Criterion C: Symptoms associated with persistent avoidance of stimuli associated with trauma

Criterion D: Persistent symptoms of increased arousal

Criterion E: Duration of disturbance

Criterion F: Degree of disturbance in a number of areas of functioning

SSS	Symptom Severity Score
SSR	Symptom Severity Rating
SSI-SA	Shortened Interview Simple Screening Instrument for Substance Abuse
TCC	Thuthuzela Care Centre

Chapter 1

Introduction

Despite the staggering rates of rape¹ in South Africa, there is almost no research in South Africa on the psychological impact of rape on survivors², either in the immediate aftermath of rape or in the longer term. This doctoral research aims to address this gap in the literature by investigating what the mental health impact of rape is on a group of female rape survivors living in a low income, urban setting in South Africa, and how the impact of the rape might be shaped and informed by the broader context within which the rape occurred.

This chapter will begin by offering a brief overview of rape statistics in South Africa, and will then consider these statistics in relation to the question of the psychological impact of rape. Thereafter, the research aims and study design of the current study will be delineated, followed by a discussion of the broader epistemological framework which underpins this study. Finally the structure of the dissertation will be outlined.

1.1 Prevalence of rape in South Africa

South Africa has one of the highest incidences of rape in a war-free country in the world, (Artz & Kunisaki, 2003). In 2001, in comparison with 13 other countries with similar economic profiles, South Africa had the highest number of reported rapes per 100 000 people. At 104.6 per 100 000 this was three times higher than the next country on the list, Zimbabwe (South African Institute of Race Relations, 2004). In 2010, in comparison to 23 other countries, South Africa continued to have the highest number of reported rapes per 100 000 people – 132.4 per 100 000, followed by Botswana at 92.9 per 100 000 people, Lesotho at 82.7 per 100 000, and Sweden at 63.5 per 100 000. In the period 2007/2008, when the legal definition of rape in South Africa was the unlawful act of a man vaginally penetrating a woman with his penis, a total of 63 818 rapes were reported in South Africa. In the period 2008/2009, after the Criminal Law (Sexual Offences and Related Matters) Amendment Act

¹ Throughout this dissertation the phrase ‘sexual violence’ will be used as a generic term encompassing all forms of sexual offences. In keeping with the South African legal framework on sexual offences, the term rape refers specifically to penetrative sexual offences and sexual assault refers to a range of non-penetrative sexual offences. This differs from a number of states in the United States which use the term sexual assault to refer to penetrative offences (i.e. defined as rape in the South African context).

² The terms ‘victim’ and ‘survivor’ will be used interchangeably throughout this dissertation to reflect the changing and multiple circumstances of those who have experienced rape (Thompson, 2000; Vetten, Kim, Ntlemo, & Mokwena, 2009).

32 of 2007 was promulgated in which the definition of rape is penetrative assault which is no longer gender, orifice or instrument specific, a total of 70 514 rapes were reported in South Africa (South African Police Services, 2012). Since then there has been a steady decline in the number of reported rapes and for the period 2011/2012 a total of 64 514 rapes were reported to the South African Police Service (South African Police Services, 2012). A breakdown of the most recent figures according to age is not available for these periods, but in 1996 60% of rape complainants were over the age of 18 (Jewkes & Abrahams, 2002).

There can be little dispute that the number of reported rapes in South Africa is appallingly high. However, rape statistics are notoriously difficult to calculate and extrapolating meaning from these figures is even harder (Jewkes & Abrahams, 2002; Koss, 1992, 1993a; Vetten, 2004). In addition public surveys, both national and international, suggest that rape remains an under-reported crime (Koss, 1992, 1993b; Russell, 1982, 1984; Wyatt, 1992). The Medical Research Council (MRC) survey indicates that 1 in 9 survivors reported being raped to the South African Police Services (Jewkes, Penn-Kekana, Levin, Ratsaka, & Schreiber, 1999), whilst a survey conducted by Statistics South Africa (2000) indicated that 1 in 2 rape survivors reported rape to the South African Police Service.

The difficulties of estimating the actual prevalence of rape notwithstanding, there is a broad body of research spanning 40 years which suggests that rape is highly pathogenic (for a review see Campbell, Dworkin, & Cabral, 2009). In comparison to other crimes, survivors of rape appear to suffer from higher levels of distress, both in the immediate aftermath of the event and for an extended period thereafter (Campbell & Wasco, 2005; M. Harvey & Herman, 1992). With few exceptions the research indicates that victims of serious crimes involving physical assault suffer more psychological distress than victims of other crimes, and female victims of completed rape experience the most trauma, more often than not defined as Post Traumatic Stress Disorder (PTSD) (Foa & Rothbaum, 1998; Markesteyn, 1992).

Gender strongly informs the type of trauma men and women are most likely to experience; women are most frequently survivors of sexual assault and rape, whilst men are more often exposed to physical attacks and serious accidents (Gavranidou & Rosner, 2003; Violence and Injury Surveillance Consortium, 2000; Yehuda, 2004). In addition, traumatic experiences are not evenly distributed across society and the chance of experiencing a particular type of trauma is the result of a complex intersection of contextual and personal factors, which will

also inform the impact such an event has on a survivor. Worldwide, women are generally poorer, less educated and enjoy less access to supportive resources, including time, money and knowledge (Smith, 2003). Not only do these factors render women more vulnerable to rape, but the impact of this highly pathogenic crime on a poorly resourced woman is likely to be exacerbated by these contextual factors.

1.2 Aims of the study

The aforementioned body of research on the pathogenic impact of rape has been dominated by research conducted in ‘developed’ countries, particularly the United States of America (USA). In many of these studies there is an implicit assumption of a ‘normal context’ in which people are not living in contexts of ongoing violence, and have access to systems and institutions for protection against violation of human rights. Rape is understood to be an event which disrupts the normalcy of that context. Due to a colonial heritage and a history of apartheid, for the majority of the South African population, daily lived experience does not match this ‘normal US context’. Artz and Kunasaki (2003) argue that on the basis of available statistics and the living conditions in which the majority of women find themselves, rape in South Africa is similar to rape during armed conflict. This ‘abnormal context’ contains multiple possibilities for ongoing traumatisation on a number of levels, including economic, physical and psychological. In South Africa, next to children, black women are most vulnerable to the impact of these multiple sites of oppression and trauma and are also the victims of the majority of rapes reported in this country.

Using the international research findings as a point of departure, this research sought to investigate whether female survivors of rape, living in a setting palpably different to those within which the majority of research has thus far been conducted, present with similar symptoms of trauma post-rape. The hypothesis was that whilst some of these symptoms may be present in this group of survivors, the diagnostic frames offered by research conducted in ‘developed’ countries will be limited in representing the complexity of the lived experiences of a group of rape survivors in a context of ongoing and multiple levels of trauma.

1.3 Study design

This study sought to describe the psychological impact of rape on a group of women living in a low socio-economic, urban context, and to consider whether the context within which the rape occurred might in any way lead to a different pattern of outcomes or trajectories for

survivors. To this end, the research site was the Thuthuzela Care Centre (TCC) in Cape Town, which provides forensic and clinical services, and counselling for survivors of rape. It is located within the G.F. Jooste Hospital, a public hospital, which services the areas of Langa, Khayelitsha, Manenberg, Gugulethu, Mitchells Plain and Strandfontein. These areas were previously designated for African and coloured³ residents only, and they remain areas with poor service delivery, high levels of unemployment, poverty and crime. Sixty four adult, female survivors presenting with a complaint of rape within the last 72 hours at the TCC, agreed to take part in this quantitative longitudinal study on the impact of rape. Participants were interviewed at 1, 4, 12 and 24 weeks post-rape. The quantitative questionnaires assessed pre-assault, assault and post-assault variables and included a psychiatric assessment instrument.

1.4 Locating the study epistemologically

This study is located within a feminist framework. In its broadest sense, feminism recognizes that, because of gender, women are exploited and oppressed. It seeks to elucidate the experience of women from this point of view, with the aim of, at the very least, challenging the status quo and at best changing the status quo (Oakley, 1998). However, since the rise of the feminist movement in the USA, the meaning of feminism has developed and diversified. This was informed by a recognition that the initial definitions of feminism assumed a commonality shared by women universally, and as such failed to consider how oppression on the basis of gender interfaces with oppression on the basis of race and class, which fundamentally alters the daily lived experiences of women (Collins, 1990). The growing recognition of multiple and intersecting sites of oppression, including, but not limited to, religion, age, sexual orientation, able-bodiedness and ethnicity, has continued to inform feminist understandings of women's experiences of oppression as complex and multi-layered.

The question of the applicability of American and/or what has been termed Western feminism, including black feminist thought, in an African context, has been vigorously debated (see for example Agenda, 2001). In South Africa, due to both a colonial and apartheid history, women's voices were powerfully divided by race and class in such a way that the credibility of the idea of feminism itself was challenged as being Western, white and

³The following terms will be used consistently throughout the dissertation: black – which refers to the general disadvantaged majority in South Africa; African – referring specifically to black Africans; white, coloured and Indian. Although all such racially constructed terms are offensive and are recognised and rejected as such by the researcher, it is nevertheless necessary to use these terms as they reflect the past and continue to reflect the reality of class and resource divisions created by apartheid.

middle-class. Furthermore, the legacy left by apartheid has created particularly complex and fraught racial identities, which are inextricably linked with class. In comparison to the rest of the world, the divide between rich and poor in post-apartheid South Africa is extreme and falls almost exclusively along racial lines (Smith, 2003). These divides are permeated across the board by a strongly patriarchal culture (Vetten, 2004), arguably reflected not only in the very high rape statistics referred to at the start of this chapter, but also in the high prevalence of other forms of gender based violence (Boonzaier & de la Rey, 2003, 2004) and child sexual abuse (Richter, Dawes, & Higson-Smith, 2004). The difficulty, perhaps impossibility, of developing a unified understanding of feminism in South Africa notwithstanding, what does seem crucial for any South African feminism is the recognition of the centrality of race in informing women's lived experiences and how that is inextricably linked with gender and class, in a way which constructs and delineates lived experience (de la Rey, 1997).

The history of feminist thought has deeply influenced and informed research on women, not only in terms of turning the focus of research to 'women's issues', but also in terms of the methods used to gather data and the understanding and analysis of such data. In seeking to give voice to women's previously silenced experiences, early feminist research sought to listen to, record and understand women's stories, and actively resisted any categorisation, counting or collection of facts and figures from these stories. The latter was seen to be part of 'malestream' knowledge which at best was seen to fragment and dislocate women's experiences, and at worst simply erased them (Maynard & Purvis, 1994). Thus positivist, quantitative research methods were initially rejected as masculinist and Eurocentric and qualitative methodology, in particular face-to-face interviews, came to be seen as most suitable for more fully representing women's lived experiences (Collins, 1990).

With the recognition that other forms and sites of oppression (in particular race and class) informed and interacted with gender oppression, questions were raised about *which* women's experiences were being explored through face-to-face interviews and *who* was conducting the interviews. In addition, feminist researchers were divided about whether being oppressed automatically gives rise to a politicised and critical awareness of one's positioning and whether such an awareness is possible for those who have not been oppressed in a similar way (Collins, 1990; Kelly, Burton, & Regan, 1994). Thus, whilst a key feminist principle of research is that it should be grounded in women's experiences, there has been a growing recognition that recording women's stories does not necessarily provide an authentic truth,

but rather a partial truth, which is co-constructed through the interview process and which is interpreted by the researcher, whose feminist perceptions may not coincide with the interviewee's understanding of her life experience (Maynard & Purvis, 1994). The emergence of deconstructionism has further complicated the debate, since it suggests the possibility of multiple identities which are not static, but shift in relation to the contexts within which we interact.

Oakley (1998) suggests that the split created between quantitative/masculinist and qualitative/feminist research methods is in itself gendered and does not serve the emancipatory goals of feminist research. Pointing to a number of limitations of qualitative research methods Oakley (1998) argues that the

...supposed differences between qualitative and quantitative ways of knowing are not a matter of a hard-and-fast distinction, but of a continuum, with points on it where one would find it difficult to say which method was in the ascendant (p. 715).

Oakley (1998) is not, however, advocating multi-method triangulation in order to check the 'truth' of one set of findings against another. As Maynard and Purvis (1994) point out, employing multiple methods does not mean increased validity, nor does such an approach provide a "single unitary picture of the 'truth'" (p.4). Rather, there is a recognition that quantitative research methods have contributed and can continue to contribute to our understanding of 'women's issues' and statistics have been instrumental in providing feminist social activists with the 'hard facts' with which to lobby for change (Oakley, 1998). The challenge is to ensure that the methodologies, quantitative or qualitative, are informed by and serve feminist research principles; a challenge which this dissertation has endeavoured to meet.

1.5 Structure of the dissertation

The dissertation begins with a consideration of the broader historical context which underpins the study of psychological trauma; Chapter 2 describes this broader context with a focus on the complex and disputed nature of that history, a history which has in turn informed the ways in which rape trauma has come to be conceptualised and researched. It is thus hoped that this chapter contextualises the way in which the impact of rape trauma is understood, whilst highlighting the strengths and limitations of the conceptual underpinnings of such research.

Chapter 3 seeks to provide a sufficiently inclusive review of the substantial body of literature now published on the impact of rape on mental health. As such it reviews literature relating to the psychiatric and psychological impact of rape, as well as the pre-assault, assault and post-assault variables which might affect recovery. In addition, the chapter considers longitudinal studies on the impact of rape, the development of ecological and multi-factorial models, the role of socio-cultural identity in informing responses post-rape and South African research in the field. The centrality of PTSD in relation to this study of the psychological impact of rape is evidenced throughout this review chapter and the subsequent chapter provides a critical evaluation of the diagnosis. Thus Chapter 4 reflects on the key debates surrounding the diagnostic category of PTSD – the objections raised in relation to the Diagnostic and Statistical Manual (DSM) III nosology itself, and then five key debates relating to whether PTSD is a legitimate diagnostic category, followed by a consideration of the changes made to the PTSD diagnostic category across the DSM editions in light of these critiques. The chapter ends with the proposal of a middle road in relation to the veracity and utility of the diagnostic category of PTSD, particularly in relation to rape trauma.

Chapter 5 outlines the research aims of this study and the research design developed to address these aims, followed by a description of the instruments selected for data collection, the subsequent administration of the study and the procedure employed for data capture and analysis. The chapter concludes with a consideration of the ethical issues relevant to a study of survivors of rape and the ways in which these issues were addressed in this study.

Chapters 6 to 9 present the findings of this study. Chapter 6 provides descriptive data relating to the demographic profile of the survivors enrolled into the study and is followed by a description pertaining to the particulars of the incidences of rape as reported by the survivors. Chapter 7 offers a detailed account of the psychological impact of rape across time as reported by the women who participated in this research. The chapter concludes by arguing that the diagnostic category of Acute Stress Disorder (ASD) as assessed at the Week 1 interview and a diagnosis of PTSD as elicited via the Posttraumatic Stress Diagnostic Scale (PDS) offer the most efficient way of quantitatively evaluating the psychiatric sequelae of rape. Using this as a starting point, Chapter 8 presents the analyses conducted to investigate which, if any, variables measured at the Week 1, 4, 12 and 24 interviews predicted a vulnerability to developing PTSD at those time frames. Chapter 9 seeks to develop a longitudinal perspective both in relation to the variables found to be significant in relation to

predicting PTSD symptomatology and in describing the trajectory of PTSD itself across the six months post-rape.

The final chapter of the dissertation, Chapter 10, provides a summary of the key findings of this study, which is followed by a discussion of the implications of these findings in relation to this study's initial research questions, theory, research, and practical applications. This is followed by a consideration of the limitations of the study and final concluding comments.

1.6 Chapter summary

This chapter began with a brief account of the high prevalence of rape in South Africa and the observation that, whilst there is a substantial body of research on the psychological impact of that trauma dominated by studies conducted in the USA, there is a dearth of research on the psychological impact of rape in the South African context. It was suggested that given the particularities of the South African context it would be important to investigate whether the psychological impact of rape trauma in a group of women living in a setting palpably different to those within which the majority of research has thus far been conducted, present with similar symptoms of trauma as those reported in the international literature. In light of the aims of this research, the design of this current study was then briefly outlined and was followed by a discussion which sought to locate this study within a broader epistemological framework informed by feminist research principles. Finally the structure of the dissertation was described.

Chapter 2

The history of the study of psychological trauma and rape trauma

2.1 Introduction

This chapter will trace the development of the study of psychological trauma. The study of the psychological impact of rape makes a relatively late appearance in this history, although there are moments along the way in which sexual violence against women became the focus of attention. Nonetheless, this history has informed the way in which rape trauma has come to be understood and as such provides a way of contextualising research into the impact of rape trauma and of understanding both the strengths and limitations of the conceptual underpinnings of such research.

The chapter begins with a consideration of whether the study of the psychological impact of trauma is the culmination of a progressive development towards a unified body of knowledge about psychological trauma or a socio-political construct emerging out of a specific place and time. This is followed by a discussion on the development of two explanatory models developed to elucidate the aetiology of psychological trauma: the physiological model and the psychological model. Thereafter four key moments in the development of the conceptualisation of psychological trauma are examined: World War I and World War II, the Vietnam War and the feminist movement of the 1970s. The chapter concludes with summation of the central debates which have emerged out of this history with particular reference to the impact of rape on mental health.

2.2 Psychological trauma: Discovery of a lineage or socio-political construct?

This section provides an account of the debate relating to the question of whether the shift in the 19th century with regards to the definition of trauma was part of a progressive development towards a unified body of knowledge about psychological trauma, which culminated in the second half of the 20th century in the diagnostic category of PTSD, or whether there are significant differences over the history of time in defining what constitutes psychological pain, and how the expression of such pain is understood and responded to.

The etymology of the word trauma highlights the way in which the meaning of trauma changed substantially over time:

Oxford English Dictionary:

Etymology: < late Latin *traumatic-us*, < Greek *τραυματικός* of or pertaining to a wound or wounds, < *τραῦμα*, -ματ-wound.

Trauma

1. *Pathol.* A wound, or external bodily injury in general; also the condition caused by this; traumatism.

a. *Psychoanal.* and *Psychiatry.* A psychic injury, esp. one caused by emotional shock the memory of which is repressed and remains unhealed; an internal injury, esp. to the brain, which may result in a behavioural disorder of organic origin. Also, the state or condition so caused.

Traumatic

1. Of, pertaining to, or caused by a wound, abrasion, or external injury, as **traumatic erysipelas**, **traumatic insanity**, **traumatic idiocy**; †formerly, used for the cure of wounds, vulnerary, as a **traumatic balsam**, **traumatic herb**.

2. *Psychoanal.* and *Psychiatry.* Of, pertaining to, or caused by a psychic wound or emotional shock, esp. leading to or causing behavioural disturbance.

1656 (implied in traumatic), physical wound - T. Blount *Glossographia*, *Traumatick*, belonging to wounds or to the cure of wounds, vulnerary.

1684 tr. S. Blankaart *Physical Dict.* 284 *Trauma*,. ...a Wound from an external Cause.

1889 (sense of psychic wound, unpleasant experience which causes abnormal stress is implied in psychological text): T. Savill tr. Charcot *Clin. Lect. Dis. Nerv. Syst.* III. 388 The existence of traumatic psychosis [*psychose traumatique*] adds still more to the gravity of the prognosis.

1894 W. James in *Psychol. Rev.* I. 199 Certain reminiscences of the shock fall into the subliminal consciousness, where they can only be discovered in 'hypnoid' states. If left there, they act as permanent 'psychic traumata', thorns in the spirit, so to speak.

1909 A. A. Brill tr. S. Freud *Sel. Papers on Hysteria* i. It is quite evident that in 'traumatic' hysteria it is the accident which evokes the syndrome.

Thus it was only in the late 19th century that the definition was extended to refer to psychological pain and suffering. Broadly speaking this shift is linked to a series of investigations in the late 18th century and early 19th century which sought to uncover the source of physical symptoms not readily explained with reference to physical injury. Whether this shift was the culmination of a lineage that runs from the past to the present or the result of - to borrow a phrase from Allan Young (1995) - the invention of traumatic memory, the developments which led to that shift and the subsequent key moments in the history of the study of psychological trauma are generally agreed upon, though different theorists foreground different aspects of that history.

Few authors have explored the representation of psychological trauma from the earliest written texts through to the 19th century (Ben-Ezra, 2011; Birmes, et al., 2010; Birmes, Hatton, Brunet, & Schmitt, 2003; Daly, 1983). In their review of ancient texts dating back to antiquity, Birmes et al. (2010; 2003) note that until the 18th century references to psychological trauma were restricted to anecdotal accounts in philosophical or literary works. Drawing on these sources, which date back to as early as the third millennium BC and which refer in the main to contexts of war, the authors suggest that the descriptions speak to the current day symptoms associated with both ASD and PTSD in the Diagnostic and Statistical Manual (DSM). In relation to ASD they point to descriptions of feelings of terror and panic, and physical symptoms of anxiety and dissociation during the traumatic event. In relation to PTSD they refer to accounts relating to distressing intrusive memories, reliving of the trauma and nightmares as evidence of symptoms which fit the DSM criterion B for PTSD, symptoms of general malaise and withdrawal which match criterion C, and references to sleep disturbances and irritability as highly evocative of criterion D symptoms. They also note references to dissociative symptoms which they argue are akin to features of what has been termed complex PTSD, as well as symptoms which today would be considered indicative of Conversion Disorders and Somatoform Disorders.

Similarly Ben-Ezra (2011) argues that written texts starting in antiquity, through ancient Greece and Rome, the Dark Ages, Medieval Ages and the European renaissance up until the 16th century, provide evidence of a universal range of reactions to traumatic events which have not changed substantially over the centuries. Drawing on historical, mythical and medical manuscripts, the majority of which refer to contexts of war, Ben-Ezra argues that most of the trauma-related narratives speak primarily to sleep disturbances and concomitant nightmares and a restless agitation, which he suggests are symptoms strongly associated with the diagnostic category of PTSD. Ben-Ezra also notes a range of expression of symptoms which would commonly be associated with grief.

With reference to rape, over four thousand years ago the Code of Hammurabi provided penalties for the rape of virgins, daughters and wives as violation of men's property and historical texts provide evidence of the existence of sexual violence against women throughout the world through the ages (Bevacqua, 2000). The references are, however, usually focused on the details of the assault itself with little commentary on, or observation of the victim's reactions. Ben Ezra (2011) cites the story of Caenis in Ovid's *Metamorphoses*, as being one of the earliest written descriptions of the victim's reaction to being raped. Caenis

is raped by Neptune who then grants her a wish. Caenis chooses to become a man so that she may never be ravished again and she is duly transformed into Caeneus.

The only other specific account of the impact of rape is again from Ben-Ezra (2011). He refers to a narrative poem written by Shakespeare in 1594, titled *The Rape of Lucrece*, which draws on a story related in both Ovid's *Fasti* and Livy's *History of Rome*. Ben-Ezra (2011) argues that Lucrece's lament following the rape offers a detailed portrayal of "rape syndrome" (p. 235). He argues that her lament evidences that Lucrece suffers from guilt, self-blame, uncontrollable crying, recurrent thoughts and flashbacks of the rape, depression, fantasies of revenge, attacks of rage, and sleep disturbances like nightmares and insomnia. Lucrece calls on her husband and father to avenge her rape and after identifying her rapist Lucrece takes her own life.

The assertion that there is an essentially timeless and universal pattern of response to trauma, which underpins our modern day understanding of psychological trauma, effectively exemplified in the diagnostic category of PTSD, has generated a great deal of debate. Thus van der Kolk, Wessely and van der Hart (1996) have asserted that "people have always known that exposure to overwhelming terror can lead to troubling memories, arousal and avoidance" (p. 47) and that "the introduction of the PTSD diagnosis has opened the door to the scientific investigation of human suffering" (p. 5). Young (1996b), however, argues that prior to the shift in the 19th century, human suffering was understood and viewed primarily through philosophical and theological frameworks and that modern day medicalised understandings of trauma are based upon a fundamentally different premise. Furthermore, he argues that the premise itself emerged out of the "invention or discovery of traumatic memory" (Young, 1996b, p. 246) in the 19th century, facilitated through two particular routes of inquiry, which then intersect with each other at various points in history. The one route is through the investigation of psychogenic amnesia and the clinical studies of Charcot, Janet and Freud, and the other through research on traumatic memory rooted in anatomy and physiology emerging out of the work of Crile, Cannon and Pavlov. For Young (1995), PTSD is not the logical end point of these two intersecting trajectories, but rather a contemporary, culture-bound syndrome emerging out of specific socio-political imperatives, which have selectively drawn on the history of the study of psychological trauma in order to suggest such a lineage.

Leys (2000), like Young, contests a linear reading of the history of the study of trauma, but offers a different perspective, arguing that “from the moment of its invention in the late 19th century the concept of trauma has been fundamentally unstable” (p. 298). She suggests that since the late 19th century theorists and practitioners have been caught between two contradictory and irreconcilable understandings of the impact of trauma; the mimetic - which defines the impact of trauma as a dissociation from the self, shattering the victim’s cognitive abilities, preventing the experience from becoming part of ordinary memory and leaving the victim unable to consciously recall the traumatic event but destined to repeat it - versus anti-mimetic – where trauma is defined purely as an assault from without upon a passive and fully constituted subject.

With reference to gender based violence, Herman’s (1992b) ground-breaking text *Trauma and Recovery: From Domestic Violence to Political Terror*, does not specifically address the issue of a timeless and universal response to trauma, but takes as her starting point the late 19th century and, as the title of the book suggests, posits that “our contemporary understanding of psychological trauma is built upon a synthesis of... separate lines of investigation” (p. 9). Like Young, Herman recognises the importance of socio-political context with regard to the study of psychological trauma, but offers a different reading of its influence. Herman suggests that the study of psychological trauma has waxed and waned in response to particular forms of trauma as they emerged into public consciousness and that each type of trauma is brought into the public arena by an emerging socio-political movement which challenges the status quo. For Herman (1992b):

...the systematic study of psychological trauma therefore depends on the support of a political movement. Indeed, whether such study can be pursued or discussed in public is itself a political question. The study of war trauma becomes legitimate only in a context that challenges the sacrifice of young men in war. The study of trauma in sexual and domestic life becomes legitimate only in a context that challenges the subordination of women and children. Advances in the field can only occur when they are supported by a political movement powerful enough to legitimate an alliance between investigators and patients and to counteract the ordinary process of silencing and denial. In the absence of strong political movements for human rights, the active process of bearing witness inevitably gives way to the active process of forgetting. Repression, dissociation, and denial are phenomena of social as well as individual consciousness. (p.9).

Bearing these divergent views in mind, the next section traces the development of the two particular routes of enquiry which developed over time in relation to the aetiology of the psychological impact of trauma.

2.3 The aetiology of the psychological impact of trauma: Physiological or psychological?

It is generally accepted that the modern understanding of trauma began with the work of John Erichsen, a British surgeon, who assessed and diagnosed survivors of railway accidents. He observed a number of survivors of train accidents who had suffered minor physical injuries, but presented with marked psychological distress lasting for some time after the event (Young, 1995). His treatise on 'railway spine' proposed that the vigorous jolts and shakes experienced by the survivor during the accident had caused damage to the nervous system at a sub-microscopic level, resulting in psychological symptoms (Young, 2000). He noted that although these symptoms were similar to those of the hysteric, they were not comparable because of the organic aetiology of railway spine (van der Kolk, Weisaeth, et al., 1996). Similarly Oppenheim, a German neurologist, argued that the traumatic syndrome constituted a distinct disease entity in which undetectable organic damage to the brain resulted in what he termed 'traumatic neurosis' (Leys, 2000).

Herbert Page, a fellow of the Royal College of Surgeons and consulting physician for the London and Western Railway Company, challenged the assertion that the symptoms were caused by organic damage. Page argued instead that the cause of 'railroad spine' was psychological in origin, caused by extreme fright, which was understood as being equivalent to the impact of a physical assault (van der Kolk, Weisaeth, et al., 1996), a proposition which arguably then allows for a clear link to be drawn between survivors of 'railroad spine' and hysterics. In addition, Page argued that since the amendment in 1846 to the Campbell Act, which extended the provision of compensation to victims of railway accidents, the likelihood of both conscious fraud and unconscious desire for compensation needed to be seriously considered when evaluating the symptoms of victims of railway accidents (Young, 1996b).

Thus, at the inception of the concept of psychological trauma two key areas of debate emerged, which have remained pertinent to the present day. Firstly the question of the aetiology of post traumatic psychological symptoms: that is whether they are organic or psychological in nature. This primary debate profoundly informs the second debate, which concerns the way in which the presentation of post traumatic symptoms is understood. If the aetiology of post traumatic symptomatology is taken to be organic then the veracity of the

symptoms are not themselves under scrutiny and intervention and recovery will focus primarily on rebuilding strength, whilst questions relating to what factors may contribute to vulnerability and resilience in the face of a traumatic event may be explored without bringing the character of the victim into question. If, however, the aetiology of post traumatic symptomatology is taken to be psychological then the veracity of the survivor's experience of distress may be called into question, with particular reference to possible motives for, at best, exaggerating distress or, at worst, faking the symptoms, and the culpability of the survivor for experiencing a degree of distress not evidenced amongst all survivors of a similar trauma, which may then lead to a focus on the character of the survivor him- or herself.

Arguably these challenges are nowhere more evident than in the area of gender based violence, particularly with regards to adult survivors of childhood sexual abuse and adult rape survivors. In light of this it is perhaps not surprising that more recent searches for organic markers of psychological trauma, particularly in relation to the diagnostic category of PTSD, have been supported, and at times driven, by human rights activists, including feminists working in the area of gender based violence (van der Kolk, McFarlane, & Weisaeth, 1996; Yuan, Koss, & Stone, 2006). This is a paradoxical state of affairs since it also often human rights activists, and feminist researchers who challenge and critique the medicalisation and pathologising of women's responses to gender based violence (Gavey & Schmidt, 2011; Summerfield, 2004) - a tension I shall return to later in this chapter.

Returning then to the history of the study of psychological trauma, the deliberation on the aetiology of post traumatic symptoms first evident in the study of railway spine in the second half of the 1800s, set the course for the development of the two subsequent dominant trajectories in the study of psychological trauma. One path focused on the physiology of shock and was developed through the work of Crile, Cannon and Pavlov; the other route, informed by growing interest in the workings of memory, more obviously developed the psychological meaning of the term trauma, through the work of Charcot, Janet, Prince, Breuer and Freud.

2.3.1 Psychological impact of trauma: Physiological route

Young's (1995, 1996b, 2000) comprehensive accounts of the history of the study of psychological trauma refer to the work of Herbert Spencer and, by association the work of Charles Darwin, as laying the ground work for what followed in the development of the

physiological line of enquiry. Young argues that the development of this line of enquiry can be traced through the work of Erichsen and Page and onto the animal experiments conducted by two American physiologists George W. Crile (1864 -1943) and Walter B. Cannon (1871-1941) and their Russian counterpart, Ivan Pavlov (1849 - 1936), which sought to explore the evolution of what he terms the “somatised traumatic memory” (Young, 1995, p. 21).

The American surgeon-physiologist George W. Crile argued that fear is the result of a phylogenetically transmitted memory of pain, which he considered to be essential to the survival of an organism (Young, 1996b). Cannon further developed this theory by suggesting that fear and anger are mobilized within the organism when the environment presents it with threatening challenges in order to precipitate a flight or fight response. Intense fear is, therefore, not necessarily pathological, as suggested by Erichsen and Page, but may be a transient state of adaptive arousal. However, drawing on his experiments on decorticated cats, which left them in a state of unabated excessive activation of the sympathetic adrenal system, leading to a progressive lowering of blood pressure to the point that the heart stopped beating, Cannon suggested a similar mechanism operated in cases of Voodoo death and in the cases of World War 1 soldiers who fell into shock and then died following minor injury (Young, 1995). In cases of intermittent exposure to traumatic shock, Cannon and Crile proposed a cumulative process of destabilization – which they termed summation – the effect of which is ultimately the same as cases of sustained fright (Young, 1996b).

Pavlov’s work suggested an alternative understanding of the effects of intermittent exposure to trauma (Young, 1996b). In Pavlov’s classic conditioning experiment an animal is repeatedly exposed to an electric shock, which produces pain and physiological arousal. In time the physiological reaction comes to be paired with stimuli in the environment that co-occur with the trauma but which are incidental to it, and which Pavlovians noted leads to either the development of phobias in an attempt to avoid noxious stimuli, or a state of learned helplessness (Wolpe, 1990).

This physiologically based understanding of trauma has strongly influenced the study of trauma within the arena of gender based violence. Lenore Walker’s (1984) seminal text: *The Battered Woman Syndrome*, drew directly from the concept of learned helplessness to support and explicate key aspects of the eponymously named Walker Cycle Theory of Violence. In particular, Walker draws on Seligman’s observation that learned helplessness is akin to human depression and goes on to argue that battered women respond to repeated and

uncontrollable abuse just as animals respond to repeated and non-contingent electrical shocks, with learned helplessness and depression. Citing laboratory trials with both animals and humans, Walker (1984) argues that in both depressed humans and helpless animals there are “signs of emotional upset with illness, phobias, sleep disturbances, and other such symptoms similar to those described as part of the battered woman syndrome.” (p. 86-87).

In relation to sexual violence the physiologically based understanding of trauma has been used in several ways. With regard to rape related PTSD - which has come to dominate the description of rape related trauma – the early and subsequent studies on the physiology of terror offer a way of understanding the symptoms of both avoidance and hyperarousal, contained within Cluster C and D of the diagnosis respectively. In addition, Mood Disorders, particularly depression, can be understood as linked to the avoidance and withdrawal precipitated by the exposure to an overwhelming and uncontrollable trauma, and anxiety-related disorders, such as phobias, to the terror evoked by places, objects or people in some way associated with the rape.

Finally, Young (1996b) notes that, there has been what he terms a “*neo-Pavlovian*” (p.257) development. This hypothesis, based within the physiology of shock postulates that victims of traumatic memory seek out circumstances that replicate the original traumatic event because re-exposure would facilitate the release of endorphins originally released in the fight flight response evoked in the original traumatic event. According to this theory, over time survivors of trauma become addicted to the endorphins and to the memories or experiences which release these endorphins. Without the release of endorphins survivors may begin to experience symptoms of opiate withdrawal which prompts a search for re-exposure to situations which trigger the traumatic memory. This development provides one hypothesis for what many trauma theorists have come to recognise as the phenomenon of seeking out some form of re-enactment or repetition of the traumatic event. Alternative hypotheses to explain the phenomenon of the re-enactment or repetition of trauma more specifically, and post-trauma symptoms more generally, are located within the other dominant trajectory in the study of psychological trauma, which was referred to at the start of this section. This trajectory was more obviously informed by psychological rather physiological theory. The next section offers a consideration of this trajectory.

2.3.2 Psychological impact of trauma: Psychological route

Young (2000), argues that the study of the impact of trauma from a psychological perspective has its roots in philosophical works which reflect on the relationship between memory and a sense of self. Citing the works of St Augustine in the 4th century, John Lock in the 17th century and David Hume in the 18th century, Young traces a progressive development of theory which posits that it is by recalling and reflecting on our past memories – episodic memories - that we develop a sense of continuity of the self through time, which in essence confirms our existence.

Taking these philosophical writings as his starting point, in the late 19th century the psychologist, Théodule Ribot, argued that it is through a constant process of laying down new memories as old ones fade that we develop a self which we can narrate, and that the “self-narrated self” (p.29) is a universal phenomenon (Young, 1995). In this scheme, the equilibrium of the self relies on maintaining a balance between hypermnesia – remembering too much - and amnesia – remembering too little. In relation to understanding the impact of trauma from a psychological perspective, Ribot’s work on memory intersects with the study of somnambulism and hypnosis, which dates back to the 1700s. This work provided the prototype for the pathogenic secret – a memory that is hidden from the self. The person may sense that the memory exists within them, but is unable to retrieve it or may not remember that she or he has forgotten it. The memory may be accessed through an altered state (such as hypnosis) or through someone else, usually a therapist (Young, 1995). Informed by these theories, the study of hysteria in the late 19th century suggested a direct link between traumatic experiences and the workings of memory.

2.3.2.1 Charcot

It is generally accepted that Jean-Martin Charcot, the French neurologist and director of the Salpêtrière asylum in the late 19th century, proposed the earliest psychological account of the impact of trauma through his interest in the taxonomy of hysteria (Herman, 1992b). Charcot noted that the symptoms of hysteria resembled those resulting from neurological damage, such as motor paralyses, sensory losses, convulsions and amnesias (Herman, 1992b), which were also seen in sufferers of railway spine and whom Charcot suggested were in fact suffering from hysteria. Like Page, he understood the cause of such symptoms to be extreme fright, however, having demonstrated that these symptoms could be artificially induced and relieved through the use of hypnosis, Charcot went a step further and proposed that

traumatically induced “choc nerveux” (van der Kolk, Weisaeth, et al., 1996, p. 49) could put patients into a mental state similar to that induced by hypnosis, what might be described today as a dissociative state. Thus as a result of a traumatic event a set of ideas might settle in the survivor’s mind which are at best only vaguely apprehended by the survivor, but which result in a range of symptoms seen amongst hysterics.

Although Charcot’s main interest was in describing rather than explaining the mechanism by which the symptoms of hysteria emerge, his observation of a connection between symptoms in the present and a past traumatic event suggested that the unbearable nature of trauma impacts on the way in which memories of that event are laid down (van der Kolk & van der Hart, 1995). Furthermore, by equating the impact of trauma with a hypnotic state Charcot flagged that just as someone under hypnosis is highly suggestible and therefore likely to imitate or repeat what they are told to do or say, trauma may render a survivor vulnerable to “hystero-traumatic autosuggestion” (van der Kolk, Weisaeth, et al., 1996, p. 50) resulting in a tendency to compulsively repeat aspects of the unintegrated and unassimilated traumatic memory (Leys, 2000).

The issue of heightened suggestibility would later prove to be a critical and divisive one in the history of the study of the psychological impact of trauma, but for a brief period of time in the late 19th century and early 20th century what was in the foreground was the search for a scientific understanding of hysteria. Herman (1992b) argues that this interest was born out of the struggle in France between the monarchy, supported by the Catholic church, and those supportive of a republican, secular form of government. Science pitted itself against religion and the study of hysteria became a symbolic representation of this struggle. Up to that point hysteria was understood from within a religious conceptual framework and was perceived to be a mysterious female condition, originating in the uterus, and associated with demonic possession states, witchcraft, exorcism and religious ecstasy (Herman, 1992b; Showalter, 1985). As Herman (1992b) observes: “The solution of the mystery of hysteria was intended to demonstrate the triumph of secular enlightenment over reactionary superstition” (p. 16). Herman observes that a by-product of this endeavour was that in this time “men of science listen[ed] to women with a devotion and a respect unparalleled before or since” (p. 11-12); in particular, Pierre Janet, Sigmund Freud, Josef Breuer, Morton Prince, William James, and Sándor Ferenczi. Taking Charcot’s careful observations of the hysterical young women institutionalised at the Salpêtrière asylum, and his (public) demonstration of the power of

hypnosis in both inducing and relieving the symptoms of these hysterics as their starting point, they sought to explicate the root causes of hysteria.

2.3.2.2 Janet

Through his work with hysterics, first at Le Havre and subsequently at Salpêtrière in Paris, Janet has been credited with offering the first systematic enquiry of the relationship between dissociation and psychological trauma (van der Kolk, van der Hart, & Marmar, 1996). In essence Janet argued that traumatic experiences evoke extreme emotional arousal which prevents the traumatic event from being encoded in ordinary narrative memory (Herman, 1992b; van der Kolk & van der Hart, 1995; Young, 1996a). Instead the traumatic event remains unassimilated and split off from ordinary consciousness and is stored in the form of somatosensory ideas (van der Kolk, 1996b). Reminders of the trauma may then come to act as triggers for the split off memories which intrude upon consciousness through physical sensations, visual images, obsessive ruminations or behavioural re-enactments (van der Kolk, van der Hart, et al., 1996). This in turn requires that more and more psychic energy be invested in attempting to block the intrusions into consciousness, further constricting the emotional life of the patient (van der Kolk & van der Hart, 1995).

Given this understanding of the psychological impact of trauma, Janet sought to facilitate recovery in his patients by addressing the disturbance in memory, though there is some debate as to whether Janet's approach to treatment relied primarily on recalling or excising the memory of the traumatic event. Herman (1992b) suggests that recovery from trauma is best understood as unfolding through a series of stages, and cites Janet's work with hysterics as providing the earliest model of the progressive stages of recovery post-trauma. Central to the model is the act of giving words to the traumatic event in order to allow for traumatised memory to become part of ordinary narrative memory. Similarly, van der Kolk (1996b) takes Janet's distinction between traumatic memory and ordinary, narrative memory as fundamental to the development of a theory of traumatic impact and its treatment, arguing that "the lack of integration of traumatic memory is...the pathogenic agent leading to the development of complex biobehavioral changes, of which PTSD is the clinical manifestation" (p. 286). For van der Kolk treatment also unfolds through a series of stages, and the integration of traumatic, essentially somatosensory memories, into autobiographical or narrative memory is seen as a critical part of that process (van der Kolk, McFarlane, & van der Hart, 1996).

Leys (2000) argues that by foregrounding Janet's observations on the role that the integration of traumatic memory into narrative memory plays in the treatment of hysterics, Herman and van der Kolk have failed to take into account evidence from Janet's case studies which suggest that cure might also be achieved not through the recovery of memory, but through the erasure of traumatic memories. Leys notes that Janet himself observed that helping patients to forget might be as valuable as helping patients to remember (Janet, 1894, cited in Leys, 2000). In addition, Leys argues that for Janet remembering did not require the recall of factually accurate memories, but rather the development of a narrative which facilitated self-understanding, regardless of the factual accuracy of the reconstituted memory. Indeed Leys (2000) questions the proposition that traumatic memories (particularly in the form of flashbacks and nightmares) are literal and veridical in nature, which by implication render such memories as "timeless historical truth undistorted or uncontaminated by subjective meaning, personal cognitive schemes, psychosocial factors, or unconscious symbolic elaboration" (p. 7). Leys is particularly critical of van der Kolk in this regard, and along with Young (2001) argues that van der Kolk's research tracking the neurobiology of traumatic memory is fraught with contradictory and inconclusive findings.

Leys (2000) argues that both Herman and van der Kolk disown the part of Janet's work which highlights the role of forgetting or reconstitution of memory (factually based or not) because of "an entrenched commitment to the redemptive authority of history...because truth telling has not merely a personal therapeutic but a public or collective value as well" (p.109). In fact, whilst van der Kolk's research does seek to establish physiological evidence to support key aspects of Janet's understanding of traumatic memories as fragmented sensory imprints, he does recognise that his findings are not conclusive (van der Kolk, 1996b). Furthermore van der Kolk (1996b) recognises that the very act of developing a communicable narrative of the trauma which seeks to incorporate these imprints will render them subject to "condensation, embellishment and contamination" (p. 296) and that "[l]ike all stories people construct, our autobiographies, contain elements of truth, of things we wish happened, but did not, and elements that are meant to please the audience. The stories that people tell about their traumas are as vulnerable to distortion as people's stories about anything else" (p. 296-297).

At the core of this debate lies the thorny issue of suggestibility referred to earlier in this section and, by extension, the question of whether the trauma survivor's narrative may be believed on its own merits without corroborating evidence outside of the narrative related by

the survivor. Leys is, arguably, correct in recognising that the act of remembering trauma and rendering traumatic memory into a communicable narrative has socio-political implications and thus any 'hard' scientific evidence, such as neurobiological evidence, which appears to confirm or disconfirm a theory of memory in relation to trauma has socio-political implications as well. This is precisely what Herman is pointing to in her account of how hysteria and hysterics came under the gaze of the medical profession in the late 19th century, and how this inadvertently drew attention to the psychological impact of trauma.

As in the present day, at the turn of the 19th century conceptual and theoretical orientations assumed in relation to understanding the psychological impact of trauma had profound implications for whether the narratives of trauma survivors were believed and how their resultant distress was clinically treated. As early as 1859 the French psychiatrist, Briquet, had noted a connection between symptoms of hysteria and childhood histories of trauma; 381 of the 501 hysterical patients he described evidenced a direct link between their illness and the early trauma (van der Kolk, Weisaeth, et al., 1996). Similarly, by the early 1900s Janet had provided case studies of 591 patients suffering from symptoms of hysteria, and reported traumatic origins of their psychopathology in 257 of those cases (van der Kolk, Weisaeth, et al., 1996). A number of Briquet's and Janet's cases included histories of childhood sexual abuse, but these do not appear to have been highlighted or given any special mention by either Briquet or Janet. These documented cases form part of a substantial body of evidence attesting to the reality of childhood sexual abuse and rape in the 19th century – anecdotal reports, court records, government reports, reports written by reformers as well as medical and forensic reports – counterbalanced by writings focused on providing evidence for disbelieving the claims of victims, which cited the suggestibility of children, the unstable and hysterical nature of women and the improbability of respectable men of the bourgeoisie committing such acts (Masson, 1985; Olafson, Corwin, & Summit, 1993).

What distinguished the work of Charcot, Briquet and, most notably, Janet from the broad body of work referred to above was the link drawn between traumatic experiences and subsequent psychological symptomatology. By the turn of the 19th century, Janet's theory of dissociation was widely accepted as correctly explicating the effect of trauma on the psyche. As such the veracity of the stories of trauma reported by the patients (diagnosed as suffering from hysteria) were not doubted and treatment focused on addressing the disturbance in memory, be it either through integration and synthesis of memory or through forgetting. The extent of Janet's influence is evident in the work of both William James, Harvard based

psychologist and philosopher, and his colleague Morton Prince, an American neurologist. Prince's pioneering study of multiple personality was based on his clinical work with a young woman he diagnosed as suffering from Hysteria, which he understood to be the result of a traumatic event which had shattered the patient's psyche into dissociated parts and which he sought to re-integrate into a single personality through hypnosis (Leys, 2000) .

2.3.2.3 Freud

Freud's early papers on hysteria openly acknowledge and build upon the work of both Charcot and Janet. In *Studies of Hysteria*, Freud and Breuer (1988) refer directly to Janet's explication of the connection between trauma and dissociation as the cornerstone for understanding the aetiology of hysteria. Referring to Breuer's famous (failed) treatment of Anna O, Freud concluded that: "hysterics suffer from reminiscences. Their symptoms are residues and mnemonic symbols of particular (traumatic) experiences." (Freud & Breuer, 1955, p. 4) However, it was with his paper titled *The Aetiology of Hysteria* (Freud, 1962) that Freud began to make his own contribution to this theoretical body of knowledge. With reference to the link between trauma and hysteria Freud differentiates between psychoneurosis, which may be traced back to traumatic experiences in early childhood, and neurosis which is produced by traumatic events experienced late in life, but which can mask earlier infantile trauma (Young, 1995). Freud goes on to suggest that in order to defend against the psychic conflict evoked by the traumatic experiences traumatic memories are repressed (actively buried or suppressed into the unconscious), suggestive of a vertical model of the mind - rather than a horizontal model in which traumatic memories are split off through dissociation (van der Kolk, van der Hart, et al., 1996). In relation to this thesis the most pertinent aspect of Freud's observations lie in his by now much quoted assertion that the traumatic childhood experiences which give rise to symptoms of hysteria are sexual in nature: "I therefore put forward the thesis that at the bottom of every case of hysteria there are one or more occurrences of premature sexual experience, occurrences which belong to the earliest years of childhood but which can be reproduced through the work of psycho-analysis in spite of the intervening decades" (Freud, 1962, p. 203)

In his case study of Dora (Ida Bauer), Freud's next publication following on from *The Aetiology of Hysteria*, Freud does not discount or disbelieve Dora's account of the convoluted and deceitful relationships which existed between her father and family friends Herr and Frau K (Freud, 1953). These included, at the very least, ongoing sexual harassment of Dora from

the age of 14 (and possibly rape of Dora) at the hands of Herr K (all of which was verified by Herr K and Dora's father during the course of Freud's treatment of Dora). However, Freud (1953) suggests that Dora's symptoms of hysteria are best understood as a result of early unconscious libidinal impulses and fantasies which create unmanageable psychic conflict for her in response to her father's extra marital affair with Frau K and Herr K's sexual advances (assaults) on Dora (Showalter, 1985). This signals the beginning of Freud's abandonment of the Seduction theory and his development of the Oedipus Complex (Masson, 1990).

The debate relating to the reasons for and degree of Freud's rejection of the Seduction hypothesis in favour of the Oedipus complex has been protracted and fierce (Borsch-Jacobsen & Brick, 1996; Esterson, 2002; Gleaves, 1999; Malcolm, 1984; Masson, 1985). In addition, the manner in which Freud elicited his patients' accounts of sexual experiences (abuse) in childhood – encouraging patients to give voice to any images which emerge, failing which a hand was placed on the forehead and if still no images emerged this was interpreted as resistance and the procedure repeated - have prompted scholars to question the reliability of the accounts themselves (Cioffi, 1998; Esterson, 2001). Arguably, Freud's recantation of the Seduction theory was, at least in part, fuelled by his own recognition of the problem of simulation or suggestibility inherent in his treatment of hysterics. Nonetheless, what remains salient in relation to the focus of this chapter is that for a brief period of time in the late 1890s Freud's interest in the aetiology of hysteria led him to consider the impact that sexual abuse in childhood and, to some degree, adolescence had on his adult patients. This interest fuelled his development of both a psychological theory to elucidate the mental health consequences of such abuse and a treatment approach.

Freud's Seduction theory was, however, never a simple causal theory of trauma (Leys, 2000). In his paper *The Aetiology of Hysteria* Freud (1962) noted:

But we must not fail to lay special emphasis on one conclusion to which analytic work along these chains of memory has unexpectedly led. We have learned that *no hysterical symptom can arise from a real experience alone, but that in every case the memory of earlier experiences awakened in association to it plays a part in causing the symptom.* (p. 197, emphasis in the original)

Thus, with reference to sexual experiences in childhood Freud notes in *The Aetiology of Hysteria* that it is only during puberty that the individual may, through a trigger event, recall the early sexual experience(s) and then develop symptoms of hysteria. Leys (2000) argues

that by proposing a period of delay between the experience and the development of symptoms signifying distress in response to the experience, Freud is suggesting that trauma results from the “dialectic between two events, neither of which was intrinsically traumatic, and a temporal delay or latency through which the past was available only by a deferred act of understanding and interpretation” (p. 20) and as a consequence traumatic memory itself is rendered “inherently unstable or mutable” (p.20).

It does appear that as Freud’s body of work progressed he became less interested in ‘real’ trauma than in what happened intra-psychically. Thus in relation to sexual abuse, the importance of the reality of such experiences was at the very least relegated to second place, in relation to phantasy life (van der Kolk & van der Hart, 1995). Masson (1985) takes this further by arguing that Freud’s observation that “up to the present we have not succeeded in pointing to any difference in the consequences [of seduction], whether fantasy or reality has had a greater share in these events of childhood” (Freud, 1916, in Masson, 1985, p. 133) essentially renders the experience and impact of trauma entirely independent of external reality, locating it solely within the individual’s psyche. A paper delivered in 1932 by Sándor Ferenczi, a close colleague of Freud, at the International Psycho-Analytic Congress in Wiesbaden, went against this prevailing theory by arguing that without recognition and weight being given to the reality of the sexual traumas experienced by patients there could be no cure (Ferenczi, 1949). He went on to suggest that childhood sexual abuse triggered a profound regression of the ego into a state in which there was no differentiation between self and other/ ego and object and that this coupled with the parents’ denial of the attack and its impact in childhood, precipitated the symptoms of hysteria in adult clients, which included a tendency to lie (Ferenczi, 1949). The double task of therapy was therefore to facilitate the abreaction or repetition of the trauma in order for the traumatic memory to become part of conscious memory and therefore interpretable and Ferenczi relied on hypnosis or suggestion to achieve this goal. Ferenczi, however, acknowledged that the problem with the use of hypnosis or suggestion lay in the possibility of simulation or confabulation. In addition, Ferenczi was met with an impasse – despite his use of hypnosis or suggestion his patients failed to remember the traumatic events in question, some of whom came to deny that such an event had ever taken place (Leys, 2000). Freud’s dismissal of the Seduction theory in favour of the Oedipus complex and with it a focus on phantasy life and the unconscious answers, to some degree, the problem of simulation or suggestibility in accounts of sexual abuse since it doesn’t seek to engage with external reality or to give weight to that reality.

Despite the focus on women and sexual abuse in the late 1800s and early 1900s the problem of simulation and/or suggestibility inherent in the use of hypnosis and/or suggestion ultimately added to the difficulties of bringing the reality of sexual violence into the public or medical arena. With reference to the study of trauma from a psychological perspective, Freud's treatment of Dora and with it his assertion of the primacy of phantasy life and the unconscious ushered in with it a century of psychotherapeutic theory and practice which paid little, if any, attention to the reality of women's lives, particularly experiences of sexual abuse and violence (Herman, 1992b; Masson, 1990). It was left to the emerging feminist movement of the time to assert the reality of oppression experienced by women in society, including the prevalence of sexual violence in the lives of both girls and women, and second wave feminism to highlight the psychological impact of such oppression (this is discussed in the latter part of this chapter). The extent of the divide at this point in history between the psychoanalytic tradition and the women's movement in relation to sexual violence is elegantly captured in a noteworthy detail - Anna O (Bertha Pappenheim) recovered several years after her unsuccessful treatment with Breuer and went on to become a leading feminist, social worker, intellectual, and organizer involved in, amongst other things, campaigning against the sexual abuse of women and children (Herman, 1992b; Showalter, 1985).

Ironically, in terms of the development of theory and practice in relation to 'real' trauma it was arguably World War 1 and then World War II and the Vietnam War, in which the reality of the traumatic event was not in question, but where the focus was on adult male experiences of trauma in a male dominated context, that would later allow for a link to be drawn to the reality of the impact and treatment of sexual violence in the lives of adult women. It was also through the focus on war trauma that the physiological and psychological routes of enquiry into the impact of trauma came to intersect more closely, highlighting past debates and introducing new ones.

By the early 1900s the divide between a psychologically informed understanding of the aetiology of hysteria arising out of a childhood experience of trauma (real or imagined) and hysteria as a solely neurological disease characterised by a propensity to mimesis and suggestibility was evident in the split amongst Charcot's protégés. Thus Freud and Janet continued to assert the link between the symptoms of hysteria and early trauma (phantasised or real respectively), whilst de la Tourette and Babinski rejected the traumatic origins of hysteria, proposing instead that hysteria results from a vulnerability to suggestion and a propensity towards suggestibility. Thus when Babinski took over the Salpêtrière in 1905 the

focus shifted from attending to traumatic memories to addressing suggestibility in the hysteric (van der Kolk, Weisaeth, et al., 1996). Both lines of enquiry to some degree informed understanding and treatment of war neuroses in both World War I and World War II.

2.4 World War I and World War II

Faced with evidence of traumatic neuroses amongst World War I war combatants, Freud initially understood these neuroses in terms of internal conflicts between divergent drives rooted in early childhood psychosexual development (Leys, 2000) and triggered by the ethical challenges and life-death reality of combat (Young, 1995). He was, however, unable to explain the phenomenon of repetition in the form of (traumatic) dreams within the framework of libidinal wish fulfilment. In light of this Freud, returning to Janet's proposition that overwhelming emotions are at the core of traumatic neuroses, suggested an economic model in which he theorised that trauma ruptures the stimulus barrier between the ego and the environment flooding the psyche with anxiety (Leys, 2000). The repetitive dreams (nightmares) are the psyche's attempt to revisit the trauma and this time master it thereby reducing anxiety (van der Kolk, Weisaeth, et al., 1996).

Ironically, Freud's economic model is reminiscent of the mechanism proposed by Crile and Cannon (discussed in *Section 2.3.1. Psychological impact of trauma: Physiological route*, of this chapter) in which overwhelming and unavoidable threatening challenges can precipitate a state of sustained fright, resulting in what Young has conceptualised as somatised traumatic memory (Young, 2001). The mechanism through which traumatic neuroses are understood to manifest in each of the theories are fundamentally different, but they do arguably share the view that the cure for traumatic neuroses lies in addressing traumatic memory. This stands in contrast to the model of hysteria proposed by de la Tourette and Babinski which proposes a characterological susceptibility to simulation triggered by exposure to stressful circumstances.

Through the course of both World Wars and in their immediate aftermath the theories developed to explain the phenomenon of war neuroses remained relatively incomplete and unsatisfactory (Shephard, 2001). It was Abram Kardiner, an American psychiatrist and psychoanalyst who had been analysed by Freud in Vienna, who set out to develop a coherent and comprehensive theory of war trauma (Herman, 1992b; Kardiner, 1941). Drawing on his experience of working at the Veteran's Bureau post World War I he initially sought to

develop a psychoanalytically informed theory of war trauma, but was unable to do so and abandoned the project, returning to it during the course of World War II. The etiological model developed by Kardiner can be seen to be an amalgamation of several divergent theoretical positions. Kardiner drew on the work of Ferenczi as well as Freud's economic model, whilst also incorporating Crile and Cannon's physiologically informed understanding of trauma. Thus he proposed that trauma breaches the psyche's protective field and in a phylogenetic reflex the organism seeks to escape from the flood of traumatic stimuli and to avoid pain and injury by registering the trauma bodily with a concomitant primordial regression of the psyche to the infant's earliest traumatic experience, that of birth and separation from the mother (Leys, 2000).

In his model Kardiner recognised the central role played by the external trauma itself and understood the ensuing neurosis as a new adaptation to a changed environment. He suggested that the way in which any individual responds is dependent on both individual psychological resources and relations to the primary group and asserted that wartime trauma and peacetime trauma evoked the same response (Young, 2000). The publication of Kardiner's *The Traumatic Neuroses of War* in 1941 has been lauded as a landmark in the study of the psychological impact of trauma. The text provided both an account of the aetiology of trauma and symptom checklist including extreme physiological arousal, an altered sense of oneself in the world, fixation on the trauma, chronic irritability, startle reactions, explosive aggressive reactions, a sense of futility, withdrawal and detachment (van der Kolk, Weisaeth, et al., 1996). The text was to become instrumental in the development of the diagnosis of PTSD in the 1980s.

In his work Kardiner recognised that the term hysteria was a pejorative one and he recognised the difficulty of differentiating between hysterical disorders, organic origins of symptoms and secondary gains of financial compensation. He also raised questions about whether the optimal treatment of patients presenting with dissociation and somatisation should favour recovery of the traumatic memory or, given the extremely disturbing nature of some of the traumatic events, to assist the patient in managing his dissociative symptoms rather than facilitate full recall of the memory (van der Kolk & McFarlane, 1996). In addition, Kardiner raised the question of whether abreaction cures through a release of affect alone or through the reintegration of memory through developing the patient's insight into the relations between the traumatic event and his defensive processes and the role of hypnosis or narcosynthesis in such a process (Leys, 2000). Kardiner's questions spoke to many of the

dilemmas faced by those treating combatants with war neuroses in both the First and Second World Wars. The range of treatments employed to treat war neuroses in both World War I and World War II reflect the incomplete and uncertain theories developed to explain traumatic neuroses and as such highlight the central debates underpinning much of the history of the study of the psychological impact of trauma.

During World War I war neuroses came to occupy an uncomfortable position between neurological disease on the one side and malingering on the other, with a diagnosis of hysteria tending towards the side of malingering. A hierarchy of war neuroses developed in which officers were more likely to be diagnosed with neurasthenia associated with prolonged exposure to intense physical and mental strain, akin to the physiological models of Crile and Cannon, and hysteria more frequently diagnosed amongst non-officers and associated with suggestibility and simulation, akin to Babinski's model attributed to a constitutionally weak character more prone to cowardice and/or malingering (Herman, 1992b; Showalter, 1985; Young, 1995). Kardiner's contributions between the World Wars, notwithstanding, these questions remained pertinent throughout World War II, reflected in the diverse range of approaches to treatment of war neuroses in both wars.

During World War I the divide between treatment approaches is often exemplified by the differences in approach between that of British psychiatrist, Lewis Yealland (author of *Hysterical Disorders of Warfare*, 1918) and a British physician and professor of neurophysiology, psychology and anthropology, W.H.R. Rivers (Herman, 1992b; Shephard, 2001; Showalter, 1985). Yealland favoured the treatment of the symptoms of hysteria through the use of what today would perhaps be described in cognitive behavioural terms as negative reinforcement and punishment, through the use of electric shocks, isolation etc. in order to extinguish the symptom(s) with little or no emphasis on the role of the traumatic memory as underpinning the symptoms themselves. In contrast Rivers, believing that the traumatic memory itself to be the source of the symptoms, sought to uncover the memory through what today might be termed the 'the talking cure'. Young (1995) argues that despite the differences in approach to treatment both Yealland and Rivers shared the belief that hysteria is best treated through counter-suggestion, coupled with massages, baths and physiotherapy.

By World War II there was an emphasis on treatment modalities, which facilitated a rapid recovery as close to the frontlines as possible in order to expedite the return of the soldier to his unit, (Shephard, 2001; van der Kolk, Weisaeth, et al., 1996). Thus there was a growing

emphasis on forward psychiatry (working close to the frontline), including rest, hot food, sedation, explanation, reassurance and encouragement, and an avoidance of any uncovering work (Leys, 2000). More severe cases were seen further from the frontlines. In relation to these more severe cases, in keeping with Kardiner's observations, military psychiatrists noted the somatosensory way in which traumatic memory appeared to be encoded and that recovery of the details of traumatic memory appeared to facilitate recovery (Leys, 2000). In an effort to accelerate memory retrieval a range of techniques were employed to allow for cathartic abreaction through the use of narcosynthesis and sodium pentothal, replacing hypnosis and ether used in World War I (Young, 2000). Kardiner (1941), and Grinker and Spiegel (1945) understood the mechanism by which abreaction cures war neuroses as lying in the conscious integration of traumatic memory, which therefore requires the participation of the patient in the treatment process (Herman, 1992b). British psychiatrist William Sargant, working in an emergency hospital in World War II, adopted a more Pavlovian approach which locates the traumatic reaction in the physiological realm with the release of emotion itself as critical, regardless of whether the patient recalls the traumatic memory or the historical truth of such memories (Leys, 2000). Assigning the cause of war neuroses to either physiological or psychological processes clearly influenced clinical treatment plans, but it also had implications for how sufferers of war neuroses were viewed and treated within the broader context.

Faced with the undeniable reality of the very stressful context within which war neuroses developed, the question of why some combatants developed various forms of war neuroses when others didn't, remained a vexing question. If the cause of war neuroses was understood to be physiological then combatants suffering from such neuroses were arguably entitled to the same rights and privileges afforded those suffering from physical wounds of war and/or disease, including honourable discharge in the case of those unable to recover, compensation, and ongoing financial, medical and other support post-war. The question of why some combatants developed war neuroses whilst others did not then becomes a superfluous one; the injury is simply the impact of a constellation of a number of external war related factors upon a particular individual. If, however, the cause is understood to be psychological then there is the possibility that there exists within the individual some inherent predisposition and/or peritraumatic (childhood) circumstances which render him unable to cope with the realities of war. Thus the resultant war neurosis emerges out of a constitutional weakness, rendering the soldier weak-willed and lacking in strength of character, and therefore not

entitled to any of the rights and privileges provided to those suffering from war-related injuries.

With reference to adult female survivors of rape and the issues and debates emerging out of the study of war neuroses in the World Wars, three points are particularly noteworthy. Firstly, even when the reality of traumatic events was not in question and those suffering the effects of such exposure are men, as in war, a morally informed hierarchy of trauma impact became apparent. Thus, in World War 1 the distinction between officers and non-officers was often congruent with traumatic neuroses attributed either to heroic and dedicated service or to temperamental or characterological weakness respectively, and the latter were then seen, at best, as responsible for their suffering or, at worst, believed to be malingering (Barham, 2004). Whilst the categories of officer and non-officer may have come to be of less importance through the course of the Wars, the moral hierarchy remained. The symptoms initially associated with non-officers were understood to be similar to those seen amongst hysterics, and as such the thorny issue of simulation and confabulation arose, and with it questions of how best to treat the neurosis and whether such treatment should involve the active participation of the patient or not.

There is, arguably, a comparison to be drawn between the way in which a hierarchy of war trauma informed the treatment of combatants and the way in which rape survivors have historically been situated by professionals and society along a continuum; on one extreme there is the innocent rape survivor and on the other extreme the rape survivor whose narrative is seen to be highly questionable (Anderson & Doherty, 2008; Gavey, 2005). The innocent rape survivor has physical injuries to verify that she was indeed raped, is considered to have a morally blameless past, and is seen to be in no way culpable for the rape and therefore deserving of all the support and care that can be provided. This is opposed to the rape victim whose culpability is questioned through a range of factors, including lack of physical evidence, questionable moral character and/or being identified as being temperamentally unstable, with a range of peritraumatic experiences which make her vulnerable to, at best, simulation and confabulation, and, at worst, lying (Shearer-Creame, 2004). Thus both in the context of war and in cases of sexual violence, when the patients/victims/survivors are adults and the reality of the event itself is not in question (in the case of rape the question is usually less on whether there was an act of sex and more on whether such sex was consensual or not), the cause of post-trauma symptoms may still be assigned to the patient/victim/survivor him or

herself due to an intrinsic vulnerability or peritraumatic circumstances rather than to the external event itself.

The apparent success of forward psychiatry in World War II, coupled with the assertion that countries such as Germany and Russia - who did not provide compensation to those suffering from psychoneurotic illnesses - had the lowest incidence of war neuroses amongst their troops, supported a growing disinterest post-war in determining the impact of external trauma on the development of war neuroses, with a focus on the influence of peritraumatic experiences and the transient nature of war neuroses (Leys, 2000). This disinterest remained despite growing post-war evidence from veterans of World War II, the Korean War, prisoners of war and survivors of the Holocaust that symptoms could persist for many years after the initial trauma or that there could be a delayed onset of symptoms (Leys, 2000; Needles, 1946). It was the chronic problems of Vietnam War veterans which ultimately forced the focus to return to a consideration of the centrality of the effects of external trauma on the human psyche. This shift, which is discussed in the next section, proved to be a critical turning point for the feminist struggle to foreground gender based violence and its impact, particularly with reference to sexual violence.

2.5 The Vietnam War

Official accounts of psychiatric casualties in Vietnam initially boasted that these were lower than in any previous war; having dropped from 101 per 1000 troops in World War II, to 37 per 1000 troops in Korea and then to 12 per 1000 in Vietnam (Tiffany, 1967). This drop in the number of psychiatric casualties was attributed to the successful implementation of accumulated knowledge from previous wars. This included the practice of forward psychiatry, that no soldier served for longer than one year, that plenty of rest and recreation was provided during a tour of duty, battles were short, soldiers were exposed to a limited amount of artillery bombardment and that morale was kept high (Boman, 1982; Shephard, 2001). In essence these practices drew on the physiological line of enquiry into the impact of trauma, particularly prolonged exposure to stressful circumstances, with a concomitant focus on the longer term effects of fear and other emotions rather than upon a specific traumatic event and its consequences.

Whilst the number of psychiatric casualties in Vietnam was low, there was high incidence of what was termed 'character disorders' associated with 'acting out' behaviours which resulted in discharge through administrative channels rather than referral for psychiatric treatment

(Boman, 1982; Shephard, 2001). These behaviours were attributed, at least in part, to the widespread use of marijuana and heroin along with the use of tranquilisers like chlorpromazine amongst soldiers in Vietnam (F. D. Jones & Johnson, 1975; Robins, Davis, & Goodwin, 1974). Shephard (2001) suggests that such usage speaks to the “climate of moral numbness and the sub-culture of alienation among soldiers serving in Vietnam” (p. 353) and he notes that such usage was believed to have precluded effective processing of emotion and the appropriate expression of these emotions later on. Horowitz and Solomon (1975), in a paper titled “A Prediction of Delayed Stress Response in Vietnam Veterans”, suggested that given the level of numbing and denial amongst Vietnam soldiers “over the next years civilian mental health professionals [would] encounter stress syndromes in Vietnam veterans, [would] misread etiological factors and be unable to treat such persons effectively” (p.67).

As predicted by Horowitz and Solomon (1975), upon their return from Vietnam veterans felt that the Veteran’s Administration (VA) was failing to meet their needs, which they argued were different from the needs of World War II veterans. It has been argued that, in addition to the usual practical and emotional difficulties faced by soldiers returning to civilian life, Vietnam veterans faced a number of additional challenges. Vietnam veterans returned rapidly (overnight by aeroplane), as individuals, to a context which did not necessarily welcome them as heroes, in which there were limited job opportunities and where the rise of feminism was shifting relations between men and women in such a way that women were not necessarily willing to provide nurturance or support for recovery (Shephard, 2001).

By the early 1970s, with the Vietnam War at its height, the organisation Vietnam Veterans Against the War (VVAW), founded in 1967, had established ‘rap groups’ country wide where veterans met to support each other as they recounted their traumatic experiences of the war – experiences in which veterans were both victims and perpetrators of atrocities (Vietnam Veterans Against the Vietnam War, 1972). On the East Coast, military psychiatrist and antiwar activist Robert Lifton responded to requests from members of the VVAW rap groups for support from mental health professionals to help them make sense of their complex responses to their war experiences (Bloom, 2000). Dr Chaim Shatan, co-director of the postdoctoral psychoanalytic training clinic at New York University (NYU), and a medical doctor who had examined men from World War II suffering from traumatic neuroses of war, led the call for professional volunteers to provide clinical consultation to rap groups. Most of the volunteers were psychoanalysts united by their opposition to the war and willing to work alongside the rap groups in a non-medical and non-analytic style (Bloom, 2000).

In 1972 Shatan developed a diagnosis for what the members were experiencing which he termed Post Vietnam Syndrome (Bloom, 2000). He noted that the symptoms emerged for veterans some 9 to 30 months after their return from Vietnam, evidenced by feelings of guilt and rage and of being scapegoated, and a sense of profound alienation and psychic numbing (Hagopian, 2009). He argued that the psychic numbing was the result of attempts to avoid overwhelming feelings of guilt and rage, contrasted by re-enactments of retribution against the self, resulting from profound guilt. The result was social isolation, suicidal behaviour, damaged relationships, substance abuse problems and employment difficulties (Hagopian, 2009). Drawing on Freud's essay on "Mourning and Melancholia", written before World War I, Shatan understood the Syndrome as a delayed reaction to massive trauma resulting from the inability of the soldier to grieve whilst in the war zone:

The so-called post-Vietnam Syndrome confronts us with the unconsummated grief of soldiers – impacted grief, in which an encapsulated never ending past deprives the present of meaning. This sorrow is unspent, the grief of the wounds untold, their grief unexpiated. Much of what passes for cynicism is really the veteran's numbed apathy from a surfeit of bereavement and death (W. J. Scott, 2004, p. 43).

The suggestion that the Vietnam veterans were experiencing a set of symptoms constituting a syndrome directly attributable to their experiences as combatants in Vietnam had serious implications. Until then Vietnam veterans were being diagnosed by mental health professionals with a range of diagnoses including Schizophrenia, Major Depression, Alcohol and Drug Dependence and a range of Personality Disorders (as classified by the ICD 8 and/or the DSM II), the aetiology of which were essentially understood to be endogenous. The symptomatology of such disorders impacted negatively on employability and social and familial relations, and engendered distress, confusion and hopelessness resulting in a pathogenic spiral of chronicity, despair, dysfunctional behaviour, and high rates of parasuicide and self-medication with drugs and alcohol (Young, 2000). If these symptoms could be directly attributed to the Vietnam War then questions of diagnosis, treatment, and recourse to compensation from the state, as well as culpability for acts of violence committed subsequent to the return from Vietnam or atrocities committed whilst in Vietnam would need to be revisited.

From the early 1970s a growing body of literature, generated by anti-Vietnam War activists, sought to elucidate these issues. The National Vietnam Veterans Resource Project undertook several large studies focused on the needs of Vietnam veterans and the development of

alternative self-help veterans groups (Bloom, 2000). Lifton's (1973) *Home from the War: Neither Victims nor Executioners*, highlighted the link between the dehumanising effects of exposure to trauma and the subsequent perpetration of atrocities by Vietnam veterans and how this informs treatment of the veterans on their return from the war. Figley published a series of books on psychosocial stress that began with a focus on Vietnam veterans and grew to encompass a range of traumatic events (Figley, 1978, 1985). Sarah Haley's famous paper, "When the Patient Reports Atrocities" (Haley, 1974), drew on her extensive clinical experience with Vietnam Veterans at the Boston VA to argue that mental health professionals were failing to recognise symptoms associated with combat, which in turn had profound implications for treatment.

This emergent literature seemed to point to the need for the recognition of a pattern of psychological responses to war related trauma, requiring particular treatment approaches. This was brought into sharp focus in 1974 by a series of serendipitous events. In 1974 a Vietnam veteran was charged with public violence and claimed subsequent amnesia for the event. The public defender in the matter entered a plea of not guilty due to traumatic war neuroses, but the judge rejected the plea on the grounds that there was no such diagnosis in the DSM II (Bloom, 2000). The DSM I, published in 1952, had a diagnosis termed Gross Stress Reaction, which was defined as a stress syndrome which emerged in otherwise normal people in response to extreme physical or mental stress (most commonly war related), and which would subside within two years following the stressor. The diagnosis was dropped from the DSM II (1968) presumably because the diagnosis was associated with war and the DSM II was written during a relatively peaceful era (Andreasen, 2004). It was in 1974 that the Council on Research and Development of the American Psychiatric Association (APA) appointed a psychiatrist, Robert Spitzer, to head a Task Force on Nomenclature to begin work on a new edition of the APA's DSM which was to become the DSM III (Young, 1995). Shatan and Lifton recognised that this was an important window of opportunity and formed the Vietnam Veterans Working Group (VSWG) with the aim of ensuring that psychological responses to exposure to trauma become a recognised disorder in the upcoming DSM III (Bloom, 2000).

Mental health professionals like Shatan, Lifton and Haley recognised that it would be in their interests to persuade Spitzer and the Task Force, through the Committee on Reactive Disorders - headed by Andreasen, whose clinical experience was with burn victims - that what they were describing was a syndrome not specific to Vietnam veterans, but to survivors

of a range of traumatic events. This led to a review of the general literature on catastrophes, including victims of civilian disasters and trauma (Lindemann, 1944; Shands, 1978); war trauma other than the Vietnam War, including work with survivors of the Holocaust (Krystal, 1968; Niederland, 1968) and survivors of Hiroshima (Lifton, 1967); and the data generated by the NVVRP and anti-Vietnam activists. The review also focused on the work of Mardi Horowitz (1976; Horowitz & Solomon, 1975) which drew on the work of Selye, as well as Freud, Janet, Kardiner, Grinker and Spiegel, and Lindemann, to propose a psycho-physiological theory of stress response. Horowitz's theory offered a useful overarching frame linking civilian and combat related responses to trauma. Lifton, Shatan and a Vietnam veteran who headed the NVRP, Jack Smith, presented their report to the Committee on Reactive Disorders in January, 1978. A month later the Committee submitted its final report to the Task Force recommending that a new classification of Post Traumatic Stress Disorder be included in the DSM III, under the Anxiety Disorders section. This recommendation was incorporated into the final version of the DSM III that was published in 1980 (Bloom, 2000; Young, 1995).

2.6 Feminism, trauma and the psychological impact of rape

The birth of the anti-war movement in the late 1960s coincided with the birth of second wave feminism, both of which emerged out of the New Left movement in the USA. The activism of both movements led to the foregrounding of the psychological impact of trauma, but they did so in separate and distinctive ways, which only intersected in the mid 1980s through the link between civilian and combat related response to trauma created by the diagnostic category of PTSD⁴. As noted in earlier sections of this chapter awareness of rape dates back to antiquity and can be traced through medical, legal and religious texts across the ages. Rape did not, however, become a subject of political commentary in the West until the 19th century; initially in relation the broader issues of women's rights and women's suffrage and the abolitionist movement. It was only in the second half of the 20th century, through second

⁴ It is noteworthy that the Vietnam veteran seen by Social Worker Sarah Haley at the Boston VA who prompted her questions about the veracity of the psychiatric diagnoses being given to such veterans and ultimately led to the publication of her famous paper "When the Patient Reports Atrocities" (Haley, 1974), associated his distress with having witnessed atrocities committed by soldiers in Vietnam at the My Lai massacre. Accounts of the atrocities include many acts of sexual violence and rape of women and children (Faludi, 1999). The Winter Soldier Investigations of 1971 also made public the degree of rape and forced prostitution of Vietnamese women and children at the hands of American soldiers throughout the Vietnam War. Brownmiller (1975) notes that the parting of ways between the anti-war movement and the feminist movement was not an amicable one and when called upon as a feminist to add her voice to the peace movement Brownmiller's reply was that feminists would only do so when the peace movement was ready to foreground the rape and prostitution of Vietnamese women by American soldiers, a call which was not taken up by the anti-war movement.

wave feminism, that the issue of rape in and of itself came to hold centre stage, bringing with it a growing focus on the psychological impact of rape related trauma. This section tracks this history in order to understand the relative strengths and weaknesses which underpin current conceptualisations of the psychological impact of rape trauma.

During the first wave of feminism issues related to violence against women, and more specifically rape, more often than not arose incidentally out of the broader social and political issues being addressed. As noted by Forster (1984), feminism of the late 1800s and early 1900s was constituted of many different and distinct causes, often spearheaded by particular women in particular contexts. In one way or another activism within most of these areas of focus uncovered the reality of violence against women and more specifically sexual violence. By way of example, Josephine Butler's (1828-1906) campaign against the Contagious Diseases Act of 1864, 1866 and 1869 in Great Britain (which allowed prostitutes to be examined at police stations for venereal disease) led her to uncover the trafficking of women and children for sex (Forster, 1984). Similarly, in the USA Margaret Sanger's (1879-1966) assertion that for feminism to have a future all women must be able to plan a family and her activism in the field of birth control inevitably raised the issue of the sexual coercion, sexual violence and rape endured by many women (Forster, 1984). Likewise, Victoria Woodhull's advocacy of female-first intercourse in the 19th century brought with it an unavoidable engagement with the realities of sexual violence and rape (Schneir, 1992). In his book tracing the history of women's bodies, with a particular focus on the centrality of access to birth control and advances in medicine and surgery as a precondition for feminism, Shorter (1982) suggests that prior to 1900 one of the key ways in which women were victimized was through what he terms "limitless sexual access" (p.xii). It is, however, noteworthy that none of the chapters in his book explicitly address the issue of sexual violence or rape and the index has no listing under those terms.

With reference to slavery and the abolition movement, the sexual exploitation of black women slaves in the South over a period of 200 years by their masters was legally sanctioned and as such rape of black women by their masters was understood to occur, but it elicited little political commentary or concerted social activism until the abolition movement of the 1830s and 1840s (Bevacqua, 2000). Abolitionists highlighted it as one of the many evils of slavery and little more was said about it following the emancipation of slaves. It was the lynching of black men, often in response to alleged rape of white women by black men, that elicited a more direct and active response from activists both white and black. Ida B. Wells

and other black women highlighted the connection between lynching black men and rape of black women by white men (Bevacqua, 2000). Ironically, Southern middle class women involved through the church with the abolition movement of the 1830s and 1840s and the anti-lynch movement also drew the link between sexual and racial oppression (Evans, 1979). Again, the issue of sexual violence and rape was raised in relation to a broader overarching social ill.

The examples cited above may seem to suggest that the question of sexual violence and rape were to some extent minimised or seen as secondary to broader socio-political issues. Though there is some merit in such an argument, they also point to how sexual violence was (and arguably still is) so deeply embedded within a broader context of gender based oppression that attention given to one aspect of that oppression inevitably raises awareness of other consequences of the inequities between the genders, including sexual violence and rape. This is not to suggest that first wave feminists or women engaged in the abolition movement did not see the consequence of rape as reprehensible and needing urgent social and political action, but rather that the solution for such a consequence was seen to lie within a broader agenda of social and legal reform, with particular emphasis on the right to vote during the suffragette movement and racial equity during the anti-lynch campaign and the beginning of the Civil Rights movement. Ultimately, it was through second wave feminism that attention was drawn to the question of rape as a unique and distinct issue.

The Civil Rights movement of the 1960s in the USA was - to borrow a phrase from Evans - midwife to the feminist movement of the late 1960s and early 1970s. During the abolition movement of the 1830s and 1840s southern white women active in the movement came to draw the link between racial oppression and sexual oppression. In the 1960s and 1970s women from the north who had gone to the South to join the civil rights movement drew a similar link. Within the Civil Rights movement itself the gendered division of labour highlighted the kinds of inequities between men and women which Friedan's now classic text: *The Feminine Mystique* (1963) had sought to expose. In addition, the boundary between sexual freedom and sexual exploitation of women within the movement was contested territory. This was further complicated by the issue of racism itself, the taboo of inter-racial sex and racial stereotypes of white liberal women as loose and black men as predatory, which created particularly complex and fraught tensions, both within women individually and

between black and white women in the movement (Evans, 1979)⁵. In spite of these tensions black and white women shared a brief moment of unity in expressing their concerns about the movement's failure to achieve sexual equality through a position paper presented anonymously at the Student Non-Violent Co-ordinating Committee (SNCC) conference in 1964 titled "Women in the Movement" (Evans, 1979). The paper elicited little direct response at the time, but was a precursor to the birth of the women's movement.

The Civil Rights movement in the South fuelled the establishment of the New Left movement in the North, which was joined by many of the (white) women from the North who had been part of the Civil Rights movement (Evans, 1979). Within this context women were, to some degree, freer to comment on the recurring patterns of the gendered division of labour and their sexual exploitation and objectification within the New Left. By 1967 the left was increasingly fragmented with competing interests leading towards separatism, particularly in relation to Black power and the draft and anti-Vietnam War movement. In this context women's issues received almost no attention or were referred to in relation to the pressing concerns of the day in ways which simply amplified and underscored the sexism within the movement (Bevacqua, 2000) – for example, within the black power movement arguments centred on issues of black matriarchy and the duty of women to not use birth control pills. In relation to the issue of the draft, a familiar by-line emerged: 'Girls say yes to guys who say no' (as quoted in Evans, 1979, p. 179). In response to an increasing sense of alienation, the day after the 1967 National Conference for New Politics in Chicago a group of women gathered and wrote a manifesto addressed to the women of the left; "through a network of personal friendship, organized media and events the word spread until within a year there was hardly a major city without one or more "women's liberation groups" as they called themselves" (Evans, 1979, p. 201). Modelled to some degree on the Vietnam rap groups, the black movement and the Chinese revolutionary movement, in these groups women met to share personal experiences of oppression and of the impact of sexual inequality, not least of all experiences of sexual violence, including rape.

⁵ It is beyond the scope of this thesis to address this issue in any detail, but it is important to note that this tension was present throughout the emergence of second wave feminism and continued to create divisions in the feminist activist organisations established through the 1970s and 1980s (Bevacqua, 2000). To a large degree this tension was fuelled by an assumption made on the part of the emerging feminist movement (made predominantly by white feminists) of a commonality shared by women universally, which thus failed to consider how oppression on the basis of gender interfaces with oppression on the basis of race and class, which fundamentally alters the daily lived experiences of women (Collins, 1990). American black feminist thought challenged this assumption and grew out of a need to address the "racist bias in feminist theory" (Collins, 1990, p. 20). Black feminists have argued that only black women can produce black feminist thought and that black women's experience is unique in relation to a number of issues including rape (Davis, 1982).

By 1970 the issue of rape was central to the radical feminist consciousness raising groups. Talking about painful and 'private' issues such as rape in the public arena flouted convention and highlighted the political nature of personal experience, thereby reframing rape as a political problem and not a shameful personal one. In January 1971, the New York Radical Feminists' speak out, and the conference on rape in April of the same year, served to further mobilize feminist activism in relation to the anti-rape movement (Bevacqua, 2000). By 1973 rape became an organizing principle for liberal feminists as well. The ideology underpinning the anti-rape movement, both radical and liberal, took as its starting point that women are in a subordinate position to men, women are treated unfairly by society's institutions, and that resources are unequally distributed on the basis of gender (Bevacqua, 2000).

With reference to rape itself the central organizing principle was the recognition of rape as an act of violence and not sex and with that dispelling of rape myths and a shifting of the emphasis away from the victim to the perpetrator. A host of both radical and liberal feminist writing on rape served to support and disseminate these ideas more broadly (Connell & Wilson, 1974; Csida & Csida, 1974; Firestone, 1970; S. Griffin, 1971; Horos, 1974; Medea & Thompson, 1974; Millett, 1970; Morgan, 1970). Liberal feminism's leading magazine, *Ms*, first mentioned rape in their July 1972 edition and in September 1973 published an article on how to start a Rape Crisis centre, as well as a story detailing the experience of a rape survivor going to court.

In relation to this body of work, Brownmiller's (1975) book, *Against our Will: Men, Women and Rape*, deserves special mention as a classic feminist text which exemplified the radical feminist stance on rape (Google Scholar records 4334 citation counts for the text – 10 December, 2012). Brownmiller begins the book with a personal statement which concludes with the sentence: "I wrote this book because I am a woman who changed her mind about rape" (Brownmiller, 1975, p. 9). She attributes her change of mind directly to what she learnt through her conversations with women who began gathering in small groups in the 1970s to discuss women's issues and her subsequent involvement in the growing women's liberation movement. Her book provides an account of the critical function rape has played through the ages which she argues is an act of power and control: "nothing more or less than the conscious process of intimidation by which *all* men keep *all* women in a state of fear" (Brownmiller, 1975, p. 15, italics in the original). The only references in the book to psychology and the psychological impact of rape on the victim appear in the first two pages of the first chapter where Brownmiller notes the failure of Freud and his disciples, in

particular Adler, Jung, Deutsch, Horney and Reich to “explore the real-life deployment of the penis as a weapon” (Brownmiller, 1975, p. 11). She returns to the work of Horney, and Deutsch in later chapters arguing that their conceptualisation of the hysterical, masochistic woman could be read as a manifestation of the all too real sexual oppression of women by men, but that neither disciple had dared to venture that far.

Similarly, in her book, *The Politics of Rape* (1975), Diana Russell’s reference to the psychological impact of rape is cursory. She briefly notes that Freud’s reading of men as essentially sadistic and women as masochistic failed to engage with the political and social realities of rape which she goes on to describe in detail. The first chapter, titled *The Trauma of Rape*, is a transcript of a woman’s account of her experience of having been raped that is peppered with descriptions of the impact the rape had on her. The woman describes experiencing feelings of shock and terror, being fearful of men, investing in a gun which she carries everywhere with her and becoming “too paranoid” (Russell, 1975, p. 24), avoiding any sexual relations after the rape, having bad dreams, obsessively reliving the rape, having uncontrollable flashes of the rape and getting very depressed. At one point in the interview the woman says she wanted to see a counsellor to talk it out but didn’t. Russell simply observes that the trauma of the rape was clearly deep and long lasting.

Throughout both books there is a sense of outrage at a society which enables and supports rape and with it an understanding that rape is traumatic for the survivor, but to dwell on that aspect would be antithetical to the radical feminist politicisation of rape. Both Brownmiller and Russell conclude their books with chapters which emphasise the role of the women’s movement and female activism in fighting back to ensure the eradication of rape. Anti-rape organizing and strategies were focused on five main areas: Encouraging women to attend self-defence classes to reverse or resist socialized passivity and dependency on men, participation in social activism such as Take Back the Night marches; guerrilla tactics, such as publishing the names of convicted rapists, and anti-rape graffiti; rape law reform; and the establishment of Rape Crisis Centres (Bevacqua, 2000).

It was primarily within the Rape Crisis Centres that responding to the needs of rape survivors came to include some form of counselling. The form such counselling took was, however, very much informed by feminist ideology and thus actively sought to restore a sense of control to the rape victim by providing information about police, medical and legal systems, whilst providing a supportive and non-judgemental milieu for the victim, which would allow

the victim “to share feelings of isolation, despair, helplessness and anger, feelings **which are a product of those public attitudes which persist in seeing rape as a ‘sexual’ offence to be kept out of the public eye and mind**, surrounded by a conspiracy of silence” (my emphasis, Clark & Lewis, 1977, p. 192). By 1976 there were 400 Rape Crisis centres in the USA. These centres relied primarily on state funding and as such the question of co-option and professionalization of services remained a source of heated debate. The Feminist Alliance Against Rape (FAAR), established in 1974, warned against the dangers of depoliticisation and defeminising of anti-rape projects, whilst the more liberally oriented National Coalition Against Sexual Assault, founded in 1978, actively promoted professionalization of services (Bevacqua, 2000). Similarly, the establishment, in 1973, of the National Centre for the Prevention and Control of Rape within the National Institute of Mental Health (Bevacqua, 2000) provided a source of much needed funding for anti-rape services and researchers, but arguably brought with it a tension in relation to the depoliticisation and professionalization of the anti-rape movement.

This tension was less evident in the initial research in the early 1970s on the psychological impact of rape because such research was propelled and informed by the broader feminist anti-rape movement. Thus when Ann Burgess, a professor of psychiatric nursing, and Lynda Holstrom, a professor of sociology, published their ground breaking paper “Rape Trauma Syndrome” in 1974, they conclude their findings with a re-assertion that rape “is not a private syndrome. It is a societal concern and its treatment a public charge” (p. 985). In their paper they note the dearth of information on the physical and psychological impact of rape in order to inform the therapeutic management of the victim and to prevent further psychological injury.

Prior to Burgess and Holstrom’s paper there had been a handful of publications relating to impact. The earliest of these was published in the Psychoanalytic Quarterly and provides an analysis of a dream reported by a patient who had escaped an attempted rape by an intruder in her home. Not surprisingly the interpretation focused on the dream as an expression of the patient’s feelings of guilt because of her unconscious complicity in the attempted rape (Factor, 1954). From a social science perspective Amir (1967, 1971) is famous for his work on ‘victim precipitation’ and Kanin (1957), whilst recognising the prevalence of male sexual aggression in heterosexual relationships, similarly had little compunction in holding the victim as in some way responsible for the assault (Kanin, 1967). From a medical perspective Halleck (1962) noted that rape invariably causes psychological distress and that whilst most

victims recover fully, some do develop distressing symptoms that may need further psychiatric intervention. Sutherland and Scherl's (1970) study of 13 rape survivors led them to suggest a pattern of response which they divide into three phases: the acute phase, including shock, disbelief and dismay; the outward adjustment phase, often involving denial and suppression; and a final phase of integration and resolution.

In keeping with Sutherland and Scherl's (1970) attempt to delineate a pattern of response post-rape, Burgess and Holmstrom's (1974) analysis of a series of interviews with 92 adult women presenting with a complaint of rape at an emergency ward at city hospitals in Boston led them to document the existence of a rape trauma syndrome – a two phase reaction. The first phase is described as the Acute Phase. This phase is classified as Disorganised, and is divided into Impact reactions, comprising expressed style or controlled style; somatic reactions, including physical injuries, skeletal muscle tension, gastrointestinal irritability, genitourinary disturbance; and a range of emotional reactions, predominantly of fear and self-blame. The second phase is termed a Long-term Process. This phase is classified as Reorganisation and includes increased motor activity, experiencing nightmares and traumatophobia (or phobic reactions to reminders of the traumatic situations).

Drawing on work relating to reactions to life-threatening situations, such as that of Grinker and Spiegel (1945) and Lindemann (1944) (part of the general literature referred to by the Committee on Reactive Disorders in their review motivating for the inclusion of PTSD in the DSM III), as well as Kubler-Ross's work on death and dying, Burgess and Holmstrom conceptualise rape as a crisis which disrupts a woman's life and recommend issue oriented crisis counselling (Burgess & Holmstrom, 1974). They note that the majority of the victims were able to reorganise their lifestyle after the acute phase and were able to maintain a degree of equilibrium. They stress that in no cases did the victims show ego disintegration, bizarre behaviour, or self-destructive behaviour in the acute phase. In relation to the Reorganisation phase, Burgess and Holmstrom did, however, observe two variations which they termed a compounded reaction and a silent reaction. The former refers to women with past or current history of physical, psychiatric or social difficulties who developed additional symptoms of depression, psychosis, psychosomatic complaints, suicidal behaviour or acting out behaviour associated with alcohol or drug abuse and sexual activity. The latter refers to a reaction occurring in a victim who does not disclose the rape to anyone and is carrying a psychological burden in this regard and who may be a survivor of multiple sexual assaults, childhood sexual abuse or rape. A range of psychological difficulties might then result,

including increased anxiety, physical distress, marked irritability, avoidance of intimate relationships or marked change in sexual behaviour, sudden onset of phobic reactions and loss of self confidence and self esteem, self blame and nightmares.

The Philadelphia Sexual Assault Victim Study conducted in Philadelphia between April 1973 and June 1974 was another early study which sought in part to address the absence of literature on rape victims and their adjustment difficulties. In keeping with feminist activism on rape at the time, the authors of the study comment that attending to the impact of rape trauma “does not reduce the seriousness of the offense; it reduces the trauma of the episode to the victim” (McCahill, Meyer, & Fischman, 1979, p. xvii). Furthermore, the authors stress that such research seeks to normalise rape victims’ reactions by reporting on what other rape survivors have experienced and how they recovered from the trauma.

The research sought to describe the problems rape victims encountered immediately after the rape and the adjustment patterns which emerged then and a year later. In addition the research sought to explore the factors associated with development of these patterns. Adjustment problems delineated by the research can be broadly divided into four categories:

- i. Changes in sleeping patterns, most commonly sleeping less and experiencing nightmares,
- ii. Changes in eating patterns, in particular eating less,
- iii. Increased degree of fearfulness, in particular a fear of being out on the street alone, or being at home alone and increased fear of men in general,
- iv. Relationship difficulties – worsened heterosexual relations, worsened sexual relations, worsened relations with family and general decrease in social activities.

In conclusion McCahill, Meyer and Fischman (1979) note that rape can have a devastating effect on nearly all aspects of the victim’s life and that such effects are not necessarily short-term. On the basis of their findings they observed there is no one particular kind of rape which can predict impact and that whilst the likelihood of a particular problem emerging is dependent on the interplay of several variables, in their study race and class had little bearing on the degree of impact.

As noted by Koss (2005), since 1974 there has been a proliferation of publications on rape within the field of psychology. The period of greatest productivity in this field coincided with the establishment of the NCPCR in 1975 and its subsequent closure in 1987; nonetheless

research on rape within the social sciences continued to burgeon through the 1990s and into the 21st century. Over time several research trajectories within the social sciences have become apparent (Gavey, 2005). One trajectory located within the domain of Social Psychology has focused on researching attitudes towards rape and victims of rape, the content of rape myths and their prevalence, attribution of responsibility for rape and accounting for sexual aggression. Research into the prevalence of rape is most often located within the field of Public Health and epidemiology and is concerned with providing accurate figures relating to both reported and unreported rape and exploring patterns in relation to a number of factors which may impact on who is most vulnerable to rape and what affects reporting of rape, including race, class and cultural factors. This body of research is related to research which focuses on rape typology; research on different forms of rape such as date rape, acquaintance rape, marital rape and stranger rape, as well as locating rape scenarios along a continuum of sexual coercion and violence. Research into the impact of rape trauma initially straddled several fields within the Social Sciences including Social Psychology, Sociology, but has come to be located most often within the field of Clinical Psychology and Psychiatry.

Just as the study of psychological trauma itself emerged out of a long and complex history, psychological trauma has not always been seen as the dominant effect of rape. It emerged out of a feminist movement which, through its emphasis on foregrounding a women's perspective and the violent (rather than sexual) nature of rape itself, drew attention to the harm suffered by victims of rape (Gavey, 2005). By drawing on the emergence of a trauma rhetoric and discourse, formalized and legitimised by the introduction of PTSD into the DSM in 1980, feminists were able to emphasise and give credence to the devastating impact of women's victimisation articulated within the broader supportive context of an angry, assertive and resilient women's movement (Bourke, 2007). Concerns have been voiced that with the uncoupling of political activism from psychological impact, rape victims are now defined by the traumatic experience of rape as psychologically damaged and able only to attend to that psychic injury, which serves to support a neo-liberal and conservative emphasis on individual responsibility for recovery and detracts from women's resilience in the face of the pervasiveness in society of sexual violence against women (Bourke, 2007; Gavey, 2005; Gilfus, 1999; Mardossian, 2002; Stefan, 1994; Wasco, 2003).

These concerns notwithstanding, the past 40 years have seen a fundamental shift in Western representations of and engagement with rape in relation to the law, popular culture and psychology. This shift is essentially attributable to the feminist movement of the 1970s. With

reference to psychology, researching and exploring the negative impact of rape needs to be coupled with a reassertion of the link between the impact of rape on victims and the broader socio-political context which not only provides for the “cultural scaffolding of rape” (Gavey, 2005), but also profoundly informs the ways in which the suffering of rape victims is constructed and maintained.

2.7 Chapter summary

This chapter has sought to provide a history of the study of psychological trauma with a view to highlighting the complex and disputed nature of that history in order to contextualise the study of rape trauma, thereby highlighting the strengths and limitations underpinning the study of the psychological impact of rape. The chapter began by highlighting the debate relating to whether the study of psychological trauma represents a progressive development towards a unified body of knowledge, culminating in the diagnostic category of PTSD, or a series of developments informed by several trajectories underpinned by fundamentally different principles which in turn were and are driven by specific socio-political contexts and imperatives.

The subsequent section in the chapter highlights the development of the two dominant routes of enquiry in relation to the study of psychological trauma: the physiological route and the psychological route. The former route argues that the aetiology of post traumatic symptomatology is predictable and dictated by physiologically determined responses to traumatic events and as such the veracity of the symptoms themselves are not questioned. The psychological route, however, allows for the veracity of the survivor’s experience of distress to be called into question and for those symptoms to be attributed to the survivor’s character rather than to the traumatic event. Both lines of enquiry informed the understanding and treatment of war neuroses in World War I, World War II and the Vietnam War, and, given that the occurrence of the traumatic event was not in question, highlighted past debates and introduced new ones in relation to the understanding the psychological impact of trauma.

The birth of the Vietnam anti-war movement in the late 1960s, which ultimately led to the introduction of the diagnostic category of PTSD in the DSM in 1980, coincided with the birth of second wave feminism. By the 1970s feminists were foregrounding the socio-political nature of rape, and this led to a growing focus on the psychological impact of rape. This focus drew on prior research on the psychological impact of trauma, and ultimately led to Rape Trauma Syndrome being subsumed under the diagnostic category of PTSD. The

complex and contested history of the study of psychological trauma notwithstanding, research on the psychological impact of rape has burgeoned over the last 40 years and is now a well established field which constitutes a substantial body of research. The next chapter hopes to provide an inclusive review of this body of research.

Chapter 3

Measuring the impact of rape on mental health: A review of the literature

3.1 Introduction

Given the vast body of literature now published on the impact of rape on mental health it is not possible to provide a comprehensive review of all primary studies, let alone all studies, in the field⁶. In order to provide a sufficiently inclusive review of this body of work within this chapter an initial search was conducted using Google Scholar, PsycInfo and Medline for relevant review and/or meta-analysis and/or systematic review articles relating to the mental health impact (both psychological and psychiatric) of rape more broadly. The reviews were used as key reference points in terms of providing an overview as well as guiding the search for seminal articles and/or most recent research in the field.

In addition, a similar search was conducted using Google Scholar, PsycInfo and Medline with reference to specific topics within the field (for example reviews of PTSD and rape, or reviews of alcohol and substance abuse and rape) spanning the period 2006 to 2012. If this initial search failed to provide relevant literature, the search was extended back to 2000. If no reviews and/or meta-analyses and/or systematic reviews could be found for a particular topic (such as Obsessive Compulsive Disorder (OCD) and rape) a search using key words (such as OCD and rape) was conducted using similar search engines spanning the time period 2006 to 2012, and extending back to 2000 where necessary.

The chapter begins with an overview of the broad pattern of impact and recovery and symptomatology amongst rape survivors. The next section (Section 3.3) focuses on symptoms following rape and is divided into psychiatric symptoms and psychological difficulties. The following section (Section 3.4) goes on to consider variables affecting recovery and is divided into pre-assault, assault and post-assault variables. Thereafter longitudinal studies on the impact of rape are discussed (Section 3.5), which is followed by a discussion on the development of ecological and multi-factorial models to account for individual variability in psychological impact post-rape (Section 3.6). A consideration of the role of socio-cultural identity in informing post-rape responses follows (Section 3.7) and

⁶ By way of example: A search conducted on Google Scholar with the key words ‘rape’ and ‘mental health’ yielded a total of 53 900 hits, and on PsycInfo a similar search yielded a total of 182 000 hits (15 June, 2012).

South African research on the psychological impact of rape is then reviewed (Section 3.8). The conclusion (Section 3.9) provides a summary of key findings and trends in the literature reviewed within the chapter.

3.2 Overview of the pattern of impact and recovery and symptomatology amongst rape survivors

Recent reviews of the literature measuring the impact of rape on mental health in adult female survivors, take as a given that sexual violence is a highly pathogenic event which can result in a range of psychiatric and psychological mental health difficulties (Campbell, Dworkin, et al., 2009; Jordan, Campbell, & Follingstad, 2010; S. L. Martin, Macy, & Young, 2011; 2006). As noted in the final section of the preceding chapter, this starting point rests on a now substantial body of research into the impact of rape on mental health dating back to the mid-1970s. With particular reference to this body of work, Koss's (2005) reflections on 20 years of rape research identifies the period between 1974 and 1978 as having been focused on initial response, Rape Trauma Syndrome and self-blame. Between 1979 and 1983 this research grew to include a focus on depression, anxiety and other diagnostic classifications along with the development of characterological and behavioural self-blame theory. By 1984 interest in the relationship between rape trauma and PTSD burgeoned and has continued to dominate research in the field. In addition, since 1989 research has sought to develop theories to describe and explain the cognitive processing of rape trauma, and to identify and elucidate the cognitive mediators of such trauma alongside a growing interest in developing theories to explicate the emotional processing of rape trauma.

Furthermore, from the late 1970s to the present, research has sought to elucidate the link between symptoms associated with rape trauma and a range of variables considered to be important in either facilitating or hindering recovery (see for example: Acierno, Resnick, Kilpatrick, Saunders, & Best, 1999; Bryant-Davis, Ullman, Tsong, & Gobin, 2011; Burgess & Holstrom, 1979). Reviews of the literature on the impact of rape on mental health are regularly divided into two sections: the first section usually describes the range of possible symptoms and patterns of response post-rape and the second section considers the interaction of these patterns and symptoms with a number of pre-assault, assault and post-assault variables. Across 40 years of research the literature has been consistent in delineating an identifiable pattern of reaction and recovery, a range of symptoms most commonly experienced by female adult survivors of rape, and some evidence of links between these

patterns and symptoms and particular pre-assault, assault and post-assault variables. What follows is a synopsis of the pattern and range of symptoms and associated variables as detailed in reviews of the literature, which span the past four decades of research into the psychological impact of rape (Briere & Jordan, 2004; Burgess & Holmstrom, 1974; Burt & Katz, 1985; Campbell, Dworkin, et al., 2009; Campbell & Wasco, 2005; Department of Mental Health and Substance Abuse, 2000; Elliot, Mok, & Briere, 2004; Ellis, 1983; Gilmartin-Zena, 1985; Goodman, Koss, Fitzgerald, Russo, & Keita, 1993; Goodman, Koss, & Russo, 1993; M. Harvey & Herman, 1992; Jordan, et al., 2010; Koss, 1993b; Koss & Harvey, 1991; Lenox & Ganon, 1983; S. L. Martin, et al., 2011; Mullen, Romans-Clarkson, & Walton, 1988; Neville & Heppner, 1999; Resick, 1993; Rozee & Koss, 2001; Stekeete & Foa, 1987; Weaver & Clum, 1995; Yuan, et al., 2006).

In broad terms, in the immediate aftermath of the rape, survivors report, and have been observed to be, in a state of extreme physical and emotional distress. The physical distress is expressed through shaking, trembling, restlessness and exhaustion and the emotional distress is expressed through terror, confusion and labile mood (Burgess & Holmstrom, 1974; Goodman, Koss, & Russo, 1993; Jordan, et al., 2010; Koss & Harvey, 1991; Lenox & Ganon, 1983; Resick, 1993; Yuan, et al., 2006). Within the first week post-rape the majority of survivors present with what was described in the earlier literature as an acute or immediate reaction, and later, with the inclusion of PTSD into the DSM III in 1980, this reaction was commonly referred to as 'PTSD-like' symptoms. More recently, with the inclusion of Acute Stress Disorder (ASD) into the DSM IV in 1994 the acute reaction appears to meet the criteria for a diagnosis of ASD, which has been hypothesised to be a precursor to PTSD (Bryant, 2004). This early reaction appears to subside significantly over the following three weeks and at 12 weeks post-rape fewer than half of the survivors meet the criteria for PTSD (Jordan, et al., 2010; Koss, 1993b; Resick, 1993; Stekeete & Foa, 1987; Yuan, et al., 2006).

With regards to other clinical diagnoses survivors have reported feelings and thoughts associated with depression and suicidal ideation (Campbell, Dworkin, et al., 2009; Koss, Bailey, Yuan, Herrera, & Lichter, 2003). Self-medication through alcohol or substance use may lead to an Alcohol or Substance Abuse Disorder (Campbell, Dworkin, et al., 2009; Ullman, 2003). Some survivors have reported feeling preoccupied with a sense of being contaminated or dirtied by the rape, sometimes leading to compulsive washing, which may be diagnosable as an Obsessive Compulsive Disorder (OCD) (Fairbrother & Rachman, 2004; Resick, 1993). A range of physical complaints may result in a Somatic Disorder (M. B. Stein,

et al., 2004; Ullman & Brecklin, 2003; Yuan, et al., 2006) and there is sometimes evidence of some psychotic disturbance (Elklit & Shevlin, 2011; Kilcommons, Morrison, Knight, & Lobban, 2008; Resick, 1993; J. Scott, Chant, Andrews, Martin, & McGrath, 2007). As with the symptoms associated with ASD, these are acute within the first two weeks but improve significantly over the following ten weeks (Ellis, 1983; Gilmartin-Zena, 1985; Jordan, et al., 2010; Resick, 1993; Yuan, et al., 2006).

Psychological distress and impaired social functioning post-rape has also been the focus of research (Koss & Harvey, 1991; Stekeete & Foa, 1987), in particular lowered self-esteem and self-blame and guilt (Campbell, Dworkin, et al., 2009; Gilmartin-Zena, 1985; M. Harvey & Herman, 1992; Miller, Markman, & Handley, 2007; Moor & Farchi, 2011), work difficulties and interpersonal difficulties with friends, family and partners and sexual difficulties have also been reported in the literature (Burt & Katz, 1985; Koss & Harvey, 1991). All of these difficulties show marked improvement 12 weeks post-rape (Resick, 1993; Yuan, et al., 2006).

Despite substantial improvement reported by survivors at three months, research suggests that a substantial minority of survivors continue to experience significant levels of distress on a number of levels at 6 and 12 months post-rape (Burt & Katz, 1985; Yuan, et al., 2006). While improvement is evidenced at 18 months, the research suggests that some rape survivors still report significant levels of fear and anxiety at 2 and 3 years post-rape (Koss & Figueredo, 2004a; Yuan, et al., 2006). Longer term follow-up studies suggest ongoing difficulties with PTSD, Major Depression, fear, social adjustment and sexual difficulties six years post-rape (Elliot, et al., 2004; Koss, 1993b).

3.3 Symptoms following rape

As is evident from the previous section, rape trauma is associated with a range of psychiatric diagnoses and psychological difficulties, an association borne out by recent studies. Chen et al.'s (2010) systematic review and meta-analysis of literature on the association between sexual abuse (in both childhood and adulthood) and psychiatric disorders, concludes that a history of sexual abuse is associated with an increased risk of a lifetime diagnosis of psychiatric disorders. Amstadter et al. (2011) found that poor self-rated health was associated with a number of factors including a history of forcible rape. The first part of this section reviews the literature on psychiatric symptoms post-rape, starting with particular reference to ASD and PTSD, and then focusing on other Anxiety Disorders, Mood Disorders, Alcohol and

Substance Abuse and Dependence, Somatoform Disorders, Eating Disorders and Psychotic Disorders. The second part of this section focuses on literature that examines psychological difficulties post-rape, namely impact on self-esteem and social adjustment.

3.3.1 Psychiatric symptoms

3.3.1.1 PTSD

Since the introduction of PTSD into the DSM in 1980, research on PTSD following trauma has grown exponentially, leading McNally (2003) to observe that “[t]he scientific literature [on PTSD] is now vast, defying ready mastery, and even the finest, most ambitious works of scholarship are unavoidably synoptic” (p. 229). With regard to rape, by 1985 Burgess and Holstrom asserted that “rape trauma syndrome is a posttraumatic stress disorder” (Burgess & Holstrom, 1985, p. 46) and by 1992, in a much cited prospective study of PTSD in rape survivors, Rothbaum, Foa, Riggs, Murdock and Walsh (1992) observed that “post-assault psychopathology of rape may best be described as post-traumatic stress disorder” (p. 456). It is estimated that between 17% and 65% of women with a history of sexual assault develop PTSD (Campbell, Dworkin, et al., 2009), whilst the DSM IVTR suggests a lifetime prevalence for PTSD ranging between 1% to 14% in community-based studies and between 3% and 58% prevalence rates for at risk individuals (American Psychiatric Association, 2000). Breslau (2002) found that no more than 25% of trauma survivors develop PTSD, but also found that PTSD following exposure to trauma is approximately twice as high in women and persists for longer in women. In addition, assaultive violence, including rape, has been found to be associated with the highest risk of PTSD (Breslau, Chilcoat, Kessler, Peterson, & Lucia, 1999; Breslau, et al., 1998).

The dominance of PTSD as a measure of the impact of rape trauma has been so pervasive that - as will become evident through the course of this chapter - recent research on the psychiatric and/or psychological impact of rape, more often than not, refers to the ways in which particular psychiatric or psychological outcomes are linked to the development of PTSD amongst rape survivors. This dominance has not been without its critics, even amongst those who have contributed towards and drawn on that body of research to highlight the prevalence of rape, its potentially pathogenic impact, and the need for appropriate services for survivors. In focusing on PTSD as the lens through which the impact of rape is assessed there are concerns that more nuanced, complex and layered understandings of the ways in

which survivors may respond to rape are being eclipsed (Campbell & Wasco, 2005; Koss, 2005; Mechanic, 2004; Yuan, et al., 2006).

The dominance of PTSD in the measurement of the impact of rape is, in part, attributable to findings from several early key prospective and retrospective studies with both non-representative and community and national samples, which reported a high incidence of PTSD amongst survivors of crime-related trauma, and in comparison to victims of other crimes, rape survivors appear to be at the highest risk for the development of PTSD (Foa & Rothbaum, 1998; Rothbaum, et al., 1992). Furthermore, early research suggested that risk factors predicting PTSD in survivors of sexual assault differ from the risk factors which predict PTSD amongst survivors of non-sexual assault, fuelling research into explicating causal pathways (Acierno, et al., 1999; Foa, 1997).

In a seminal and much-cited chapter, Foa and Riggs (1993) provide a comprehensive overview of the research on PTSD and rape. Their review is divided into three sections. The first section refers to the literature on the prevalence and course of PTSD amongst rape survivors and Foa and Riggs found that rape survivors constitute the largest group of people with PTSD in the USA. They outline the course of PTSD as follows: Within the first two weeks post-rape almost all rape survivors meet the criteria for a diagnosis of PTSD (except that the time frame precludes the diagnosis being made), and in the majority of survivors there is usually a steady decrease in symptomatology at 4 weeks and 12 weeks post-rape, such that fewer than half of the rape survivors meet the criteria for PTSD at 3 months post-rape. The minority of rape survivors who meet the criteria for PTSD at 3 months post-rape are less likely to evidence improvement thereafter and are more vulnerable to developing chronic PTSD (Foa & Riggs, 1993, with particular reference to Rothbaum et al. 1992).

Foa and Riggs (1993) account for the prevalence and course of PTSD amongst survivors of rape via an information processing model, which suggests that PTSD is the result of a failure to successfully process the memory because the traumatic event overwhelmed the victim's capacity to either assimilate or accommodate the event into her existing schemas. The failure to adequately process the traumatic event is understood to be influenced by a range of variables which may be categorised as pre-assault, assault and post-assault factors. With regards to pre-assault variables, Foa and Riggs note that while there appears to be no discernible relationship between demographic variables and vulnerability to developing PTSD post-rape, a history of psychiatric illness, particularly depression and substance use, is

predictive of PTSD post-rape. Similarly, a history of prior victimisation is associated with a dissociative coping style post-rape, which are both associated with a greater risk of PTSD post-rape. With regards to assault-related factors, evidence for a link between relationship to the perpetrator and vulnerability to developing PTSD post-rape is equivocal, and the association between the degree of brutality and perception of life threat and PTSD post-rape appears to be mediated by cognitive factors. These cognitive factors, which include adopting an avoidant coping strategy post-rape, inform reactions in the immediate aftermath of rape, which appear to hinder emotional processing, thereby increasing PTSD related symptoms of hyper arousal and intrusion. Furthermore, post-assault, high levels of guilt and self-blame appear to be associated with chronic PTSD, as are high levels of general life stress and a sense of a lack of control in a dangerous world. A lack of social support is also associated with PTSD symptomatology. However it is not clear whether a lack of social support contributes to PTSD or whether a diagnosis of PTSD negatively impacts on a survivors' ability to access social support.

In the main, more recent literature has confirmed Foa and Riggs' (1993) summary of the prevalence and course of PTSD amongst rape survivors, as well as the role of pre-assault, assault and post-assault variables in predisposing survivors to developing PTSD post-rape. Using a large representative sample ($n = 4075$), Hapke, Schumann, Rumpf, John and Meyer (2006) found that sexual violence and pre-existing Anxiety Disorders accounted for the higher prevalence of PTSD in women. As noted previously, Breslau's (2002) review of epidemiologic studies of PTSD in the general population confirmed that women are at higher risk of developing PTSD than men, and that this higher level of risk is likely due to the higher risk of assaultive violence, a finding echoed by a number of overviews of the epidemiology of PTSD in both developed and developing countries (Kaminer & Seedat, 2006; Norris, et al., 2003; Seedat & Stein, 2000; Tolin & Foa, 2006; Zlotnick, et al., 2006). Breslau (2002) also concluded that there are three factors which are relatively consistently associated with the development of PTSD: Pre-existing psychiatric disorders, a family history of disorders, and childhood trauma. In a relatively recent meta-analysis of predictors of PTSD and its symptoms (not specific to rape-related trauma) the following seven yielded significant effect sizes (Ozer, Best, Lipsey, & Weiss, 2008): The predictors were i. Prior trauma, ii. Prior psychological adjustment, iii. Family history of psychopathology, iv. Perceived life threat during the trauma, v. Post trauma social support, vi. Peritraumatic emotional responses and vii. Peritraumatic dissociation. Family history, prior trauma and prior adjustment yielded the

smallest effect sizes, and peritraumatic dissociation the largest effect size. The authors conclude that peritraumatic psychological processes, not prior characteristics, are the strongest predictors of PTSD.

Klump's (2006) review of the literature on PTSD and sexual assault confirms that among women the highest rates of PTSD are associated with rape. In the main her review confirms the salience of the particular pre-assault, assault and post-assault variables identified by Foa and Riggs (1993) as contributing to the development of PTSD post-rape. In addition, Klump cites research which suggests that younger female survivors of rape are more vulnerable to developing PTSD than older women, and that acute reactions to trauma shape the recovery process; with early peak reaction (within 1 week post-rape) associated with steady recovery and delayed peak reaction (within 3 weeks post-rape) associated with the development of chronic PTSD. Klump adopts a similar cognitive processing model to the one proposed by Foa and Riggs (1993), which provides an explanatory model for ways in which multiple pre-assault, assault and post-assault variables contribute to the development and maintenance of PTSD. Klump does however note that although research on the relationship between sexual assault and PTSD is extensive, the literature is dominated by research on white women and as such fails to engage with how cultural, racial and ethnic differences might impact on the development of PTSD post-rape (this is considered in more detail in *Section 3.7 Socio-cultural identity and the psychological impact of rape*, of this chapter).

South African research on PTSD suggests comparatively high levels of PTSD across various groups of trauma survivors, including survivors of state-sponsored violence/political violence, criminal violence, traffic accidents, occupation related trauma, persons living with HIV/Aids and gender based violence (Kaminer & Eagle, 2010; Olley, Abrahams, & Stein, 2006; Rasool, Vermaak, Pharoah, Louw, & Stavrou, 2002). However, these findings are frequently based on small sample sizes, rely on self-report questionnaires and have methodological limitations that make it difficult to clarify the causal relationships between exposure to trauma and PTSD. The South African Stress and Health study (SASH) is the only study to date which has sought to examine PTSD prevalence rates using the DSM IV based CIDI interview on a nationally representative sample (Kaminer, Grimsrud, Myer, Stein, & Williams, 2008). The SASH study reported a very low rate of PTSD nationally compared to that reported in other countries - a life-time prevalence of 2.3% in the SASH study compared to a lifetime prevalence rate of 8.9% in the USA and 11.2% in Mexico; populations with similar trauma exposure rates to the South African population. It has been suggested that this

low rate may be in part be attributable to the problem of translation of standardised protocols and phrasing of questions (an issue discussed in detail in relation to this research in Appendix Q) as well as the subclinical symptoms and expressions of distress in response to trauma which fit more closely with other psychiatric diagnoses such as Somatic Disorders (Kaminer & Eagle, 2010; Kaminer, et al., 2008). In keeping with international findings, the SASH study found that for women rape carries the highest risk of PTSD, followed by intimate partner violence (IPV). On the basis of these findings Kaminer and Eagle (2010) note the urgent need for more research in order to develop a fuller understanding of the mental health needs of female survivors of sexual violence in South Africa, particularly longitudinal research which might help to clarify the causal relationships between exposure to a particular type of trauma and psychiatric symptoms in a context of socio-economic deprivation.

3.3.1.2 Other psychiatric disorders

3.3.1.2.1 Anxiety Disorders (excluding PTSD)

ASD was introduced into the DSM IV TM in 1994. The diagnosis sought to provide a description of an initial PTSD-like reaction which can be diagnosed within four weeks of the traumatic event, unlike PTSD which can only be diagnosed if symptoms have been present for more than one month. In addition, the diagnosis seeks to identify people at risk for the subsequent development of PTSD (Bryant, 2004). Whilst the diagnosis shares the PTSD symptomatology clusters, it also emphasises dissociative symptoms that are associated with chronic post-trauma symptomatology (Ozer, Best, Lipsey, & Weiss, 2003). Inclusion of the ASD into the DSM IV has been criticised because of the lack of empirical evidence to support the diagnosis, the assumption of an association between ASD and PTSD and for pathologising typical and transient post-trauma adjustment (Bryant, 2004). Evidence from a number of studies, none focused specifically on rape survivors, suggests that at least half of those diagnosed with ASD are at risk for developing PTSD. However, there is also evidence to suggest that at least half of those who develop PTSD do not initially meet the criteria for ASD (Elklit & Christiansen, 2010). These mixed findings are arguably, at least in part due to multiple complex pathways that link dissociation (a key characteristic of ASD) with PTSD (Bryant, 2004); dissociation has been argued to be a more significant PTSD risk factor for women and dissociation is higher in female rape survivors than in survivors of non-sexual assault (Elklit & Christiansen, 2010; Zoellner, Alvarez-Conrad, & Foa, 2002).

Nevertheless, there has been limited research on ASD amongst adult female survivors of rape. Findings from a cross-sectional study with 150 female victims of sexual assault suggest that whilst general distress and ASD are correlated, they represent two independent ways of reacting to trauma; dissociation significantly predicts ASD severity, whilst relational problems and functional impairment significantly predicts general distress (Elklit, Due, & Christiansen, 2009; Elklit & Shevlin, 2011). There appears to be only one study exploring the predictive power of ASD on PTSD for female rape victims (Elklit & Christiansen, 2010). The study found that while an absence of ASD symptoms was associated with a lowered risk of developing PTSD, only half of the women diagnosed with ASD went on to develop PTSD and that ASD failed to identify between 20% and 30% of the women in the sample who subsequently developed PTSD. Furthermore, in keeping with an earlier study of female victims of criminal assault and rape (Dancu, Riggs, Hearst-Ikeda, Shoyer, & Foa, 1996), dissociation was not a predictor of a subsequent diagnosis of PTSD. The authors conclude that ASD is of limited use in identifying women most at risk for developing PTSD.

Reviews of the literature on the psychological impact of rape regularly note that since the earliest studies (see for example: Burgess & Holmstrom, 1974; Calhoun, Atkeson, & Resick, 1982; Kilpatrick, Resick, & Veronen, 1981), the experience of fear and anxiety has been a prominent feature in the immediate psychological aftermath of rape for the majority of rape survivors (Campbell, Dworkin, et al., 2009; Ellis, 1983; Resick, 1993; Yuan, et al., 2006). While research suggests a marked reduction in the intensity of such feelings by 12 weeks post-rape, a number of survivors continue to experience increased levels of fear and anxiety, who are then more likely to meet the diagnostic criteria for an Anxiety Disorder. Earlier research suggested that adult female survivors of rape are at greater risk for developing Panic Disorder, Generalised Anxiety Disorder (GAD), Phobic Disorders, as well as Dissociative Disorders, all of which appear to be associated with the development of PTSD (see for example Darves-Bornoz, 1997; Nixon, Resick, & Griffin, 2004) .

Searches using PsycInfo, Medline and Google Scholar for more recent reviews (since 2000 to 2012) focused on Panic Disorder, GAD, and Phobic Disorders post-rape, did not yield any articles. A search for recent articles (not necessarily reviews) on Panic Disorder, GAD, and Specific, Social Phobia and Agoraphobia post-rape yielded a limited number of directly pertinent publications; in the main the link between these disorders and rape appears to have been subsumed under the now dominant diagnosis of PTSD, which can accommodate a number of aspects of the other Anxiety Disorders (Foa & Rothbaum, 1998). In addition, as

argued in *Section 3.4 Variables affecting recovery*, research on predicting the development of PTSD post-rape is now focused on explicating the multiple and complex pathways which may lead to a diagnosis of PTSD post-rape, whilst these models might well include the role of other psychiatric diagnoses in the development of PTSD post-rape, this forms only a small part of the greater picture. These research trends may account for the limited number of more current articles focused on the link between specific Anxiety Disorders (other than PTSD) and rape.

Research, including South African based research (Lochner, et al., 2002), suggests that there is an association between the development of OCD and exposure to traumatic life events (Cromer, Schmidt, & Murphy, 2006; de Silva & Marks, 1999) and between OCD and PTSD (de Silva & Marks, 2001). Building on prior literature linking female sexual assault survivors' sense of being contaminated and dirtied by the rape, which in turn prompts a persistent wish to wash, Fairbrother and Rachman's (2004) research provides evidence for a link between sexual assault and feelings of mental pollution, which may lead to OCD-related hand-washing, further associated with an exacerbation of PTSD symptomatology.

Subsequent research appears to confirm that there is a significant relationship between feelings of mental pollution and PTSD symptomatology, which was found to be fully mediated by negative trauma-related cognitions (Olatunji, Elwood, Williams, & Lohr, 2008). Furthermore, treatment resistant OCD appears to be associated with a co-morbid diagnosis of PTSD (Olatunji, et al., 2008).

3.3.1.2.2 Depression and suicidality

Research has consistently found that from adolescence onwards females are at significantly higher risk for depression than males (Dunn, Gilman, Willett, Slopen, & Molnar, 2012).

Exposure to interpersonal violence, in particular sexual abuse in childhood and sexual assault in adulthood, is associated with increased risk of depression, and given that females are more likely than their male counterparts to be victims of interpersonal violence (Gavranidou & Rosner, 2003), this differential exposure appears to play an important role in the disparity in the risk for depression between the genders (Dunn, et al., 2012).

Rape in adulthood is associated with both acute and chronic depressive symptoms, with evidence of a dose-response relationship between number of assaults and likelihood of a diagnosis of lifetime Major Depressive Disorder (MDD) or Dysthymic Disorder (Koss,

Bailey, et al., 2003; Najdowski & Ullman, 2011). Furthermore, research suggests that childhood sexual abuse elevates the risk for re-victimisation in adulthood (Claasen, Palesh, & Aggarwal, 2005; Maniglio, 2009) and that childhood sexual abuse is a predictor of persistent depression in women who are sexually assaulted or raped in adulthood (Cheasty, Clare, & Collins, 2002). Research findings also suggest that the risk for depression following childhood sexual abuse extends well beyond childhood into adulthood, with an additional increased risk of PTSD and suicidality in adulthood (Koss, Bailey, et al., 2003).

Despite evidence of high rates of PTSD/depression co-morbidity amongst survivors of interpersonal violence, particularly intimate partner violence, there has been limited research exploring the factors contributing to such co-morbidity (Taft, Resick, Watkins, & Panuzio, 2009). Thus it is not clear why some survivors of sexual assault develop PTSD alone whilst others develop symptoms of both PTSD and depression. Taft et al.'s (2009) findings suggest that a diagnosis of PTSD alone is associated with higher levels of childhood sexual abuse, whilst a comorbid diagnosis of PTSD and MDD is associated with more distorted trauma-related beliefs, dissociation, PTSD severity and depression severity and that co-morbidity is not a function of symptom overlap. Koss et al. (2003) argue that, given that since the literature suggests PTSD and depression are distinct and discriminable entities, depressive symptoms are more likely to be the result of the impact of victimisation on self-blame, guilt, shame and maladaptive thought processes more closely associated with rumination, which are distinct from the more intrusive symptoms associated with PTSD.

In a review of the literature on sexual assault victimisation and suicidal behaviour in women Ullman (2004) notes that both probability and non-probability sample studies suggest a strong link between sexual assault history and suicidal behaviour, with evidence for a cumulative effect of sexual victimisation and suicidal behaviour. The review notes that the link between sexual victimisation and suicide attempts occurs through a number of possible pathways. The risk of re-victimisation following childhood sexual abuse appeared to increase women's risk of co-morbid diagnoses of depression, PTSD and substance use, all significantly associated with suicidal behaviour, although only depression was found to be a significant predictor of suicide attempts. History of other adverse events and lifetime traumatic events were also predictive of suicide attempts. Subsequent research has in the main confirmed key associations and has attempted to more fully delineate multiple pathways resulting in suicidal ideation and suicide attempts in survivors of sexual assault (see for example Joiner, et al., 2007; Segal, 2009; Ullman & Najdowski, 2009a).

3.3.1.2.3 Alcohol and substance abuse and dependence

Ullman's (2003) critical review of field studies on the link between alcohol and adult sexual assault in women makes a distinction between drinking which may precede and contribute to the risk of sexual assault, and the development of drinking problems as a consequence of sexual victimization, and notes that in all likelihood there is a bi-directional relationship between the two. This is supported by evidence from cross-sectional studies which show that a lifetime history of heavy drinking in women is associated with increased risk of reporting lifetime sexual victimisation; an association found to be stronger amongst adult female survivors of childhood sexual abuse. This association may, to some extent, explain the increased risk of subsequent re-victimisation amongst this group of women. Ullman (2003), however, observes that at the time of her review, in the main, research seems to suggest that sexual assault is related to an increased risk of later drinking problems rather than drinking leading to sexual assault, and cites the longitudinal study conducted by Kilpatrick, Acierno, Resnick, Saunders, & Best (1997) as providing the best evidence of this.

There is a high co-morbidity between PTSD and alcohol problems. Ullman (2003) cites the work of Nishith, Mechanic and Resick (2000) as providing evidence for childhood sexual abuse contributing indirectly to PTSD symptoms through adult rape. Ullman refers to evidence suggesting that drinking problems may be more likely among sexually victimised women with PTSD. This observation seems to be supported by subsequent research conducted by both Ullman, Filipas, Townsend and Starzynski (2005, 2006a) and Messman-Moore, Ward and Brown (2009), which indicates that PTSD precedes Substance Abuse Disorders. In addition, the research suggests that subsequent problem-drinking is associated with histories of prior trauma, drinking to manage distress and tension-reduction expectancies which are congruent with self-medication theory and not with PTSD symptomatology.

Self-medication post-rape through use of prescription drugs such as sedatives, tranquilisers and antidepressants, has been less well researched. There is evidence though, to suggest that lifetime PTSD, other forms of substance use/abuse, and a history of drug or alcohol-facilitated rape are significantly associated with increased likelihood of non-medical use of prescription drugs (NMUPD) (McCauley, et al., 2009). Campbell and Sturza (2005) note that NMUPD by rape survivors raises the question of whether survivors are self-medicating or whether survivors' post-rape trauma is being medicalised. The majority of survivors in their study did not disclose the assault to medical practitioners for fear of the reactions they might

receive and were prescribed medication for depression and physical health difficulties. The minority of women survivors who did disclose the assault to their medical practitioners were more likely to have been raped by a stranger with a weapon and to have depressive symptoms. Arguably, these rape scenarios are more likely to be defined as rape by the broader society, including the doctors the women were seeing, who then prescribed medication for treatment of the survivors' symptoms.

3.3.1.2.4 Somatoform Disorders

There is now a substantial body of research documenting that a history of sexual assault in either childhood or adulthood is associated with increased rates of physical health problems and increased utilisation of medical services in women (M. B. Stein, et al., 2004). Research suggests a dose-response relationship; multiple assaults or more severe assaults are associated with worsened physical health outcomes (Campbell, Greeson, Bybee, & Raja, 2008; Ullman & Brecklin, 2003). Increased health care seeking is moderated by a range of factors. Studies based on representative samples suggest that both demographic factors and assault details influence the degree to which health care services are accessed. Having a higher level of education, being older and a member of a minority group, have been associated with greater accessing of health care services (Ullman & Brecklin, 2003). With regards to assault details, evidence of physical injuries, being a victim of stranger rape and reporting of the assault to the police, were associated with a greater likelihood of accessing health care services. It is noteworthy that multiple victimisation is associated with higher rates of PTSD, which may in turn increase lifetime service-seeking (Campbell, et al., 2008; Ullman & Brecklin, 2003). The aforementioned notwithstanding, the literature suggests that women who have been sexually assaulted are vulnerable to experiencing a range of somatic symptoms (S. L. Martin, et al., 2011), including but not limited to headaches (Golding, 1999), gastrointestinal difficulties, chronic pelvic pain and sleep disturbances (Clum, Nishith, & Resick, 2001; Frayne, et al., 1999; Krakow, et al., 2002).

Paras et al.'s (2009) systematic review of longitudinal (case-cohort and cohort) studies explored the link between sexual abuse and a lifetime diagnosis of Somatic Disorders, and found that sexual assault was associated with a lifetime diagnosis of non-specific chronic pain, functional gastrointestinal disorders, psychogenic seizures and chronic pelvic pain. When analysis was restricted to studies in which sexual abuse was defined as rape (occurring in either childhood or adulthood), significant associations were observed between rape and

the lifetime diagnosis of fibromyalgia, chronic pelvic pain and functional gastrointestinal disorders. Hauser, Kosseva, Uceyler, Klose and Sommer's (2011) systematic review and meta-analysis of studies exploring the link between emotional, physical and sexual abuse in Fibromyalgia Syndrome (FMS) found significant associations between FMS and self-reported childhood and sexual abuse, which included rape. Both reviews do, however, note that while there does appear to be an association between sexual abuse, including rape, and somatic complaints, the findings are compromised by a lack of rigour, and general poor study quality.

A systematic review of the literature focused on sleep disturbances among victims of sexual abuse has highlighted that sleep disturbances are prevalent in survivors of sexual abuse as compared to non-abused samples (Steine, et al., 2012). Rape is associated with a higher incidence of sleep disturbance symptoms - in particular nightmares, sleep paralysis, nightly waking, restless sleep and tiredness. The reviewers do point out, however, that it is not possible to establish whether the sleep disturbances are a direct result of the sexual abuse or are caused by other factors such as the use of alcohol or psychotropic medication or psychiatric illnesses such as depression or PTSD.

Several studies have demonstrated that PTSD and depression are mediating factors in the relationship between trauma exposure and reports of elevated health symptoms in women (Kimerling, Clum, & Wolfe, 2000). Schnurr and Green (2004) have found that PTSD functions as a mediator; compromising women's physical health through its impact on their psychological well-being. Understanding the bio-psychological mechanisms by which PTSD affects health is a growing focus in this field (Woods, et al., 2005). In a study of adult victims of sexual assault obtaining medical forensic exams Groer, Thomas, Evans, Helton and Weldon (2006) found that victims had significantly compromised immune/inflammatory functioning compared to non-assault controls, which is associated with chronic inflammatory disorders, chronic pain syndromes and recurrent pain symptoms.

Assault related injuries and physical health risks: While assault-related injuries and physical health risks do not constitute psychiatric conditions per se, given the seriousness of these difficulties and the strong likelihood that they will, to some degree, impact on mental health, it seems important to attend to this aspect of rape trauma, which is arguably best addressed within the section on somatic complaints.

Approximately a third of rape survivors sustain a number of physical injuries (Tjaden & Thoennes, 2000). In the main such injuries include scratches, lacerations, welts, bruises, broken bones, dislocated joints, head and spinal cord injuries, and vaginal and perineal trauma and anorectal trauma (Goodman, Koss, & Russo, 1993; S. L. Martin, et al., 2011)⁷. Sommers' (2007) review of genital injuries post-rape found such injuries to be reported at widely divergent rates; from 5% for studies using visual examination to 87% for studies using colposcopic techniques. The latter finding is in keeping with a subsequent review of the literature which found that with colposcopic examination 70.6% of survivors had sustained rape-related genital injuries (Weaver, 2009).

A number of studies have sought to establish the prevalence of sexually transmitted infections following sexual assault. Most commonly researched infections are gonorrhea, chlamydia, syphilis, herpes simplex virus, human papillomavirus and human immunodeficiency virus (HIV) (S. L. Martin, et al., 2011). A comprehensive review of the medical literature on the prevalence of Sexually Transmitted Diseases (STDs) in victims of assault concludes that prevalence rates vary widely depending on the population studied and risk factors for STDs. This variability notwithstanding, and despite low follow-up rates amongst survivors of sexual violence, the authors suggest that preventative treatment for STDs should be available in most instances (Reynolds, Peipert, & Collins, 2000).

In keeping with current World Health Organisation (WHO) guidelines recommending post-exposure prophylaxis (PEP) for individuals at risk of acquiring HIV, the provision of anti-retroviral therapy (ART) to reduce the risk of HIV transmission following sexual assault has become a central feature of post-rape care (World Health Organisation, 2007). Research suggests that the fear of acquiring HIV is a primary concern for survivors of sexual assault (Resnick, et al., 2002), but that adherence to PEP treatment is generally lower following post-assault as compared to consensual sexual exposure (Chacko, Ford, Sbaiti, & Siddiqui, 2012). In their systematic review and meta-analysis assessing adherence to PEP amongst victims of sexual assault, Chacko et al. (2012) found adherence to be lower in developed country

⁷ Martin et al. (2011) report that in 2005 3.7% of all female homicides in the USA were rape homicides. Abrahams et al.(2008) report that in South Africa in 1999 16.3% of all female homicides were rape homicides.

settings compared to developing country settings; a finding attributed to higher awareness of risk in settings where HIV prevalence is higher. Nonetheless, they note that lack of adherence was high across all studies and occurred at different points along the PEP care pathway, but few reasons were given for defaulting. Whilst toxicity of ARV therapy may to some extent explain non-compliance, studies suggest that in the aftermath of rape a number of factors may impact on adherence rates, including degree of trauma, level of education, perceived degree of risk and the meaning attributed to rape and HIV within the broader social context (Abrahams & Jewkes, 2010; Garcia, et al., 2005).

Since 2002, when the South African government mandated the provision of PEP to survivors of rape at all government clinics and hospitals, South African research in this area has burgeoned (Kim, Martin, & Denny, 2003). A review of the current state of provision of non-occupational post-exposure prophylaxis following rape in sub-Saharan African countries over the last 10 years observes that while survivors of rape perceive provision of PEP an important part of post-rape care, adherence remains relatively low – completion rates ranged between 12 – 65%, with a mean of 40% (Draughon & Sheridan, 2011).

In their review, Draughon and Sheridan (2011) note that research findings - all drawn from research studies conducted in South Africa (Carries, Muller, Muller, Morroni, & Wilson, 2007; Christophides, Muirhead, Jewkes, Penn-Kekanna, & Conco, 2006; Kim, et al., 2009; Vetten & Haffeejee, 2005a) - indicate that survivors may initially need more information with regards to PEP and subsequent ongoing educational and psychological/counselling support through the course of treatment, a finding supported by a subsequent South African study (Arend, Maw, de Swardt, Denny, & Roland, 2013; Roland, et al., 2012). The need for further research explicitly focused on the way in which mental health might impact on adherence is noted in the review, with particular reference made to Abrahams et al.'s (2010) finding that there were high levels of depression in their sample, which has been found to impact on adherence (Mills, et al., 2006).

Gynaecological, reproductive and sexual health: Research on the frequency with which a single act of forced intercourse results in pregnancy per incident, suggests a range of between 1% and 5% (Goodman, Koss, & Russo, 1993; Holmes, Resnick, Kilpatrick, & Best, 1996) - the likelihood of conception with a single act of intercourse (not forced) has been estimated to be 3% (Wilcox, Dunson, Weinber, Trussell, & Baird, 2001). Survivors who access medical

health services in the immediate aftermath of rape are likely to receive medication to prevent pregnancy, but for survivors who do not report the rape the fear of being pregnant as a result of the rape is likely to contribute to psychological distress, and if there is a pregnancy the choices with regard to termination, or carrying to term, or keeping the child or not are likely to cause a great deal of psychological anguish. The limited research on the psychological impact of pregnancy and/or birth of a child resulting from rape is primarily focused on war rape, which attests to the high degree of trauma associated with the pregnancy, birth of a child and longer term consequences of raising a child conceived through rape (Erjavec & Volčič, 2010; Skjelsbæk, 2006).

With regard to sexual functioning, research has reported both decreased sexual activity post-rape and increased risk-taking sexual behaviours post-rape (Campbell, Sefl, & Ahrens, 2004). A comprehensive review of the literature from 1970 to the late 1990s found an association between rape and a decrease in subsequent sexual activity, which can continue for at least one year post-rape (van Berlo & Ensink, 2000). In addition, the review reported evidence of diminished sexual satisfaction, and inhibited arousal and desire. These difficulties were understood to be informed by psychological (shame, guilt and emotional distress) and psychiatric (depression, PTSD) sequelae of rape. Weaver's (2009) review reports on a number of subsequent studies, which provide evidence for an association between medically explained and unexplained reproductive and sexual problems (including painful menstruation, irregular menstrual periods, lack of interest in sex, inability to become sexually aroused or stay sexually aroused, inability to orgasm, and pain during sexual intercourse) and rape.

The review also points to a link between increased rates of high-risk sexual behaviours (including having multiple sexual partners, reduced likelihood of use of condoms, or negotiating safe sex, drug and alcohol abuse at the time of sexual contact) and a history of sexual assault (Weaver, 2009). Weaver notes that there was only one study on the interconnection between sexual morbidity post-rape and psychological functioning; Sengs, Clark, McCarthy and Ronis (2006) found that a diagnosis of PTSD was associated with increased risk for of all ICD-9 categories of diseases and that co-morbidity with depression or a Dissociative Disorder, or Borderline Personality Disorder (BPD) raised risk in a dose-response pattern. Weaver (2009) argues that over and above the more obvious link between mental disorders and negative health behaviours such as high risk sexual behaviours, there

may be a more direct physiological link between acute psychiatric diagnoses such as PTSD, depression and generalised anxiety and reproductive and sexual health problems, which requires further investigation.

3.3.1.2.5 Eating Disorders

Research suggests that a range of traumatic experiences may be associated with Eating Disorders (Smyth, Heron, Wonderlich, Crosby, & Thompson, 2008). In particular, a consistent link between childhood sexual abuse and Eating Disorders has been documented (Smolak & Murnen, 2002). Research on the link between sexual trauma in adulthood and current eating disorder symptomatology has received less attention and results are less consistent. Evidence suggests that women with a history of both childhood sexual abuse and adult rape have the highest levels of eating pathology (Wonderlich, et al., 2001), and that rape in adulthood is strongly associated with Eating Disorders (Jonas, et al., 2011) even when past history of familial trauma or childhood sexual abuse is controlled for (Ackard & Neumark-Sztainer, 2002; Faravelli, Giugni, Salvatori, & Ricca, 2004; Fischer, Stojek, & Hartzell, 2010). A review examining the co-morbidity between Eating Disorders and Anxiety Disorders concludes that Anxiety Disorders are significantly more frequent amongst those diagnosed with an Eating Disorder, with some limited evidence for Anxiety Disorders predating the Eating Disorder diagnosis; the strongest link appears to be between a diagnosis of OCD and an Eating Disorder, with some evidence to suggest an association between PTSD and an Eating Disorder (Swinbourne & Touyz, 2007).

3.3.1.2.6. Psychosis

In both clinical and community populations there is a significant association between self-reported trauma and psychosis. Studies based on clinical samples have found high rates of childhood sexual abuse amongst patients diagnosed with Psychotic Disorders, and in large community samples a dose-response relationship between total number of different traumatic experiences and a diagnosis of psychosis has been observed (Elklit & Shevlin, 2011). One of the hypotheses suggested to explain the association between trauma and psychosis is that psychosis may emerge as a reaction to exposure to trauma (Morrison, Frame, & Larkin, 2003), and that such a reaction is facilitated by dissociative post-trauma symptoms, which undermine the individual's connection with the real world and hamper reality testing (Kilcommons, et al., 2008). There is an overlap between psychotic symptoms and symptoms

associated with PTSD, particularly in relation to avoidance and negative symptoms as well as intrusions. This has fuelled debate as to whether PTSD and psychosis following trauma occur along a single continuum, or whether they are distinct but interacting phenomena, with the latter constituting a subtype of Psychotic Disorders which are trauma-induced (Morrison, et al., 2003; Resick, 1993).

Research focused on victims of rape in adulthood suggest that after controlling for previous diagnoses of psychosis and other demographic variables, rape increases the likelihood of a diagnosis of psychosis, suggestive of an etiological link between trauma and psychosis (Elklit & Shevlin, 2011). Furthermore, the severity of the rape has been found to be positively associated with the severity of the psychotic experiences, and the severity of PTSD symptomatology has been positively associated with the severity of delusional states and a predisposition to hallucinations (Kilcommons, et al., 2008; J. Scott, et al., 2007). Dissociative responses and negative appraisals appear to predispose victims of rape to psychosis (Kilcommons, et al., 2008). Childhood sexual abuse was found to be a significant predictor of auditory and tactile hallucinations, whilst rape in adulthood is associated with hallucinations, delusions – particularly somatic delusions such as delusional parasitosis - and thought disorders (Read, Agar, Argyle, & Aderhold, 2003).

3.3.2 Psychological difficulties

3.3.2.1 Self-esteem

Early reviews on the psychological impact of rape consistently refer to research on the negative impact of rape on the survivor's self-esteem, with particular emphasis of feelings of worthlessness and damage (Burt & Katz, 1985; Gilmartin-Zena, 1985; Resick, 1993). In these reviews, lowered self-esteem is frequently associated with high levels of self-blame amongst survivors (with particular reference to the work of Janoff-Bulman, 1979; Janoff-Bulman, 1992), which in turn is argued to be related to the attributions, cognitive appraisals and causal explanations survivors draw on in the aftermath of rape (M. Harvey & Herman, 1992; Koss & Harvey, 1991; Lenox & Ganon, 1983).

More recently, the association between self-blame and negative mental health outcomes of rape, in particular PTSD, Depressive Disorders, Substance Use Disorders and poorer coping strategies, such as reduced likelihood of accessing social support, has fuelled research focused on explicating the factors which contribute to increased self-blame amongst

survivors of rape (Campbell, Dworkin, et al., 2009; Miller, et al., 2007; Moor & Farchi, 2011). These factors include the role of rape myth acceptance in increasing self-blame (building on the early work of Burt (1980) a substantial body of subsequent research in this area has emerged, for reviews see Lonsway and Fitzgerald (1994), Suarez and Gadalla (2010) and Grubb and Turner (2012), though the focus is not on survivors of rape per se), victim-blaming from personnel within police, legal and medical systems (Koss, Bachar, & Hopkins, 2003; Stanton, Lochrenberg, & Mukasa, 1997), and the ways in which a complex matrix binding race, gender, class and socio-economic status engender shame and self-guilt within rape survivors (Neville, Heppner, Oh, Spanierman, & Clark, 2004; Womersley, Maw, & Swartz, 2011).

3.3.2.2 Social adjustment

Early reviews outlining the psychological impact of rape routinely refer to the negative impact rape has on social adjustment, where social adjustment refers broadly to the ability to function effectively at work, financially, in social and leisure activities, within intimate relationships and the immediate family, as well as within the extended family (Burt & Katz, 1985; Ellis, 1983; Koss & Harvey, 1991; Resick, 1993; Stekeete & Foa, 1987). Essentially, the aforementioned reviews cite research (with particular reference to Resick, Calhoun, Atkeson, & Ellis, 1981) highlighting the negative impact of rape in all areas, but with some variability noted in relation to evidence of impairment in intimate relationships and functioning within the immediate family.

Searches using PsycInfo, Medline and Google Scholar for more recent literature (2000 to 2012) on social adjustment post-rape, and more specific searches relating to social, work, family and marital adjustment, yielded only a handful of relevant articles. With reference to social adjustment, an article by Golding, Wilsnack and Cooper (2005), found that across six independent population surveys, people who had been sexually assaulted or raped were consistently less likely than others to be married, to report weekly contact with friends or relatives, and they report less emotional support from friends, families or a spouse. However the correlational data precluded any inference being made about a causal relationship, though it was suggested that the findings highlighted the need for a focus on increasing social support for survivors of sexual assault or rape. Connop and Petrak's (2004) qualitative study explored the impact of sexual assault or rape on heterosexual relationships and noted the difficulties male partners had in providing support to their female partners post-assault or

post-rape, the impact of the assault or rape on the couple's sexual relationship, and the male partner's issues of anger and blame in relation to the assault or rape.

There have been a limited number of studies on the financial costs (both tangible and intangible) of sexual violence, all conducted in the USA, with estimates ranging from \$ 319.7 million annually (a figure which includes medical and mental health costs and lost productivity) to \$127 billion annually (a figure which includes tangible and intangible costs for sexual violence of both men and women) annually (S. L. Martin, et al., 2011).

In the main it would seem that the constituents of the broader concept of social adjustment have been medicalised through incorporation into psychiatric diagnoses, in particular MDD, PTSD - with particular reference to Criterion F: The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning (American Psychiatric Association, 2000) - GAD, and phobias and/or are more fully explored in relation to the concept of social support and its impact on recovery, which is reviewed in the second part of this chapter.

3.4 Variables affecting recovery

Despite what the previous section suggests about the highly pathogenic nature of rape, it is clear that not all survivors react in the same way. While it seems evident that most survivors will experience distress in the acute phase, many do not develop longer standing difficulties. In order to make sense of this, research has sought to understand what variables may influence outcome. These variables have been routinely categorised into pre-assault, assault and post-assault variables. Pre-assault variables comprise socio-demographics, prior psychological functioning, life stressors and cognitive working models. Assault variables relate to acquaintanceship status of the perpetrator(s) in relation to the victim, degree of violence used, and within-crime reactions on the part of the victim. Post-assault variables can be further divided into survivor variables – initial reaction, participation in the criminal justice system, cognitive appraisals and attributions and evidence of resilience and post traumatic growth – and contextual variables, which encompass socio-economic and cultural context.

3.4.1 Pre-assault variables

3.4.1.1 Demographics

Research suggests that socio-demographic variables such as age, race/ethnicity, level of education, employment status, and marital status play a limited role in relation to post-rape impact and recovery. With regard to age, recent reviews of the literature suggest that women who are raped at a younger age may be more vulnerable to developing suicidal ideation, depression and PTSD than their older counterparts, though some research has found no effect of age on post-rape sequelae, and similar equivocal findings have been reported for level of education in relation to post-rape impact (Campbell, Dworkin, et al., 2009; S. L. Martin, et al., 2011). In general, no association has been found either between psychiatric and/or psychological impact post-rape, and race/ethnicity, marital or employment status (Campbell, Dworkin, et al., 2009; S. L. Martin, et al., 2011). It is noteworthy, however, that these findings are based on research conducted primarily in the USA, whose demographics contrast significantly with those in developing countries, including South Africa. There is a distinct lack of data on the role of socio-demographic variables on the psychological impact of rape amongst survivors in South Africa.

3.4.1.2 Prior history of trauma and prior history of psychiatric illness

Exposure to multiple traumatic experiences, in particular childhood sexual abuse and childhood physical abuse, and recency of sexual victimisation have been found to be associated with greater risk of sexual re-victimisation (Claasen, et al., 2005). Research suggests that childhood sexual abuse is the most significant risk factor leading to adult sexual victimisation, but that the connection is mediated by adolescent sexual assault, in that childhood sexual abuse increases the risk of adolescent assault, which in turn predicts adult sexual victimisation. (Koenig, Doll, O'Leary, & Pequegnat, 2004). Re-victimisation is, in turn, associated with the development of psychiatric disorders, in particular higher levels of depression and anxiety, more specifically PTSD (S. L. Martin, et al., 2011; Messman-Moore, Long, & Siegfried, 2000; Ullman, Filipas, Townsend, & Starzynski, 2007). In addition, there is evidence of greater general distress, difficulties in interpersonal relationships, coping, self-representations, self-regulation and a greater degree of self-blame and guilt post-rape (Claasen, et al., 2005).

A recent meta-analysis found childhood sexual abuse to be a non-specific risk factor for the development of mental health difficulties (Hillberg, Hamilton-Giachritsis, & Dixon, 2011). In

addition, a history of psychiatric illness (particularly, Schizophrenia, Depressive Disorders, and Dissociative Disorders) is associated with increased risk of sexual assault/rape, as is intellectual disability (Ullman & Najdowski, 2011). The findings, with regards to the relationship between a prior history of mental health difficulties and post-rape mental health sequelae, are equivocal. Findings from a number of studies suggest an association between a history of psychiatric illness pre-assault and increased levels of distress post-rape, including a diagnosis of PTSD, whilst other studies have found no evidence for such an association (Briere & Jordan, 2004; Campbell, Dworkin, et al., 2009). Campbell et al. (2009) argue that these inconsistent findings may at least in part, be attributable to a difference in emphasis between the two bodies of research; studies which provide evidence for an association, have focused on specific mental health variables, in particular prior histories of suicide attempts, substance use, anxiety attacks and OCD, and their link to post-rape distress, whilst studies finding no association have focused on more general psychiatric histories, such as visits to psychiatrists and psychiatric admissions.

3.4.1.3 Personality factors

There has been limited research on the association between long-standing personality traits and personality structure, and development of psychiatric illness and psychological distress post-rape. Results from a large nationally representative sample examining co-morbidity of PTSD and BPD, show that there is a high degree of lifetime co-occurrence between the two disorders, which is not entirely overlapping (Pagura, et al., 2010). It is noteworthy though, that sexual trauma (particularly childhood sexual abuse) is significantly more likely amongst individuals with PTSD and BPD, as compared to those with PTSD only (but not BPD only) (Pagura, et al., 2010). This association has informed arguments for viewing BPD as part of a post-traumatic stress syndrome, which Herman (1992b) has argued might best be captured as a separate diagnosis of Complex Post-traumatic Stress Disorder. With regards to the association between a prior diagnosis of BPD and post-assault pathology, there is some research to suggest that survivors of rape with BPD or BPD characteristics are generally more symptomatic than survivors without that symptomatology, and while survivors diagnosed with BPD or BPD characteristics benefit from treatment, post-treatment they were less likely to achieve sustained good end-state functioning (Feeny, Zoellener, & Foa, 2002).

Research within the psychoanalytic tradition suggests that patterns of early attachment and early trauma set particular templates in place, which will not only influence vulnerability to

re-victimisation in adulthood (as discussed in the previous section), but also inform responses and adjustments to trauma in adult life (Brothers, 1995; Fonagy, 2002; Kalched, 1996; Sinason, 2011). With a few exceptions (see for example Garland, 1998), this body of work does not focus specifically on the link between early history and adjustment post-rape in adulthood.

Drawing on the theory of personality structure, Cox, MacPherson and McWilliams's (2004) research appears to confirm that in a nationally representative sample of men and women who had experienced one or more traumatic events, elevated levels of neuroticism and self-criticism were significantly associated with PTSD. After controlling for the five types of trauma significantly associated with PTSD amongst women (which included rape), and factors identified as significantly associated with PTSD in women (lifetime Affective Disorder and history of multiple trauma), neuroticism remained significantly associated with PTSD in women.

3.4.2 Assault variables

3.4.2.1 Relationship status of perpetrator and survivor

Research findings on the association between relationship status between the rapist and survivor and negative mental health sequelae post-rape are equivocal and suggest that the link may be mediated by several factors (S. L. Martin, et al., 2011). Broadly speaking, it would seem that in comparison with rape by an acquaintance, a rape by a stranger is associated with greater PTSD symptomatology, depression and general trauma. Rape by a relative or partner may be more predictive of PTSD (Campbell, Dworkin, et al., 2009; Feinstein, Humphreys, Bovin, Marx, & Resick, 2011; Temple, Weston, Rodriguez, & Marshall, 2007). Ullman, Filipas, Townsend and Starzynski (2006b) argue that these differences may be because rapes perpetrated by strangers, relatives or partners appear to be more violent and involve a greater degree of perceived life threat than acquaintance rape. In addition, differences in symptom severity based on victim-offender relationship may be informed by the ways in which formal and informal systems react to different types of assault; stranger rape appears to elicit greater negative social reaction (Ullman, et al., 2006b). It is noteworthy that cognitive appraisals and coping strategies, and social responses to rape (all of which are post-assault variables) are in the main stronger predictors of PTSD than the relationship of the perpetrator and survivor (Gutner, Rizvi, Monson, & Resick, 2006; Ullman, et al., 2006b).

3.4.2.2 Degree of violence

The effect of the level of violence perpetrated in the course of the assault - including weapon use, threats to life and degree of injuries sustained during the assault – on subsequent degree of trauma is not clear (Campbell, Dworkin, et al., 2009). Studies comparing rapes perpetrated by gangs/multiple perpetrators as opposed to an individual perpetrator, offer some evidence to suggest that victims of gang rapes suffer more severe outcomes post-assault, though this may be in part attributable to an increased likelihood of negative social reactions towards victims of gang rape (Ullman, 2007b). Furthermore, it would appear that perceived dangerousness of the assault and perceived threat to life is more closely associated with increased PTSD symptomatology than the actual degree of violence or injuries sustained (Ullman & Filipas, 2001b; Ullman, et al., 2006b), and gang rapes may be perceived as more dangerous and life threatening than rapes perpetrated by an individual.

3.4.2.3 Within-crime victim reactions

The question of whether the way in which a victim responds during the course of the assault has a bearing on the nature and degree of post-assault impact has not been unequivocally answered. There is some evidence to suggest that in the aftermath of rape women who actively resisted the rape, regardless of whether such resistance was successful in preventing completion of the rape or not, have tended to feel better about themselves and to experience less depression than women who did not actively resist the rape (Ullman, 2007a).

Situational factors (such as time of the attack, use of weapons and relationship to the perpetrator) appear to be related to physical resistance, verbal resistance, as well as lack of resistance (Clay-Warner, 2003). In addition, victim alcohol or substance use before or during rape is commonly associated with low levels of victim resistance, and it has been postulated that women's alcohol or substance use may contribute to greater self-blame and poorer psychological health post-rape (Campbell, Dworkin, et al., 2009; Koss, Figueredo, & Prince, 2002b). Findings in this regard suggest a relatively complicated causal pathway between alcohol or substance-induced impairment or incapacitation during rape and psychological aftermath. Thus, some research reports a non-significant relationship between alcohol or substance use at the time of the rape, and post-rape emotional responses (Clum, Nishith, & Calhoun, 2002). Some research suggests that there is little difference between incapacitated and forcible rape with regards to the intensity of emotional distress or PTSD symptomatology in the aftermath of rape. Survivors of incapacitated rape tended to attribute greater

responsibility to themselves for the rape, are less likely to disclose to anyone post-rape, are more likely to receive negative social judgements, have a greater sense of stigma and self-blame, and adopt more maladaptive coping strategies such as avoidance and rumination and increased alcohol use (Brown, Testa, & Messman-Moore, 2009; Littleton, Grills-Tauchel, & Axsom, 2009). Finally, there is research which suggests that forcible rape, incapacitated rape and drug-alcohol facilitated rape, are all associated with increased risk for PTSD and depression (Zinzow, et al., 2010). Women with rape histories involving both substance facilitation and forcible tactics, evidence the highest risk for psychiatric disorders, in particular PTSD, MDD and Alcohol Abuse, in comparison to rape victims where there was no force or threat of force and/or the victim was not intoxicated or incapacitated by alcohol and/or substances (Zinzow, et al., 2012).

3.4.3 Post-assault variables

3.4.3.1 Survivor variables

3.4.3.1.1 Initial reaction and coping strategies

As noted previously in relation to the development of ASD (*Section 3.3.1.2.1 Anxiety Disorders*), there has been research on whether there is an association between the degree and intensity of initial distress post-rape, and longer term impact, which has yielded mixed results. Gilboa-Schechtman and Foa's (2001) findings suggest that rape survivors with delayed peak reactions evidenced more severe pathology 12 weeks post-rape than did rape survivors with early peak reactions. Subsequent research suggests that there may be links between the types of coping strategies adopted by survivors post-rape and the development and persistence or remittance of psychiatric and psychological symptoms post-rape (Klump, 2006).

Research has made a distinction between maladaptive and adaptive coping strategies. Maladaptive strategies such as avoidance, withdrawal, disengagement and substance use have been associated with longer recovery time and higher levels of depression, anxiety, fear and PTSD, whilst adaptive strategies, such as accessing social support and expressing emotions have been found to be associated with faster recovery, and less depression, fear, anxiety and PTSD (Campbell, Dworkin, et al., 2009; Frazier, Mortensen, & Steward, 2005; Gutner, et al., 2006; Littleton & Breifkopf, 2006; Najdowski & Ullman, 2009; Ullman, Townsend, Filipas,

& Starzynski, 2007). Nonetheless, there have also been mixed findings in this regard; for example, some research suggests that the type of social support received impacts on adjustment, rather than seeking out social support per se, and that particular approach strategies can lead to more distress (Campbell, Dworkin, et al., 2009). In addition, avoidant strategies such as keeping busy, and suppressing negative thoughts, might be beneficial in the immediate aftermath of rape, and have been found to be associated with less distress (Campbell, Dworkin, et al., 2009; Frazier & Burnett, 2001; S. L. Martin, et al., 2011). These findings point to the importance of recognising that the type of coping strategies adopted by survivors are influenced by several broader factors including time, situation, context and environmental support (Campbell, Dworkin, et al., 2009).

3.4.3.1.2 Cognitive appraisals and attributions

Interest in the ways in which the cognitive processing of the rape by the survivor impacts on post-rape functioning has grown exponentially over the past three decades. Broadly speaking, this large body of research focuses on the role of perceived control in relation to impact, the way in which the survivor conceptualises and makes sense of her experience, the meaning attributed to the experience, and the way in such meanings are socially constructed.

Findings from earlier research suggest that rape survivors who believed they had control over the outcomes of events in their lives had lower rates of depression and PTSD six months post-rape than women with lower levels of perceived control (Foa, Zinbarg, & Rothbaum, 1992; Regehr, Caddell, & Jansen, 1999). More recently Frazier, Berman and Steward (2002) developed a temporal model predicting that person (equivalent to behavioural self-blame) and vicarious (rapist blame) past, present and future control would be differentially related to post-trauma distress. Subsequent longitudinal studies appear to confirm that personal past and vicarious past control result in higher distress in survivors, whilst a belief in control over the recovery process (present control) and future control is most adaptive (Frazier, 2003; Frazier, Steward, & Mortensen, 2004). These findings have been understood to be related, in part, to an association between past control and social withdrawal, and present control and less withdrawal, and more cognitive restructuring (Frazier, et al., 2005).

It has been suggested that the propensity for self-blame amongst rape survivors (as discussed in *Section 3.3.2.1 Self-esteem*, of this chapter), is a way of maintaining a sense of control over overwhelming events. Janoff-Bulman (1979) has proposed that this type of self-blame is

behavioural and adaptive as opposed to characterological self-blame, which she suggests is not adaptive. More recent research suggests that both types of self-blame contribute to maladaptive beliefs, and these beliefs are associated with a history of trauma and exposure to violence and prior psychiatric difficulties (Koss & Figueredo, 2004a). Maladaptive beliefs are, in turn, associated with greater general distress and higher levels of PTSD, suggesting that processing beliefs and reducing a preoccupation with attributing causes may minimise negative mental health outcomes post-rape (Koss, et al., 2002b). With regards to the link between adjustment post-rape and survivors' attempts at making meaning of their traumatic experiences, research findings suggest that a search for meaning can only be healing if such meaning can be found; being preoccupied with a search for meaning when no such meaning can be found appears to worsen the recovery process (Ullman, 2007c).

As noted in the previous chapter (*Section 2.6 Feminism, trauma and the psychological impact of rape*), feminist critiques located within a social constructionist paradigm have questioned and challenged the dominance of the medicalised and psychologised way in which the impact of rape has been conceptualised. It is argued that both the impact of rape and meaning-making post-rape is profoundly informed by a broader cultural context and frameworks of meaning that support and underpin normative heterosexuality, which provides what Gavey (2005) has termed the cultural scaffolding for rape. Gavey and Schmidt (2011) argue that in addition to the influence that a range of discourses relating to gender, sexuality, responsibility and rape will have in shaping and informing responses to and by women who have been raped, there is also now a discourse about the impact of rape. Broadly speaking this discourse asserts that rape is traumatic, has a negative psychological impact which can be measured, recovery must be actively pursued (often with the help of mental health professionals) and women whose responses do not fit this discourse are in a dangerous state of denial, (Gavey, 2008; Gavey & Schmidt, 2011). Gavey and Schmidt (2011) suggest that this leads to a false epistemological certainty, which precludes a more comprehensive understanding of the multiple ways in which survivors of rape may respond to and make sense of their experience, and the ways in which these responses are informed and shaped by a broader social and political context, which both supports and enables a rape-prone culture.

Interestingly, research suggests that whether women label their experience as rape or not may have little import on whether post-rape distress is reported and what form that distress may take (Kahn, Jackson, Kully, Badger, & Halvorsen, 2003; McMullin & White, 2006). It would seem that what is of more importance, is the way in which survivors understand and make

sense of their experience, and this is informed by a complex set of both individual and contextual factors. South African research in this area consists of predominantly post-graduate theses, which have reported on the ways in which rape survivors' narratives, whilst interpretable through a psychologised (PTSD) lens, also extend beyond that paradigm, requiring a social constructionist reading of the ways in which the survivors describe their experiences. In these studies descriptions provided by survivors appear to draw on multiple discourses, including those of patriarchy and heterosexuality, which are embedded within the broader socio-cultural contexts within which survivors have both experienced the rape and its aftermath (Booley, 2007; de Swardt, 2006; Edross, 2008, 2010; Womersley & Maw, 2009).

3.4.3.1.3 Resilience and post-traumatic growth

The question of what the impact of rape on mental health is has focused almost exclusively on the pathogenic effects of rape. There is, however, a growing interest in the diverse ways in which survivors show not only resilience (Bonnano, 2004; M. Harvey, 1996) in the face of psychological trauma, but also evidence post-traumatic growth (Linley & Joseph, 2004; Tedeschi & Calhoun, 2004).

With regard to resilience, Harvey and colleagues propose an ecological model, where recovery is conceptualised as a multidimensional phenomenon. In this model, impact, recovery, and resilience may be expressed through eight inter-related domains of experience - authority over memory, the integration of memory and affect, affect tolerance and regulation, symptom mastery, self-esteem, self-cohesion, safe attachment and meaning-making (M. Harvey, et al., 2003). Resilience is understood to be informed and facilitated or hindered by the reciprocal relationships between people and context, and is evident when a particular domain is unaffected by trauma and the survivor can draw on that domain to facilitate and repair and recover in another domain (M. Harvey & Tummala-Narra, 2007).

In their review of the post-traumatic growth literature, Linley and Joseph (2004) report on a number of studies which show that survivors are likely to suffer and recover simultaneously; two of the 39 studies reviewed, focus specifically on sexual assault/rape. In both studies survivors reported both short-term and long-term positive changes. These gains do, however, co-exist with a profound sense of loss in a number of areas (Frazier, Conlon, & Glaser, 2001; Thompson, 2000) - a finding supported by subsequent research (Grubagh & Resick, 2007). In addition, more recent research on post-traumatic growth amongst survivors of rape, suggests

that a number of factors are associated with self-reported positive life changes including appraisal of the event, social support, positive coping strategies (including religious coping) and perceived control (Ahrens, Abeling, Ahmad, & Hinman, 2010; Borja, Callahan, & Long, 2006; Frazier, Tashiro, Berman, Steger, & Long, 2004), and that post-traumatic growth appears to moderate the severity of symptoms of PTSD and depression (Frazier & Berman, 2008; Kunst, Winkel, & Bogaerts, 2010).

3.4.3.2 Contextual variables

3.4.3.2.1 Engagement with institutions: Health, police services and justice

Campbell et al. (2009) and Campbell (2010) provide comprehensive reviews of the challenges faced by survivors in accessing formal assistance post-rape and ways in which survivors' experiences of the multiple formal social systems they may come to engage with, can hinder or facilitate recovery. Approximately 20% to 45% of survivors engage with the police, the legal system, the medical system, the mental health system and/or advocacy groups post-rape (Campbell, Dworkin, et al., 2009). For these survivors the provision of appropriate services delivered in a non-judgemental and supportive manner, appears to support recovery, whilst the failure to provide services or the insensitive delivery of services can result in secondary traumatisation, which may impact negatively on the mental health of the survivor (Campbell, 2010; Campbell, Dworkin, et al., 2009).

Studies of victims who report the rape to the police and pursue prosecution through the criminal justice system, indicate that the majority of survivors experience victim blaming questions which results in increased guilt, self-blame, depression, feelings of violation and reluctance to pursue the matter any further (Campbell, 2010). With regards to PTSD survivors whose cases failed to progress, or who reported high secondary victimisation, were at risk for increased PTSD symptomatology (Campbell, Ahrens, Sefl, Wasco, & Barnes, 2001; Campbell & Raja, 2005). In light of this it is noteworthy that survivors who did not report to the police specifically stated that they were concerned that the process would cause them additional distress (Patterson, Greeson, & Campbell, 2009). There is evidence, however, to suggest that engagement with the legal system may also offer benefits in terms of empowering survivors which seems to be related to holding perpetrators accountable for their actions. In an attempt to pursue this restorative aspect of the legal process while attempting to

circumvent the more damaging aspects of the legal process, a community based restorative justice program has been mooted (Herman, 2003; Koss, Bachar, et al., 2003).

For the majority of survivors who receive medical care and medical forensic examinations, evidence suggests that contact with hospital emergency departments results in guilt, depression, a sense of violation and distrust in others, and reluctance to seek out further assistance (Campbell, 2010; Campbell & Raja, 2005). Contact with medical services that results in no provision of basic medical care services is associated with higher levels of PTSD, while survivors of acquaintance rape who report high degrees of secondary victimisation and limited medical care, report higher levels of PTSD than those who do not seek out medical care at all (Campbell, Ahrens, et al., 2001). Studies in the USA suggest that survivors who receive medical care through the Sexual Assault Nurse Examiner (SANE) program, which provides comprehensive medical services delivered by trained personnel, report less secondary victimisation and less general distress (S. L. Martin, Young, Billings, & Bross, 2007).

In general, research suggests that survivors report positive experiences of mental health services and that these services are helpful in ameliorating the effects of secondary victimisation (Campbell, 2010). Survivors who access legal support services from rape crisis centres or women's shelters are generally less distressed following contact with the legal system, and are significantly less likely to experience secondary victimisation (Campbell, 2006). Experiences of individual or group counselling also appear to significantly reduce distress and self-blame while increasing social support, self-efficacy and a sense of control (Howard, Riger, Campbell, & Wasco, 2003; Wasco, et al., 2004).

It is important to note that research in the USA suggests that survivors from an ethnic minority and/or with low socio-economic status are at particularly high risk for experiencing difficult and stigmatising responses from formal support systems, which in turn reduces the likelihood of seeking further assistance from formal systems (Campbell, 2010; Kaukinen & DeMaris, 2009).

There is a sizeable body of South African research evaluating the way in which the South African Police Service, the criminal justice system, and the public health system respond to survivors of sexual violence, but this research seldom focuses on the psychological impact of those responses on the survivor. Christofides et al. (2005) found many weaknesses in the provision of quality health services for rape survivors within the South African public health

system. In keeping with findings from the USA their results suggest that in order to provide optimum medical care for survivors of rape there must be clear clinical management guidelines, implemented by trained and motivated providers who have been designated to provide medical care for survivors. Subsequent research found that survivors making use of public health services in both rural and urban settings valued receiving HIV prophylaxis, undergoing a rigorous examination which would aid the legal process, and having a sensitive health care provider who could provide counselling (Christophides, et al., 2006).

Studies of rape survivors' experiences of the South African Police Service, report high levels of dissatisfaction with the service received and evidence of secondary victimisation resulting from victim-blaming questions, failure to follow procedure or provide or gather relevant information, and pressure to drop the case (Combrinck & Skepu, 2003; Du Plessis, Kagee, & Maw, 2009; Stanton, et al., 1997). Studies of the criminal justice system report a very high attrition rate and a noteworthy degree of rape myth adherence in the concluding statements of the presiding officers (both magistrates and judges), which included more lenient sentencing when there is little evidence of physical injury, and/ or little evidence of psychological distress, or long lasting psychological damage (Vetten, et al., 2008; Vetten & Van Jaarsveld, 2008). The impact of such statements and sentencing on the survivor was not, however, a focus of these studies.

3.4.3.2.2 Social support

Ullman's (1999) review of studies show mixed results for the role of social support and its link to post-rape recovery. Some studies show no significant effect associated with positive support, whilst others demonstrate positive impact of social support post-rape. Negative social reactions, however, are consistently associated with strong negative effects. Ullman (1999) notes that factors such as assault characteristics, who the provider of support is, coping strategies, pre-assault support, and other post-assault factors, modify the relationship between social support and mental health outcomes. In the main recent reviews of the literature confirm these findings (Campbell, Dworkin, et al., 2009; S. L. Martin, et al., 2011).

In addition, research has sought to more fully describe who survivors turn to and how the different sources of social support impact on recovery. Findings suggest that the majority of rape survivors are likely to first disclose to informal support providers, that these disclosures are most often initiated by the survivors themselves, and that this group of survivors tend to

receive positive reactions, which are associated with less psychological distress and may facilitate recovery (Ahrens, Campbell, Ternier-Thames, Wasco, & Sefl, 2007; Campbell, Ahrens, et al., 2001; Filipas & Ullman, 2001; Starzynski, Ullman, Filipas, & Townsend, 2005). Negative responses from friends and family are associated with increased depression, anxiety and PTSD (Borja, et al., 2006; Campbell, Ahrens, et al., 2001; Ullman, Filipas, et al., 2007). It has been suggested that negative reactions from family and friends may be more salient than positive reactions because survivors initiate the contact with the expectation of receiving support and unexpected negative responses are thus more distressing (Campbell, Dworkin, et al., 2009). It is, however, important to note that highly distressed survivors are more likely to seek out support (Starzynski, et al., 2005), and survivors are also likely to disclose to more than one person (Filipas & Ullman, 2001) and to receive a range of responses, which in turn will influence the decision of whether to disclose to anyone else (Ahrens, 2006). Furthermore, the impact of positive or negative reactions on the survivor appears to be informed by how the survivor makes sense of the reaction they receive and how much weight they may attach to that reaction (Ahrens, et al., 2007). This finding is, arguably, linked to literature relating to the broader issue of cognitive attributions and meaning-making considered in *Section 3.4.3.1.2 Cognitive appraisals and attributions*, of this chapter, which suggests that the way in which a survivor makes meaning of the trauma they have experienced and the process of meaning-making itself, is perhaps more salient than the level of support received per se (M. Harvey, Mishler, Koenen, & Harney, 2000).

3.5 Longitudinal studies

The vast majority of studies in the field of violence against women employ cross-sectional research designs. With reference to sexual violence these studies have served to confirm that many women experience rape, and that the assault frequently results in psychological and/or psychiatric distress, but they are unable to provide trajectories of the impact of rape over time. Campbell, Brown Sprague, Cottrill and Sullivan (2010) published an exhaustive methodological review of prospective longitudinal studies of sexual assault/rape survivors, which yielded a total of 32 projects reported in 53 articles, all of which were published in peer-reviewed journals. These studies focused on the mental health sequelae of rape, effective therapeutic interventions, sexual re-victimisation, preventing re-victimisation, and the development of assessment instruments.

The majority of longitudinal studies have focused on tracking the mental health impact of rape ($n = 13$ projects, 41%) within the first year post-rape, with an emphasis on the acute phase (1 to 4 weeks post-rape) and the 3, 6 and 12 month post-rape time frames, though a few studies have extended the time frame to include the second year post-rape. These studies can be broadly divided into three categories: Studies focused on mapping the impact of rape over time, which are dominated by studies on PTSD post-rape; studies focused on exploring the link between rape trauma and substance use and abuse; and studies seeking to explicate the link between coping strategies and/or cognitive mediation and the psychological impact of rape.

Earlier studies tracking the impact of rape on mental health over time, highlighted the pathogenic nature of rape trauma (Burgess & Holmstrom, 1974; Kilpatrick, et al., 1981; Kilpatrick, Veronen, & Resick, 1979a, 1979b), and drew links between post-rape reactions and pre-rape functioning (Atkeson, Calhoun, Resick, & Ellis, 1982), and initial reactions and subsequent reactions (Gilboa-Schechtman & Foa, 2001). Subsequent studies sought to describe the course of PTSD post-rape (Rothbaum, et al., 1992), the link between PTSD symptomatology and assault variables (Cascardi, Riggs, Hearst-Ikeda, & Foa, 1996), and/or specific acute reactions (Feeny, Zoellener, & Foa, 2000; M. G. Griffin, 2008; Orth, Cahill, Foa, & Maercker, 2008; Valentiner, Foa, Riggs, & Gershuny, 1996; Zoellener, Foa, & Brigidi, 1999; Zoellener, Sacks, & Foa, 2001), and the efficacy of various treatment modalities for chronic and acute PTSD post-rape (Foa, Dancu, et al., 1999; Foa, Hearst-Ikeda, & Perry, 1995; Foa, et al., 2005; Foa, Rothbaum, Riggs, & Murdock, 1991; Resick, et al., 2008; Resick, Nishith, Weaver, Astin, & Feuer, 2002; Rothbaum, Ninan, & Thomas, 1996).

In the main, longitudinal studies exploring the link between rape trauma and substance use and abuse, have focused on exploring the link between pre-rape functioning and a vulnerability to substance use/abuse post-rape (Kaysen, et al., 2006; Messman-Moore, Ward, & Zerubavel, 2012; Resnick, Acierno, Amstadter, Self-Brown, & Kilpatrick, 2007; Ruch, Amedo, Leon, & Gartrell, 1991; Testa, Livingston, & Hoffman, 2007; Testa, Van Zile-Tamsen, & Livingston, 2007; Ullman, et al., 2006a), and the link between acute reactions and substance use/abuse (Acierno, Resnick, Flood, & Holmes, 2003; Ullman & Najdowski, 2009b). A smaller number of studies have sought to elucidate the link between coping strategies and/or cognitive mediation and the psychological impact of rape (Frazier, et al., 2005; Koss & Figueredo, 2004a, 2004b; Mason, Ullman, Long, & Starzynski, 2009).

3.6 The development of ecological models and multi-factorial models to account for individual differences in the psychological impact of rape

While longitudinal studies aim to track the impact of rape over time, they do not necessarily provide a comprehensive overview of the ways in which a combination of multiple factors may contribute to increased levels of distress post-rape or which (combination of) factors might facilitate recovery over time. As noted previously (*Chapter 2: Section 2.6 Feminism, trauma and the psychological impact of rape*, and in this chapter: *Section 3.4.3.1.2 Cognitive appraisals and attributions*), since the earliest studies on the psychological impact of rape, concerns have been voiced that a trauma response theoretical model (dominated by the clinical diagnosis of PTSD), is at risk of pathologising victims and failing to take cognisance of the way in which broader context contributes to individual differences in post-traumatic impact and recovery (Campbell, Dworkin, et al., 2009; M. Harvey, 1996). In response, feminist scholars have sought to develop ecologically informed models of rape trauma impact and recovery, which seek to conceptualise the psychological impact of rape as the interaction between an individual and multiple interconnected environmental contexts (Campbell, Dworkin, et al., 2009).

Earlier ecological models focused on the interaction between pre-assault variables (including life stressors and demographics), assault variables, and post-assault variables (including coping strategies, attributions and social support) to account for psychological impact post-rape (Ruch & Leon, 1986; Wyatt, 1992). Koss & Harvey (1991) proposed a Person (including demographics, pre-rape functioning and social support) x Event x Environment (including factors such as degree of safety and control post-trauma, community attitudes and values held in relation to sexual assault, availability and quality of care model) model. The interaction between these variables is understood to shape the survivor's response; a response which may be treated successfully or unsuccessfully or remain untreated and resolve or not. Harvey (1996) developed the model further by elaborating on specific factors within the three variables and proposing a multidimensional definition of recovery and resilience (discussed in *Section 3.4.3.1.3 Resilience and post-traumatic growth*, of this chapter).

Neville & Heppner's (1999) Culturally Inclusive Ecological Model of Sexual Assault Recovery (CIESMAR) expands on these earlier models by suggesting that recovery occurs through a series of interconnected systems. Within this model, microsystem factors (which include personal variables and assault characteristics) and mesosystem factors (social support

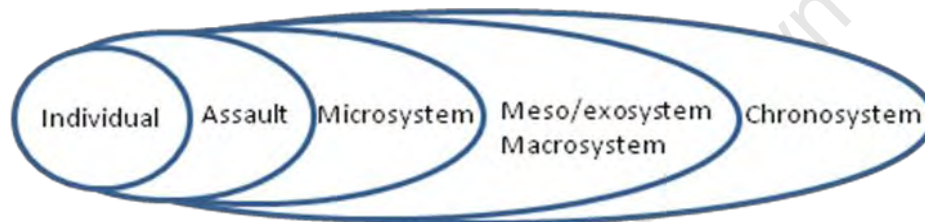
and institutional interventions) interact with each other and with an overarching macrosystem, which refers to the socio-cultural context within which rape survivors live and which they argue influences the entire recovery process.

Campbell et al. (2009) have elaborated on Neville and Heppner's (1999) model by suggesting an ecological model which conceptualises impact occurring through a series of concentric circles.

Figure 1

An Ecological Model of the impact of sexual assault on women's mental health

(Campbell, Dworkin, et al., 2009, p. 228: Figure 1)



The innermost circle speaks to individual level factors, which include demographics and informal social support. This is followed by assault factors, which include the nature of the victim-offender relationship, severity of injury, degree of threat and use of weapons etc. Microsystem level factors refer to the impact of disclosures to formal social support systems. The meso/exosystem factors include impact of engagement with legal and medical institutions as well as with community based organisations. The macrosystem level refers to socio-cultural identity and rape-prone cultures within which survivors live. Finally, chronosystem factors refer to the cumulative effects of developmental transitions over the life course, and includes a history of sexual assault or other victimisation. Self-blame is conceptualised as a meta-construct, which transcends any one level of analysis, which results from interactions across all levels of the social ecology.

Campbell et al.'s (2009) review of the literature on the impact of rape on mental health, which is presented using this ecological model, suggests that neither individual factors nor assault variables in themselves allow for the prediction of post-assault sequelae, while various factors at the micro level (negative responses from informal sources of support), mesosystem and exosystem level (negative experiences with the legal system and to some extent the health system), and the macro system level (with particular reference to institutionalised racism and pervasive rape myth acceptance), and chronosystem level

(cumulative trauma), appear to negatively impact on post-rape recovery. The authors do, however, note the need for more research which examines the interactions between various factors across different levels of the social ecology in order to provide a more conceptually complex and nuanced understanding of post-rape recovery process.

As argued throughout this chapter, there is a substantial body of research that has sought to elucidate the relationship between several factors and degree of distress post-rape, most frequently assessed through the diagnosis of PTSD. More recently, however, there have been attempts to bring various strands of the research together to develop conceptually rich, multi-factorial working models to understand the post-rape experience (see for example Koss & Figueredo, 2004a, 2004b; Koss, Figueredo, & Prince, 2002a; Najdowski & Ullman, 2009; Ullman, Townsend, et al., 2007). By way of illustration Koss and colleagues (Koss & Figueredo, 2004b; Koss, et al., 2002b) have sought to develop and test a model of how cognitive factors mediate rape's physical, mental and social health impact. The model builds on the work of Janoff-Bulman in relation to self-blame, empirical findings which highlight the salience of prior exposure to violence and a history of psychological problems in recovery post-rape, and reflects on the role of memory processing post-rape, all in relation to negative impact post-rape as measured through greater 'General Distress' which is hypothesised to influence both PTSD symptoms and physical symptoms. Findings suggest that prior history of psychological problems and prior exposure to violence (variously described as Pre-assault variables or Individual system factors a la Neville and Heppner, or chronosystem level factors a la Campbell) contribute to increased levels of self-blame (a meta-construct a la Campbell et al.), regardless of the way in which the memory of the rape is processed, which increases the degree of distress post-rape.

What seems key with regard to the development of both ecological models and multi-factorial models is that, regardless of how the multiple factors informing post-rape impact are grouped – either in terms of pre-assault, assault and post-assault variables, or nested within concentric circles or systems from individual, assault, micro, meso/exo, macro and chronosystem levels - there is a recognition that no one factor or one level can account for the psychological impact of rape, and that individual differences amongst survivors reflect a complex interplay between a range of factors at multiple levels.

3.7 Socio-cultural identity and the psychological impact of rape

The more recent ecological models referred to in the previous section acknowledge the importance of race, ethnicity and culture, more broadly referred to as socio-cultural identity, in relation to the impact of rape on mental health. Neville and Heppner (1999) locate these variables within the macrosystem, whilst Campbell et al. (2009) place these variables at both the individual and macro level system. Both sets of researchers note, however, that there is a dearth of research examining the specific role of different socio-cultural identities in post-rape impact and recovery. In light of this it is noteworthy that, as discussed in *Section 3.4.1.1 Demographics*, of this chapter, recent reviews report that socio-demographic variables, including race and ethnicity, play a limited role in relation to the psychological impact of rape. Given the context of this research, it seems important to flag this particularly complex issue for some discussion.

Campbell et al.(2009) note that there have been many studies which have examined racial/ethnic differences in rape impact and recovery, and in the main these studies suggest that there are indeed few differences with regards to the psychological and psychiatric impact of rape. Where differences are more likely to be evidenced is in the area in which there has been less research, that is the way in which social and cultural norms and relationship role expectations inform the survivor's world view, which in turn influence post-rape disclosure experiences, the reactions from those they may confide in, and how survivors themselves narrate and make meaning of their experiences (Bletzer & Koss, 2004, 2006; Lefley, Scott, Llabre, & Hicks, 1993; Lira, Koss, & Russo, 1999; Luo, 2000; Neville, et al., 2004; J. E. Williams & Holmes, 1982; Wyatt, 1992; Wyatt & Notgrass, 1990).

Thus, by way of example, Bletzer and Koss's (Bletzer & Koss, 2004, 2006) comparison of the narrative accounts given by Anglo, Mexican and Cheyenne women, shows both commonalities in response to the experience of rape, and also differences informed by socio-cultural context. For example, Anglo women's accounts were substantially more expansive, which the authors attribute to a cultural expectation amongst Anglo women of freedom of expression, which stands in contrast to the expectations of Cheyenne and Mexican women, who are from oppressed minority groups.

Similarly, Neville, Heppner, Oh, Spanierman and Clark (2004) found no differences in post-rape symptoms between African American and white college students. African American women were, however, more likely to internalize what they term the 'Jezebel' image which

increased self-blame resulting in lower self-esteem amongst African American women than their white counterparts. Campbell (2009) notes that these findings are reminiscent of Wyatt's (1992) findings that African American rape survivors believed themselves to be more at risk of rape than their white counterparts. These findings point to a complex interplay between socio-cultural context and racist rape myth stereotypes. Adherence to rape myths increase survivor's degree of self-blame, whilst reducing the likelihood of disclosing the rape to anyone and seeking out support (Campbell, Dworkin, et al., 2009) and Neville and Heppner (1999) note that ethnic minorities in America appear to adhere to a higher number of self-reported rape myths than their white American counterparts.

These findings highlight the importance of considering the role socio-cultural context plays in post-rape adjustment. There is arguably, however, a possibility that terms such as race, ethnicity or culture or the umbrella term socio-cultural identity, might obfuscate the issue of oppression and power and class differentials between and within the different groups being compared. If rape is located within a broader context of oppression, then it is likely that the pattern of harm and recovery post-rape is a complex one which intersects with multiple sites of oppression including the daily impact of low socio-economic status and racism interacting with sexism. Thus, it is possible that a single act of rape may form part of ongoing, insidious trauma and the choices available to rape survivors living in oppressive contexts are also likely to be limited, which in turn may inform impact of and recovery from rape. In light of this it is difficult, if not impossible to disaggregate the factors which inform socio-cultural context and to know which of these factors should be accorded more weight than others in accounting for post-rape impact, reiterating the need to recognise that there is a complex and unique interplay of multiple factors at multiple levels which inform an individual's post-rape response.

3.8 South African research measuring the psychological impact of rape

As is evident from the literature reviewed in this chapter, research on rape mostly hails from the USA, and this has until fairly recently, sought primarily to describe and measure the psychological and psychiatric impact of rape, often with particular reference to PTSD. In South Africa, following the demise of apartheid, there has been a burgeoning of research on gender-based violence with a particular focus on highlighting, through epidemiological studies, the high levels of sexual violence, including rape, in South Africa and accounting for

these high levels⁸. In contrast, there is a very limited body of South African research on the psychological/psychiatric impact of rape. It is not possible to understand why South African research on the impact of rape on mental health is so limited without locating it within the broader historical context of how research into gender-based violence developed in South Africa. Such a review is, however, beyond the scope of this thesis, and is the subject of a separate research project currently underway, which focuses on a particular aspect of South African gender-based violence literature; that of research in the arena of rape (of adult women, not children or men), with the purpose of understanding how and why this substantial body of research in South Africa remains limited with regard to describing, understanding and/or ‘measuring’ impact on mental health (Maw, 2012).

With regard to published research in South Africa which specifically addresses the psychological and psychiatric impact of rape, eight studies located within the field of HIV/AIDS and PEP for rape survivors speak directly to the question of impact on mental health (Abrahams & Jewkes, 2010; Abrahams, et al., 2010; Christophides, et al., 2006; Kim, et al., 2009; Mills, et al., 2006; Olley, et al., 2006; Roland, et al., 2012; Vetten & Haffeejee, 2005a), three studies address the link between the rape survivors’ engagement with the police and the justice system and mental health (Combrinck & Skepu, 2003; Du Plessis, et al., 2009; Stanton, et al., 1997), and three South African studies on PTSD refer specifically to rape and PTSD amongst South African rape survivors (Kaminer & Eagle, 2010; Kaminer, et al., 2008; Olley, et al., 2006), whilst one study lists a range of symptoms experienced by survivors of

⁸ The Medical Research Council’s Gender and Health Research Unit, established in 2001, has played a critical role in the development of research in the arena of sexual violence and has also been host to two initiatives: the Sexual Violence Research Initiative (SVRI), and the South African Gender-Based Violence and Health Initiative (SAGBVHI). The largely epidemiological research which this Unit and these initiatives have generated along with work developed by several other researchers (see in particular the work of Lisa Vetten), offer ways of locating South African rape statistics and figures within particular contexts and demonstrates the complex set of relationships in these contexts, which enable and support ongoing sexual violence. Broadly speaking this body of research on sexual violence can be divided thematically as follows:

- i. Describing and exploring the context within which sexual violence occurs;
- ii. Youth and sexual violence (and HIV);
- iii. Sexual violence and HIV and PEP;
- iv. Provision of services post-sexual assault (including PEP);
- v. Sexual violence and the criminal justice system.

sexual violence associated with both depression and PTSD (Rasool, et al., 2002). A further two studies focus on describing impact in the immediate aftermath of rape (Womersley & Maw, 2009; Womersley, et al., 2011). These studies have been discussed in *Sections 3.3.1.2.4 Somatoform Disorders, 3.4.3.2.1 Engagement with institutions, 3.3.1.1 PTSD, 3.4.3.1.2 Cognitive appraisals and attributions, and 3.3.2.1 Self-esteem*, respectively.

With regards to South African masters and doctoral level research specifically focussed on the psychological and psychiatric impact of rape, a search using two databases: ISAT (Index of South African Theses) and the NRF (National Research Foundation) Nexus Database, which lists current and completed research projects, yielded a total of 21 masters theses and five doctoral theses (three completed and two currently underway). In the main, the masters theses explore and describe the impact of rape at an individual and relational level (particularly the impact of the rape on relationships with intimate partners and family functioning) and survivors' experiences of institutional responses (particularly with hospitals and police).

With reference to the three completed doctoral theses: Mgoqi's (2006) doctoral thesis sought to understand the role of assault severity, personality traits and rape myth adherence and the mediating role of attributions in predicting psychological responses and coping styles. Using Structural Equation Modelling the results suggest that coping style was influenced by symptom clusters associated with PTSD and that assault severity, self-blame and perception of control impacted significantly on degree of psychological distress. Moss (2009) conducted in-depth interviews with four women who were raped by men known to them and found that knowing the perpetrator, reactions of others, the risk of HIV infection and social support had a significant impact on the survivors' lived experiences. Padmanabhanunni (2011) assessed the efficacy of a cognitive treatment model for PTSD in the treatment of seven rape survivors and found individual, contextual and state-level factors impeded treatment delivery and implementation.

The dearth of research on the impact of rape on mental health within a South African context has led to a tendency to rely on and refer to models of mental health impact based on research conducted predominantly in the USA, which in turn informs service provision for survivors in South Africa. Without South African based research on the impact of rape trauma the question of the transferability and appropriateness of American/Global North models of rape

trauma cannot be adequately assessed and an assumption of commonality may hamper the provision of effective intervention strategies for survivors.

3.9 Chapter summary

It seems clear from this review that there are few unequivocal findings with regard to both symptomatology following rape, and variables affecting recovery, although there is some evidence to support foregrounding particular psychiatric disorders and psychological difficulties, and several pre-assault, assault and post-assault variables in seeking to understand individual variability in the responses of survivors of rape. With regard to psychiatric diagnoses, PTSD, Depressive Disorders, Alcohol and Substance Abuse and Dependence and Somatic Disorders seem to be the diagnoses most strongly associated with post-rape symptomatology and the negative impact of rape on social functioning has, in the main, been subsumed into these diagnostic categories. Impact on self-esteem is most evident through the tendency towards self-blame amongst rape survivors which is, in the main, engendered through what has been broadly termed a “rape-prone” (Campbell, Dworkin, et al., 2009, p. 239) cultural context, which blames victims for the rape and supports rape myth adherence, further complicated by a complex matrix of oppression based on race, class and gender.

With regard to the impact of pre-assault, assault and post-assault variables on recovery, the evidence does seem to suggest that a prior history of trauma and a history of psychiatric illness has a negative impact on recovery post-rape. With regards to assault variables findings are equivocal, though degree of violence may influence post-rape functioning. What seems clear is that pre-assault and assault variables cannot fully predict post-rape sequelae and that post-assault variables are critical in informing impact. In this regard unsupportive responses from both informal and formal support networks seem to be associated with more symptoms than those who received neutral or supportive responses. Furthermore, research suggests that the way in which survivors make meaning of their experience and the process of meaning-making itself may be more salient than degree of support received per se.

What seems clear is that the mental health consequences of rape are caused by multiple factors at multiple levels and longitudinal models, ecological models and multi-factorial models all seek to better describe and explicate this process, which is further complicated by the socio-cultural context within which rape occurs and survivors recover. That being said the

broad body of research into impact of rape on mental health is based in the USA, whilst there is a dearth of South African research in this field.

Despite the multiple factors and levels informing post-rape adjustment, from the review provided in this chapter, it is evident that the diagnostic category of PTSD has come to play a central role in almost every aspect of research on the psychiatric and/or psychological impact of rape and variables affecting recovery. Whilst this dominance has provided a lens through which the impact of rape on mental health can be understood and measured, it also runs the risk of narrowing the scope and range of our understanding. In light of this it seems important to critically consider the diagnostic category of PTSD and to evaluate the arguments made for and against its dominance in the study of rape trauma; this is the focus of the following chapter.

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Chapter 4

PTSD: A consideration of the key debates relating to the diagnosis

4.1 Introduction

This chapter reflects on the key debates surrounding the diagnostic category of PTSD. It begins with a brief consideration of the broader objections raised in relation the DSM III nosology itself, and then goes on to focus on the ongoing debate relating to whether PTSD actually describes a disorder which belongs in the DSM. These debates can be broadly divided into five main arguments: that the diagnosis was a politically, rather than scientifically, motivated one; that the disorder medicalises and pathologises normal reactions to traumatic events and fails to consider cultural relativism in understanding or describing those reactions; that evidence from neuroscience remains equivocal as to the veracity of the diagnosis; that the aetiology of PTSD has not been clearly established; and finally that given the dubious aetiology of the disorder, the symptoms of PTSD are arguably not distinct from other disorders in the DSM, particularly Mood Disorders and Anxiety Disorders. This is followed by a consideration of the changes made to the PTSD diagnostic category from DSM III to DSM III R, DSM IV TM and DSM IV TR and proposed changes in the forthcoming DSM 5 in light of these critiques.

4.2 Objections to the DSM III nosology

The inclusion of PTSD into the DSM III was not without its critics, both amongst those who objected more broadly to the principles underpinning the development of the DSM III, and those supportive of the DSM III, but who questioned whether PTSD met the criteria for inclusion into the DSM III nosology.

With reference to the former group, the DSM III represented a radical departure from the system of classification which informed the DSM I and DSM II. Both the DSM I and DSM II conceptualised psychiatric disorders as occurring on a continuum from mental health to mental illness and diagnostic groupings as being quantitatively different reactions of the psyche to a unitary set of causes: psychological, social and biological (M. Wilson, 1993; Young, 1995). As such both manuals were consistent with a psychodynamic theoretical framework. The DSM III, informed by Kraepelinian principles, is underpinned by a medical model in which classification is based upon criteria which are accessible to empirical

observation and measurement and aetiology is understood to be organic and biochemical in origin (Lloyd, 1997). Symptoms are therefore of interest insofar as they contribute to the creation of a stable pattern identifiable as a disorder, but the meaning of symptoms per se is not of interest. The DSM III actively sought to divest itself of any theory driven approach, including a psychodynamic one (Cooper, 2004). Critics argued that it was not possible to have an atheoretical diagnostic language, that the cook-book approach of the DSM III failed to consider the complex interplay between symptoms, and that each symptom was erroneously seen to be of equal importance and, finally, that the DSM III process was being driven by a particular interest group (that of psychiatrists) in opposition to other groups, in particular psychoanalysts (Young, 1995). The debates regarding the limitations of the DSM and the veracity of psychodiagnosis are ongoing with little room for striking a middle ground between those who defend and promote the medicalisation of psychological suffering and those who question the ideology which underpins the DSM and the 'science' of psychodiagnosis as a whole (Marecek & Gavey, 2013).

Despite these objections, the DSM III (and its subsequent versions, DSM III R, DSM IV TM and DSM IV TR) has come to be the most frequently used book amongst all mental health professionals and is more widely used around the world than the International Classification of Diseases (ICD) for teaching, research and clinical practice (Kirk & Kutchins, 2008; Maser, Kaelber, & Weise, 1991). The question of whether PTSD actually describes a disorder which belongs in the widely used DSM remains the subject of ongoing debate; the key aspects of that debate are discussed in the following section.

4.3 The question of whether PTSD belongs in the DSM

4.3.1 The problem of PTSD being a politically, rather than scientifically, motivated diagnosis

Given the link between the anti-Vietnam War movement and PTSD, it would be reasonable to argue that the reason PTSD found its way into the DSM III was primarily socio-political. This is a proposition that anti-Vietnam War activists would not deny (Lifton as cited in Caruth, 1995a, p. 130; W. J. Scott, 1993). In a much cited paper Yehuda and McFarlane (1995) recognise that the history of the inclusion of PTSD into the DSM is one of putting the proverbial cart before the horse – thus the diagnosis was initially politically motivated, a

theoretical framework was then developed to support the motivation and research followed to provide the empirical foundations for the diagnosis.

With regard to motives underpinning the inclusion of PTSD into the DSM III, the diagnosis allowed for the identification of a (blameless) victim suffering from symptoms resulting from a traumatic event (Ehrenreich, 2003). As such the diagnosis has had important strategic sequelae for survivors of a range of traumatic events. For Vietnam veterans the diagnosis secured the right to receive health care benefits for psychiatric disabilities incurred in the course of active duty some ten years previously. The diagnosis was critical in challenging and reshaping perceptions of survivors of gender based violence (including intimate partner violence, childhood sexual abuse and adult sexual violence) in the public arena, the media, and medical and legal discourse (Farrell, 1998). As a result Andreasen (1995) noted that PTSD has come to be the only psychiatric diagnosis patients would want to have. This observation has been noted in relation to a more jaundiced reading of the utility of the PTSD diagnosis, which points to research demonstrating that there is a strong relationship between litigation and the possibility of financial compensation and receiving a diagnosis of PTSD, once again raising the thorny issue of the possibility and likelihood of malingering in relation to trauma induced symptomatology (Rosen, 2004).

The theoretical underpinning for the identification of a cohort of victims/survivors of a range of traumatic events who share a common set of psychological reactions has, however, been the source of much debate. As discussed in *Chapter 2: Section 2.2 Psychological trauma: Discovery of a lineage or socio-political construct?*, the question of whether the diagnostic category of PTSD is the logical culmination of various strands of knowledge about an essentially timeless and universal reaction to extreme trauma, or solely a socio-political construct, goes to the heart of this debate. In addition, it has been argued that the use of a single construct to describe responses to a wide range of traumatic events - events as diverse as motor vehicle accidents, muggings, house fires, responses to natural disasters, responses to human made disasters including war, torture, prolonged physical abuse, sexual violence, ethnic cleansing – is theoretically dubious. Furthermore, it limits the attempts of researchers to understand trauma, hinders clinicians' attempts to assist trauma victims and confounds the development of appropriate public policy (Ehrenreich, 2003; Shephard, 2004).

Young (1995) argues that a list of traumatic events which would be universally accepted as such would, in fact, be very short and that thereafter the list would be culturally specific and

informed by the meaning given to the event in light of both micro and macro contextual factors. In light of this it is noteworthy that Vietnam veterans reported psychological distress on the basis of the violence they had witnessed **and** the violence they had perpetrated. However, the PTSD diagnosis locates the source of trauma outside the sufferer (Turner, 1996). Thus, whilst in keeping with the initial socio-political impetus behind the inclusion of PTSD into the DSM III, the diagnosis has been used to champion the rights of politically oppressed individuals and groups, such as refugees and torture survivors, it has also been used as an explanation of the violence committed by individuals in the service of oppressive regimes such as the apartheid regime (Eagle, 2002).

With regards to the empirical evidence for the theoretical underpinnings of PTSD, Young (1995) argues that the initial research on PTSD as a diagnostic category was dominated by research on Vietnam veterans and that the Vietnam War was distinctive in several respects from other wars and civilian related traumatic experiences. He notes that five major epidemiological studies of PTSD (conducted in the USA between 1987 and 1991) evidenced marked disparities between Vietnam veterans and non-Vietnam veterans and more broadly between men and women in relation to PTSD. Researchers from the various studies attributed these differences to technical issues relating to the psychometric properties of the assessment tools, whilst Young argues that the differences speak directly to meaning variance associated with psychological trauma per se, which points to profound unresolved epistemological concerns relating to the concept of PTSD itself.

The original socio-political imperative of acknowledging the suffering of victims (as opposed to victim/perpetrators) of trauma informed a key aspect of the theoretical framework which initially underpinned PTSD: that is, that PTSD was understood to be a normal response to an abnormal stressor and that it was the intensity of the stressor itself, rather than an interplay between the individual and the stressor, which determined the severity of the symptoms. Yehuda and McFarlane (1995) cite numerous empirical studies evidencing the opposite; that PTSD is a psychopathological (i.e. abnormal) response to a stressor, not usually evident amongst victims/survivors of traumatic events. Epidemiological surveys provide further support for this indicating that whilst experiencing a traumatic event is not uncommon – even during peacetime in developed democracies - most individuals who experience life-threatening traumatic events do not develop PTSD (Bowman & Yehuda, 2004; Breslau, et al., 1998; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1999). Furthermore, research evidences marked differences and variations in response to a wide range of traumatic events, and whilst

events involving intentional harm do appear to evidence greater PTSD rates amongst survivors - with some correlation between severity of the event and the likelihood of developing PTSD - there is nonetheless a significant variation in responses and PTSD rates remain well under 50% (Bowman & Yehuda, 2004).

In sum, the veracity of PTSD as a psychiatric diagnosis has been questioned because of its socio-political roots, the generalisation of Vietnam related trauma as applicable to a wide range of other kinds of (civilian) traumas and the initial assumption that PTSD is a normal response to an abnormal stressor. With reference to socio-political roots of PTSD, recognising the powerful role of an activist movement in securing the inclusion of a particular diagnosis into the DSM is different from arguing that the diagnosis itself is erroneous or misguided. Whilst empirical evidence for the diagnostic category of PTSD was initially drawn primarily, though not exclusively, from the experiences of Vietnam veterans, subsequent research has drawn on survivors from a wide range of traumatic events. That PTSD is the exception rather than the norm in relation to survivors of a range of traumatic events lends support to the inclusion of PTSD within the DSM. However, whether the findings of the ongoing research into PTSD are seen to provide convincing evidence for the diagnostic category of PTSD depends in large part on whether one accepts the medicalisation/ pathologisation of psychological distress in response to exposure to a traumatic event. This debate is discussed in more detail in the following section.

4.3.2 The problem of medicalising and pathologising trauma responses and the question of cultural relativity

The debates highlighted in the previous section have informed the development of a substantial body of critical thinking and research relating to the way in which psychological distress following traumatic events has been both medicalised and pathologised. It has been argued that the process has been informed almost exclusively by Western conceptualisations of (mental) health and disease, which fail to consider contextual factors and issues of cultural relativism in relation to the meaning and impact of traumatic events on survivors.

Summerfield (2001, 2004) argues that the socio-political motivations underpinning the creation and inclusion of PTSD into the DSM were, at least in part, informed by an individualistic, rights- and compensation-conscious culture which fosters a sense of injury and grievance in relation to the experience of distress. As such PTSD makes it advantageous

to frame trauma-related psychological distress in psychiatric terms that underscore victimhood rather than survivorhood (Summerfield, 2001). Paradoxically, a diagnosis initially born of a wish to give voice to the suffering of survivors of social wrongs may, by representing the effects of collective violence and social upheaval in individual illness and vulnerability, allow for the assumption of moral and political neutrality in the face of human rights violations (Summerfield, 1999, 2001). Alternatively, the veracity of a claim that an individual has suffered a human rights violation may come to be assessed primarily on the basis of the evidence of individual psychopathology (i.e. PTSD) and/or physical harm caused to the victim/claimant. Arguably both positions are possible because PTSD pathologises and universalises human reactions to adversity (McNally, 2003).

The assumption that PTSD has universal validity has generated a great deal of debate and research. It has been argued that PTSD is a culture-bound (European and North American) diagnosis located within a Western medical framework, which, through its emphasis on empirical and objective observation, asserts universality (Bracken, 2002). Within this framework the impact of psychological trauma is thus conceptualised as analogous to physical trauma and units of measurement are based, paradoxically, almost exclusively on subjective experiences of distress reified into symptoms of PTSD (Summerfield, 2004). Critics suggest that this allows for a disavowal of the “fundamental relativity of human experience, even in extreme conditions, and the primacy of the subjective appraisal and social context” (Summerfield, 2004, p. 241), which in turn is seen to medicalise and pathologise what is argued to be manifestations of understandable human suffering in the face of extreme events (Hinton & Lewis-Fernandez, 2010; McNally, 2004).

The question of the role of social context is inextricably linked to the question of how different cultural contexts might define trauma, as well as how culture shapes and informs the psychosocial aspects of responses to traumatic events. This would include consideration of the role of religious and spiritual beliefs, patterns and ways of coping and social resources available in particular contexts, how language encodes traumatic events and relative standards of what is seen to be normal, abnormal and deviant in any particular culture (Summerfield, 1999). As such PTSD has now joined the broader controversies associated with culture-bound psychiatric disorders (Marsella & Yamada, 2000). Marsella (2010) goes so far as to observe that to date research has demonstrated that almost all aspects of trauma related mental disorders are shaped by cultural determinants.

The history of the study of psychological trauma reviewed in the previous chapter may thus be seen as a reflection of the ways in which Western culture has shaped and informed the development of psychological trauma theory and practice. It has been argued that in the late 20th and early 21st centuries the rise of post-modernism in Western culture, which destabilises and challenges any sense of meaning, order and coherence, has fuelled the ascendance of the concept of trauma as both a psychiatric category and cultural idiom (Bracken, 2002). In this context the symptomatology of PTSD may be seen to speak to the post-modern psyche's attempts to overcome a sense of fragmentation and loss of meaning (Bracken, 2001; Caruth, 1995b; Farrell, 1998; Fassin & Rechtman, 2009). This contextual reading of trauma and/or PTSD as a sign of our (Western) times, arguably conflates differences between victims, perpetrators, and bystanders turning us all into survivors and loses sight of the actual lived experiences of survivors of extreme events and their responses to those events (Kansteiner, 2004; Sontag, 2004). Furthermore, if PTSD is the product of a particular (Western, 20th and early 21st century) cultural context this begs the question of the meaning attributed to trauma and its impact in cultures distinct from modern Western contexts – do survivors in such contexts evidence any PTSD-like symptoms and what might this mean for the veracity of the PTSD diagnosis?

As noted in *Chapter 2: Section 2.2 Psychological trauma: Discovery of a lineage or socio-political construct?*, it has been argued that there is some evidence of PTSD-like symptomatology in response to extreme events, most often war, recorded in Western philosophical and literary works dating back from antiquity up to the 19th century. Thereafter, as noted in *Chapter 2: Section 2.4 World War I and World War II* and *Section 2.5 The Vietnam War*, the question of whether the symptoms observed and reported amongst hysterics and then in soldiers of World War I, World War II, and the Vietnam War, are part and parcel of an underlying universal pattern of response to trauma encapsulated within the PTSD diagnosis has been fiercely debated and remains largely unresolved.

More recently the Falklands War (1982) and the Gulf War (1990) exemplified the ongoing unresolved nature of this debate. Thus whilst initial figures suggested that there were only 48 cases of primary psychiatric disorder resulting from the Falklands War, Falklands veterans reported ongoing war related psychological difficulties and by the 1990s Falklands veterans sued the British Ministry of Defence for medical negligence on the grounds that by failing to detect and provide adequate counselling for PTSD it had failed in its duty of care (Shephard, 2001). During the course of the Gulf War (1990) the military went to considerable lengths to

provide psychiatric counselling and support both prior to and post combat. Despite this, by early 1991 reports emerged of chronic illnesses ranging from headaches and fatigue to motor neuron disease, heart conditions and cancer (Shephard, 2001). The question of whether these symptoms were caused by exposure to uranium vaccines against chemical and bacteriological weapons, organophosphate chemicals or Iraqi nerve agents in a bunker blown up by the allies, or psychological factors (akin to the Hysterical epidemic and Soldier's Heart in World War I and Effort Syndrome in World War II, as suggested by Elaine Showalter, 1997, in Shephard, 2001) remained largely unanswered.

A review of research on symptoms recorded in medical records of soldiers from a number of conflicts from 1854 onwards suggests that symptoms of intrusion (including flashbacks) and avoidance, which are central to the PTSD diagnosis, feature quite infrequently in the medical records of soldiers from earlier conflicts, with somatic complaints more frequently noted (Bracken, 2001). The incidence of flashbacks are, however, significantly greater in more recent cohorts such as veterans of the Gulf War (E. Jones, et al., 2003). The research seems to suggest that at very least some of the characteristics of PTSD are historically determined. It has, however, been argued that the intimate and inextricable relationship between our understanding and reading of a particular condition and the social context within which it arises makes the search for evidence of PTSD in the past futile (Kansteiner, 2004). That PTSD did not exist in the past does not, necessarily, render the diagnosis meaningless in the present; but rather denotes that “mental illnesses, like many other scientific facts are invented *and* real at the same time” (Kansteiner, 2004, p. 212 italics in the original). Thus PTSD is, arguably, neither a timeless and observable entity to be discovered (like bacteria) or an illusory construct, but rather an “interactive” (Hacking, 1999 as cited in McNally, 2004, p. 11) diagnosis, which has emerged through the interface of “psychobiology and the cultural context of classification” (McNally, 2004, p. 11)

With regard to the universality of the PTSD diagnosis, a review of literature published since 1994 on cultural, race, or ethnicity-related factors which might limit the universal applicability of PTSD concluded that, although there was evidence of cross-cultural variability - particularly with reference to how the meaning attributed to a traumatic event might influence symptom presentation, the relative salience of symptoms related to avoidance, and the prevalence of somatic symptoms - there was substantial evidence for the cross-cultural validity of PTSD (Hinton & Lewis-Fernandez, 2010). Similarly in a synopsis of ethnocultural aspects of PTSD, Marsella (2010) observes that although there do appear to

be common cross-cultural neurological processes, correlates and consequences in the initial response to trauma, ethnocultural variables exert substantial influence on perceived causes, trauma related symptoms, and the onset, course and outcome of the distress. The existence of such ethnocultural variability challenges a purely psychiatric bio-medical understanding of PTSD. Nonetheless, a psychiatric bio-medical understanding of PTSD continues to hold a dominant position in research into PTSD and the next section focuses on this research as it relates to the key debates relating to PTSD and the DSM.

4.3.3 The role of neuropsychological evidence in validating the diagnostic category of PTSD

Over the last 20 years there has been an increasing focus on the neuropsychology (both neurobiological and neurocognitive) of PTSD. It is beyond the scope of this review to offer anything beyond a schematic overview of the key neuropsychological findings (for reviews see Hageman, Andersen, & Jorgensen, 2001; Shalev, Gilboa, & Rasmusson, 2011; Vasterling & Brewin, 2005; Yehuda & LeDoux, 2007); rather, what is offered is a consideration of the implications of this body of research in relation to the ongoing debate relating to the veracity of the diagnostic category of PTSD.

The study of the neuropsychology of trauma is firmly located within the physiological line of enquiry described in *Chapter 2: Section 2.3.1 Psychological impact of rape: Physiological Route*. As such it takes as its starting point that in the face of acute and extreme stress there is automatic and simultaneous activation of numerous brain regions and neurotransmitters which allow for the person (organism) to assess and respond maximally to the perceived threat. The brain regions most immediately involved in the fear response have been identified as the amygdala, the medial prefrontal cortex (mPFC), the hippocampus, the dorsal raphe nucleus, and the locus coeruleus, and four neurotransmitter/ neurohormone systems – the opiate system, the noradrenergic system, the serotonergic system and the hypothalamic-pituitary-adrenal (HPA) axis (Southwick, Rasmusson, Barron, & Arnstein, 2005).

Threat processing by the amygdala involves the appraisal, generation and maintenance of fear, which is the first step in the activation of the fight-flight response. This process is facilitated by the hippocampus, which evaluates incoming stimuli both spatially and temporally and retains information in short term memory, and the mPFC, which mediates and informs the amygdala's assessment of the threat based on knowledge of the fear stimulus

(both innate and previously acquired) (L. M. Williams, et al., 2006). On the basis of this assessment, impulses from the amygdala to the locus coeruleus and the dorsal raphe nucleus activate the opiate, noradrenergic, serotonergic and HPA axis hormonal systems, which simultaneously stimulate the release of catecholamines (norepinephrine and epinephrine), serotonin, hormones of the HPA axis (cortisol and glucocorticoids) and endogenous opioids. The release of these hormones enable the organism to respond maximally to threat by ensuring optimal energy levels and immune functioning (van der Kolk, 1996a). The final stage of this normative and adaptive stress reaction is the return of these physiological reactions to baseline. It is this final stage in the stress reaction process which has been identified as key in understanding and explaining the difference between normal reactions to extreme events and the development of PTSD. In neuropsychological terms PTSD may thus be seen to be the result of the failure of a normal process of recovery and adaptation post-trauma with measurable neurobiological and neurocognitive outcomes (Yehuda, 2002a).

Using the most recent technical advances in neuroscience (such as structural and functional brain imaging, positron emission tomography (PET), gene-expression profiling, gene-transcription), neurobiological studies have focussed on the basic features of PTSD – the acquisition and maintenance of maladaptive responses resembling fear conditioning, and the emergence of hyperarousal, threat biased perception and memory disturbances after trauma exposure. Evidence suggests that there is a relationship between PTSD and chronic and sustained physiological arousal apparent in the dysregulation of the opioid, glutamatergic, noradrenergic, serotonergic and neuroendocrine systems, which appear to be related to the way in which trauma is processed through the amygdala, hippocampus and mPFC (Hageman, et al., 2001; Yehuda & LeDoux, 2007).

With regards to the opioid system there appears to be a paradoxical effect for individuals diagnosed with PTSD. The release of analgesia and beta-endorphins, which reduces sensitivity to pain (numbing) and allows for a temporary sense of control during acute stress, appears to become a conditioned response, which is then triggered by exposure to any cue reminiscent of the original trauma. The overstimulation of these systems is understood to lead to a subsequent depletion which results in symptoms of hyperarousal such as sleep disturbance, hyperactivity and explosive outbursts of aggression. It has been hypothesised that this process resembles exogenous opioid withdrawal and that people with PTSD then

seek to re-expose themselves to trauma in an attempt to reactivate the opioid system creating a vicious cycle (van der Kolk, 1996a; van der Kolk & Greenberg, 1987).

There have been inconsistent findings with regards to both the serotonergic and the noradrenergic systems with evidence of both increased and decreased levels of serotonin and noradrenaline respectively in patients with PTSD. Low levels of serotonin are associated with an inability to modulate arousal and with impulsivity and aggression. Increased levels of noradrenaline are associated with anxiety, sleeping problems and exaggerated startle responses. These symptoms are congruent with Cluster D symptoms of PTSD. With regards to increased serotonin levels and lowered levels of noradrenaline in PTSD, it has been postulated that this evidences a sensitisation of the respective systems in which the abnormal changes in hormone levels precipitate a complex process of up- or down-regulation across hormonal systems in an attempt to return the organism to homeostasis (Hageman, et al., 2001; van der Kolk, 1996a).

The involvement of the HPA axis in PTSD has been the focus of a great deal of research. Evidence suggests an increased sensitivity of the HPA axis to feedback in patients with PTSD. Increased sympathetic nervous system activity in PTSD has been evidenced by increased levels of corticotrophin-releasing factor - CRF - (which stimulates the adrenergic aspect of the stress response through the locus ceruleus) in cerebrospinal fluid and increased levels of catecholamines (dopamine, norepinephrine and epinephrine) in urinary excretions and dysregulation of glucocorticoid levels and receptors. These are accompanied by concomitant compensatory down-regulation of adrenergic receptors as well as evidence of increased sensitivity of these receptors. Since hippocampal formation is an inhibitor of CRF release, smaller hippocampal volume observed in some, but not all, persons diagnosed with PTSD has been linked to the higher concentrations of CRF. It has not, however, been established whether reduced hippocampal volume is a pre-existing condition which increases vulnerability to developing PTSD or whether it is a result of exposure to trauma (Hageman, et al., 2001). An increase in catecholamines is associated with a concomitant increase in cortisol levels; however, two studies have found lowered cortisol levels in the immediate aftermath of trauma predicted PTSD. Of particular relevance is the work of Resnick, Yehuda, Pitman and Foy (1995) which found that in the immediate aftermath of rape women with a history of previous assault had a lower mean acute cortisol level and higher probability of subsequently developing PTSD than women without such a history. Lowered cortisol levels

are understood to be associated with increased sensitivity of the glucocorticoid receptors on the pituitary gland. The return to homeostasis is in part facilitated by a process of autoregulation initiated by cortisol which inhibits sympathetic activation. Thus it has been hypothesised that lowered cortisol in the immediate aftermath of trauma will result in higher autonomic arousal which is in turn associated with PTSD (Yehuda & LeDoux, 2007).

Research over the past 20 years has provided clear evidence that heightened psychophysiological reactivity is evident in the majority of persons with PTSD, but not all (Frueh, Elhai, & Kaloupek, 2004; Orr, McNally, Rosen, & Shalev, 2004). During trauma increased sympathetic arousal is understood to deactivate mPFC and hippocampal modulation of the amygdala's indiscriminate response to fear-related triggers (through the establishment of an association between the unconditioned threat stimuli (US) with previously neutral stimuli which become conditioned stimuli (CS) and activation of the species specific defence response SS DR) in order to maximise the organism's capacity to survive a sudden, unexpected and potentially fatal event (Shalev, et al., 2011). Extinction of this conditioned fear response post-trauma is understood to be dependent on inputs from the mPFC and hippocampus which appear to remain compromised in the face of ongoing sympathetic arousal post-trauma (Brewin, 2003).

The compromised functioning of the mPFC and hippocampus has been associated with intrusive and distressing memories of the traumatic event, central to Cluster B of the PTSD diagnosis. Excitation of the amygdala with the concomitant down-regulation of the hippocampus and mPFC is understood to allow for rapid processing of incoming information. Drawing on classical cognitive network models of memory, successful processing of these memories is understood to be dependent on the down-regulation of the amygdala along with the re-activation of the hippocampus and mPFC (Zoellner & Bittenger, 2004). This re-activation enables traumatic memories to be processed through complex memory networks or schemas which facilitate the integration and incorporation of new emotionally laden memories into a broader bank of autobiographical memories. It is postulated that in PTSD the system's failure to return to homeostasis maintains a split between ordinary memories and the partly elaborated, primarily non-verbal memories laid down during the traumatic event (Brewin, 2003; van der Kolk, 1996b); a split which it has been theorised may be further compromised by peritraumatic dissociation, though evidence for this is disputed (Bedard-Gilligan & Zoellner, 2012; Zoellner, et al., 2002). Interestingly, this conceptualisation of

traumatic memory is firmly rooted within the psychodynamic tradition (see *Chapter 2: Section 2.3.2 Psychological impact of trauma: Psychological route*).

In PTSD the failure to process traumatic memories is understood to result in frequent, distressing, involuntary memories of the trauma, nightmares and traumatic flashbacks – triggered by trauma associated cues, with prominent perceptual features and resulting in intense reliving of the traumatic event in the present (Brewin, 2005). There has been strong debate as to the veridical nature of flashbacks (van der Kolk & McFarlane, 1996; Young, 2001) and it has been argued that there is no neurological evidence of flashbacks constituting a specific neurological event (McNally, 2004). Interestingly, and somewhat paradoxically, research has also suggested that heightened emotions impact negatively on memory recall. This seems particularly salient in the face of severe trauma such as rape. Koss and colleagues (Koss, Figueredo, Bell, Tharan, & Tromp, 1996; Tromp, Koss, Figueredo, & Tharan, 1995) found that compared to other unpleasant memories, rape memories were less clear and vivid, less likely to occur in a meaningful order, less well-remembered and less thought and talked about. Similarly Mechanic, Resick and Griffin (1998) found that survivors of rape had poor recall of the rape that improved over time.

Thus whilst it seems that traumatic events do impact on memory, a key question remains – are traumatic memories qualitatively different, that is, stored and processed differently, to other types of emotionally distressing memories? Or are they simply quantitatively different, that is on the extreme end of a continuum of memory processing and storage? In an evaluation of the research, Zoellner and Bittenger (2004) conclude that “memory fragmentation in PTSD may substantially overlap with non-PTSD states, other distressing memories, and memories from other events associated with the onset of psychopathology” (p. 158) and that “without stronger evidence to the contrary, the simpler, quantitative explanation of traumatic memories in PTSD is preferred” (p. 159). Similarly Lynn, Knox, Fassler, Lilienfeld and Loftus (2004) argue that a review of the research literature offers little empirical support for unique processing of traumatic memories, particularly for a dissociative mechanism. This area of research proved critical in the False Memory debate of the 1990s (and the associated diagnosis of Dissociative Identity Disorder (DID)) that divided mental health professionals into Savors and Skeptics (Brewin, 2003; Hacking, 1995) and which reiterated the two key areas of debate in relation to the concept of psychological trauma – that of the aetiology and veracity of post-traumatic symptomatology – highlighted in *Chapter 2:*

Section 2.3 The aetiology of the psychological impact of trauma: Physiological or psychological?

Given the overview above it is evident that several neurological perturbations have been associated with PTSD, but none have proven to be characteristic of the disorder for all individuals with PTSD (Shalev, et al., 2011), and the findings seem to raise as many questions as they seek to answer. These questions may be broadly categorised under two key issues. Firstly, in the main, neurobiological research has focused on evidence of hypocortisolism, reduced hippocampal volume, elevated physiological arousal and the nature of traumatic memories. Since none of these markers offer a direct and specific link to PTSD, the question is whether PTSD lies on the extreme of a continuum describing normal responses to stress or whether it is a distinct categorical construct. The former conceptualisation is more in keeping with the historical antecedents of the diagnostic category, which places the cause of the distress outside of the individual. The latter, driven in the main by advances in neuroscience techniques, is more focused upon exploring and describing individual (multiple) diatheses resulting in a diagnosis of PTSD (and other disorders) in the face of extreme stress, thereby de-emphasising the centrality of the traumatic event itself (Shalev, et al., 2011; Yehuda & McFarlane, 1995; Young, 2001, 2004). The search for factors that predispose a minority of trauma survivors to develop PTSD begs the second question, which is whether the traumatic event itself is in fact the primary cause of the range of symptoms clustered together under the PTSD diagnosis, or whether the symptoms are a result of an amalgamation of predisposing factors, both genetic and environmental, which result in a range of mental health difficulties described by the diagnostic category of PTSD and/or several other psychiatric disorders. It is the first part of this second question – the aetiology of PTSD – which is addressed in the following section.

4.3.4 The question of the aetiology of PTSD

Unlike any other diagnostic categories in the DSM IV, which are phenomenological and descriptive, with causation assumed to be complex and multifactorial, aetiology is a definitive aspect of the PTSD diagnosis. Exposure to a traumatic event (Criterion A) accounts for all the subsequent symptoms listed under Criteria B, C, D, E and F of PTSD, thereby providing a causal link between the present and an index event in the past which excludes other factors

(Summerfield, 2001). As noted in *Section 4.3.1 The problem of PTSD being a politically, rather than scientifically, motivated diagnosis*, both empirical studies and epidemiological surveys have demonstrated that whilst rates of exposure to highly threatening events is quite common, rates of PTSD are relatively low. Furthermore, even if there is evidence of high levels of distress in the immediate aftermath of trauma, research suggests that most people will spontaneously recover (Shephard, 2004). This suggests that exposure to trauma may be a necessary, but not sufficient condition, for the development of PTSD and raises the question of which, if any, risk factors (pre, during and post-exposure to a traumatic event) may dispose some individuals to develop PTSD (Bowman & Yehuda, 2004).

As noted in Chapter 2 (see in particular *Section 2.4 World War I and World War II*), the question of predisposing risk factors in relation to understanding and explaining responses to a traumatic event has recurred throughout the history of the study of the psychological impact of traumatic events. Broadly speaking, predisposition has been conceptualised in terms of vulnerability due either to peri-traumatic experiences and/or characterological (more recently framed as genetic) vulnerability. Both perspectives have had profound implications for the ways in which those struggling to recover from a traumatic event have been perceived and responded to. Tracking the military history of screening of prospective recruits, Shephard (2004) notes a chequered record which evidences a range of attempts at screening out those identified as most obviously vulnerable with automatic exclusion of the feeble minded and psychopathic during World War I, and the use of intelligence tests and assessment of vulnerability to psycho-neurosis in World War II. None of these practices appeared to be particularly successful in differentiating between those soldiers who were most likely to successfully meet the challenges of combat from those most likely to succumb to psychiatric illness (Shephard, 2004). In the USA at the start of the Vietnam War there was no real screening for psychological vulnerability, bar exclusion based on debilitating psychiatric illness and homosexuality, and selection was in essence class based; 76% of men sent to Vietnam were from lower/middle working class backgrounds (Shephard, 2004).

Given the history outlined in *Chapter 2: Section 2.5 The Vietnam War*, it is not surprising that for Vietnam War activists, 'predisposition' became a dirty word, and the magnitude of the stressor was understood as critical in determining the degree of post traumatic distress; a normal response to an abnormal stressor. This linear, uni-directional dose-response model of PTSD has to some extent been supported by empirical research; however, subjective

perception of threat has often been found to be a greater predictor of distress than objective indicators (Brewin, 2003; Brewin, Andrews, & Valentine, 2000). This raises several interesting questions: Firstly does subjective appraisal of an event as highly threatening render the event by definition traumatic, and secondly, what informs the unique and specific appraisal of the same event as traumatic by one person, but not another? Furthermore, the diagnostic category of PTSD appears to pivot on the understanding that time flows in one direction, from past (cause) to present (effect); however, it is also possible that the causal link between a past event and current distress is made retrospectively (as in delayed onset PTSD commonly diagnosed amongst Vietnam veterans). This hiatus begs the question of whether the current distress is in fact directly attributable to the past traumatic event or whether the event triggered mental health difficulties associated with a history of psychiatric illness and/or other difficulties which predate the traumatic event (Young, 1995, 2004). By the late 1980s, with veteran rights to compensation and care entrenched, it became morally and politically permissible to once again revisit and explore these questions in relation to psychological responses post-trauma (Breslau & Davis, 1987; McFarlane, 1990; Yehuda & McFarlane, 1995; Young, 2001).

With regards to the first question McNally (2004) argues that conceptual bracket creep is not inevitable and that Criterion A of the PTSD diagnosis serves to set clear and explicit parameters on what is and is not defined as traumatic (see *Section 4.4.1 Criterion A: Defining a traumatic event*, below for a consideration of changes to Criterion A over time in the DSM). Thus what distinguishes a traumatic incident from a non-traumatic incident is the nature of the event, not the survivor's response. That said, it seems clear that the event itself is not a sufficient cause of PTSD and that personal vulnerabilities and the nature of the social environment profoundly inform post-traumatic adjustment (Brewin, 2003; Rechtman, 2004). Furthermore, different types of traumatic events appear to be more pathogenic than others, for example interpersonal violence appears to be a more potent stressor than accidents (Yehuda & LeDoux, 2007). Exposure to trauma is not random, which suggests that there are links between PTSD and demographic, socioeconomic and genetic predictors of exposure (Yehuda & LeDoux, 2007). More recent research has sought to consider these risk factors alongside exploration of other pre-trauma risk factors, risk factors associated with the traumatic event itself, and post-trauma risk factors in tracking and understanding risk for the development of PTSD. It is beyond the scope of this review to offer anything but a cursory

overview of pre-trauma, trauma and post-trauma risk factors for PTSD; these are more thoroughly considered in the next chapter in relation to the impact of rape on mental health.

Pre-trauma factors which have been considered in relation to developing PTSD are gender, low socioeconomic status, lack of education, low IQ, a history of psychiatric illness, a history of childhood abuse (physical and/or sexual), and other adverse childhood experiences (Brewin, 2003). Exploration of risk factors directly related to the event itself has focused primarily on trauma severity, including perceived life threat during the trauma (Ozer, et al., 2008), but has also included degree of dissociation, including derealisation and depersonalisation (van der Velden & Wittmann, 2008), degree of experience of mental defeat (Ehlers, et al., 1998) and degree of physiological reactivity, as measured in the immediate aftermath of the traumatic event (Orr, et al., 2004). Assessment of post-trauma factors have considered exposure to subsequent life stressors, degree of social support – particularly unsupportive social reactions - and the role of beliefs and meaning making in adjustment post-trauma (Ullman, Filipas, et al., 2007), with a more recent exploration of factors which enable resilience (Agaibi & Wilson, 2005) and post-traumatic growth (Tedeschi & Calhoun, 2004).

Brewin (2003) observes that the magnitude of the effects of each of these factors appears to be small and that if all the risk factors are interrelated, and have overlapping effects, then the extent of any overall risk will also be small. If, however, the effect of all the pre-trauma risk factors is separate and additive, then a significant degree of risk of PTSD could be argued to be attributable to an individual's characteristics. Several reviews have concluded that the most important factors which increase the risk of PTSD include temperament (particularly the trait of Neuroticism), a history of psychiatric illness, low intelligence, pre-event beliefs and attributions, biological factors and degree of social support (Bowman & Yehuda, 2004; Brewin, Andrews, & Valentine, 2000; Summerfield, 2001). A recent meta-analysis found significant effect sizes for prior trauma, prior psychological adjustment, family history of psychopathology, perceived life threat during trauma, post-trauma social support, peri-traumatic emotional responses and peri-traumatic dissociation with the last evidencing the greatest effect size (Ozer, et al., 2008). The authors conclude that peri-traumatic psychological responses, not prior characteristics, are the strongest predictors of PTSD; however, it could be argued that, just as subjective appraisal of the event itself is informed by prior trauma history, so too are peri-traumatic responses. It seems that there are multiple pathways to PTSD relative to pre-trauma risk factors, features of the traumatic event itself,

and post-trauma experience (Brewin, 2003). Returning to the third question referred to earlier in this section of whether the diagnosis of PTSD is in fact directly attributable to the past traumatic event or whether the event triggered mental health difficulties associated with a history of psychiatric illness and/or other difficulties that predate the traumatic event, Bowman and Yehuda (2004) observe:

Overall, research demonstrates that PTSD is best understood as the periodic expression of long-standing dispositions that often are risk factors for both threatening exposures and subsequent dysfunctions. At the very least, pre-event risk factors that include enduring personality features and beliefs have been found to predict PTSD more reliably than event features (p. 24).

This summation begs the question: does the diagnostic category of PTSD constitute a discrete and distinct psychiatric disorder, or is it made up of a combination of a range of symptoms better accounted for by several other psychiatric disorders, which leads to the focus of the next and final section in this overview of the critiques of PTSD.

4.3.5 Is PTSD distinct from other disorders?

It has been noted that, with the exception of Criterion A of PTSD, which appears to knit the symptoms of the PTSD diagnosis together, most if not all of the symptoms listed under Criteria B to F are not diagnostically specific and overlap with other psychiatric disorders (Brewin, 2003; Summerfield, 2001; Young, 2004). The diagnoses most commonly cited as sharing characteristics of the PTSD diagnosis are other Anxiety Disorders, in particular Panic Disorder, Specific Phobia, Generalised Anxiety Disorder (GAD), Mood Disorders, in particular Major Depressive Disorder (MDD), Substance Related Disorders, Paranoid Schizophrenia and, on Axis II, Borderline Personality Disorder (BPD) (Herman, 1993; D. J. Stein, Seedat, Iversen, & Wessely, 2007). Accordingly, symptoms distinctive of conditioned reactivity to environmental cues and avoidance behaviours in PTSD could also be associated with fear based symptoms evident in other Anxiety Disorders. Similarly sleep disturbance, impaired concentration, social isolation, loss of interest in activities, restricted affect, anger and irritability are indicative of depression (Breslau, Chase, & Anthony, 2002; Breslau & Davis, 1987; Frueh, et al., 2004).

It is perhaps not surprising, therefore, that there appears to be a high degree of co-morbidity amongst those diagnosed with PTSD. Data from the US National Comorbidity Survey (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995) found that approximately 80% of

patients with PTSD met the criteria for at least one other DSM diagnosis, most commonly Major Depressive Disorder, OCD, Panic Disorder and Substance Abuse or Dependence (Hageman, et al., 2001). Furthermore the data suggests that both depression and substance abuse are more likely to be consequences of having developed PTSD, whilst co-morbid Anxiety Disorders are more likely to be independent of the traumatic event that led to the development of PTSD (Brewin, 2003). Resick's (2001) review of the literature on PTSD and co-morbidity suggests that the majority of people diagnosed with PTSD have at least one other diagnosable disorder, most commonly depression.

Co-morbidity makes it difficult to establish if PTSD is a unique and specific response to trauma, and if so, how to differentiate which symptoms belong to which diagnosis.

This is further complicated by two additional sets of findings. Firstly, research has shown that PTSD criteria B to F are commonly reported by psychiatric outpatients seeking treatment for depression, regardless of whether or not there was exposure to a traumatic event (Bodkin, Pope, Detke, & Hudson, 2007). Secondly, research suggests that even those who are not seeking treatment, who do not report exposure to traumatic stressors, and who are in the main not psychiatrically ill (for example, undergraduates in a course, or random adults in a survey), when asked about PTSD symptoms in relation to worrisome or troubling life events, appear to report PTSD-qualifying symptoms at equal or sometimes higher rates than those reporting Criterion A stressors (Bodkin, et al., 2007; Gold, Marx, Soler-Baillo, & Sloan, 2005; Mol, et al., 2005). These findings could be taken to mean that either PTSD incorporates too many of the symptoms associated with other psychiatric disorders to be specific or that the symptomatology describes a non-specific syndrome of distress rather than a distinct syndrome linked to severe trauma exposure (Spitzer, First, & Wakefield, 2007). In addition, the finding also highlights the problem of relying on self-report to diagnose PTSD, raising questions of exaggeration, malingering and/or exacerbation of a pre-existing Mood, Anxiety or Personality Disorder (McNally, 2003).

There are several ripostes to these criticisms. One route is to demonstrate the coherence of the syndrome (that is that PTSD symptoms tend to occur together), by demonstrating that the symptom patterns are similar across a range of traumatic events (Green, 1993). Another route is to examine the structure of PTSD symptoms in order to evaluate whether they do in fact form the three PTSD clusters of re-experiencing, avoidance and arousal (Brewin, 2003). Factor analyses have provided some evidence for either three or four symptom clusters, which correspond to some degree to the PTSD symptom clusters, but with several caveats

and some debate as to whether the factors relate to an overall higher order factor which corresponds to the PTSD diagnosis (Powers, Nayak, Cahill, & Foa, 2012). In addition, analyses seem to suggest that PTSD includes a cluster of symptoms shared with other diagnoses, most commonly depression (Lancaster, Melka, & Rodriguez, 2008), which returns us to the issue of co-morbidity.

Studies have examined whether the removal of overlapping Anxiety and Mood Disorder symptoms in the PTSD diagnosis would impact on rates of diagnostic co-morbidity and alter PTSD's diagnostic or construct validity. In the main this research suggests that symptom deletion has no impact on these variables, but there is some evidence to suggest that Criterion B (re-experiencing symptoms) is most distinctive of the PTSD diagnosis (Elhai, Grubaugh, Kashdan, & Frueh, 2008; Franklin & Zimmerman, 2001).

In light of the above, it can be argued that although PTSD does share symptoms associated with other disorders, these shared symptoms combine with more distinctive symptoms which follow a unique trajectory specific to PTSD, but that PTSD cannot and does not encompass the full range of potential responses (psychiatric or otherwise) which exposure to traumatic events may precipitate (Brewin, 2003).

4.4 Changes to the PTSD diagnostic category from DSM III to DSM IV (TM)

In response to the critiques and debates surrounding the diagnosis of PTSD reviewed in the foregoing *Section 4.3 The question of whether PTSD belongs in the DSM*, there have been a number of changes to the diagnostic category of PTSD across the DSM III, DSM III R, DSM IV TM and DSM IVTR and it is these changes which will now be considered.

4.4.1 Criterion A: Defining a traumatic event

Since 1980 the boundaries for Criterion A, which designates what constitutes a traumatic event, have been repeatedly revised. Initially, in the DSM III Criterion A identified a traumatic event on the basis of it being a "recognisable stressor that would evoke significant symptoms of distress in anyone" (American Psychiatric Association, 1980, p. 238). The criticism that Criterion A lacked specificity in terms of the definition of a traumatic event i.e. recognisable stressor, was to some degree addressed by the revision of Criterion A in the DSM IIIR (American Psychiatric Association, 1987), which divided Criterion A into two parts: the first part defined a traumatic event as falling "outside the range of usual human experience" (p. 250), whilst the second part of the definition was slightly reworded i.e. the

event “would be markedly distressing to anyone” (p. 250). Criticism of the definition, both in terms of the need for clearer parameters on what constitutes a traumatic event, as well as the observation that traumatic experiences do not necessarily fall outside the range of ordinary human experience (Kessler, et al., 1995) – particularly salient in relation to gender based violence – led to a more substantial revision of Criterion A in the DSM IV TM which was retained in the DSM TR (Spitzer, et al., 2007). This revised two part definition stipulates that a person must have been exposed to traumatic event in which firstly “the person experienced, witnessed or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others” (American Psychiatric Association, 1994, p. 427) and secondly: “the person’s response involved intense fear, helplessness and horror” and also offers an additional comment on how this may manifest in children (p. 428).

It has been argued that the changes over time in Criterion A have broadened the definition to include a now overly wide range of events, which go beyond direct or vicarious exposure to include second-hand exposure through hearing about a traumatic event. This problem of “bracket creep” (McNally, 2003, p. 231) is seen to risk trivializing PTSD and has important forensic implications with regards to litigation and disability claims (Rosen, 2004).

Secondly, it has been observed that Criterion A2, as it currently stands, serves to shift the emphasis away from A1 towards subjective experiences outlined in A2 (Frueh, et al., 2004) and is conceptually flawed for a number of reasons. Firstly, it relies on retrospective self-report. Current symptoms may influence memories of reactions at the time, and reported dissociation and difficulties in remembering peri-traumatic reactions make it difficult to interpret reported memories. Secondly, it fails to take into account a range of other emotions such as anger and shame (Brewin, Andrews, & Rose, 2000). Research on A2 suggests that it contributes little in terms of validating the definition of trauma (Criterion A) because most people who meet A1 also meet A2 (Breslau & Kessler, 2001; Brewin, Andrews, & Rose, 2000). It has been suggested that removal of A2 would reduce the complexity of diagnosing PTSD, whilst not substantially increasing prevalence rates and that A2 should be reconceptualised as a risk factor for PTSD rather than a diagnostic criterion (Friedman, Resick, Bryant, & Brewin, 2011; Karam, et al., 2010).

Interestingly, but perhaps not surprisingly, noteworthy changes to Criterion A have been mooted for inclusion in the DSM 5. These changes appear in the main to seek to address the problem of bracket creep. According to the APA DSM 5 website (<http://www.dsm5.org>) the

changes to Criterion A1 seek to remove ambiguities and tighten the definition of traumatic events and Criterion A2 has been deleted because it has been deemed to have no utility (American Psychiatric Association, 2012).

Whether these proposed changes will silence critics who argue that as it currently stands Criterion A remains “fraught with assumptions about what may or may not be traumatic, and is not fully consistent with human experience across time and cultures” (Bowman & Yehuda, 2004, pp. 15-16) remains to be seen. It is unlikely that those opposed to the medicalisation of distress and who foreground the salience of the socio-political underpinnings of PTSD will be impressed by the changes, whilst those concerned that an overly restrictive definition of trauma might exclude individuals who might otherwise receive assistance through a diagnosis of PTSD may be apprehensive about the proposed tightening of Criterion A (Orr, et al., 2004). In terms of sexual violence, as it currently stands Criterion A1 is relatively inclusive, but Criterion A2 poses some serious difficulties in the face of rape within partnerships, coercive sex and date rape (Gavey, 2005). As such, Criterion A in the DSM 5 may be seen as more inclusive, though the problem of the medicalisation and individualisation of a social ill remains.

4.4.2 PTSD symptomatology: Criteria B to D and Criterion E and F

The three main PTSD symptom clusters - Cluster B (symptoms characteristic of persistent re-experiencing of the traumatic event), Cluster C (symptoms associated with persistent avoidance of stimuli associated with the trauma) and Cluster D (persistent symptoms of increased arousal) – have remained constant across the four editions of the DSM. There have, however, been numerous changes in the wording of the specific criteria listed within each cluster along with a number of additions and deletions and the relocation of two criteria from one cluster to another.

With reference to changes in Cluster B, the most noticeable changes from DSM III (American Psychiatric Association, 1980) to DSM III R (American Psychiatric Association, 1987) were the requirement that symptoms be *persistent*, the uncoupling of reliving the traumatic event from an environmental trigger, and the addition of a fourth criterion which refers to intense psychological distress in response to environmental cues reminiscent of the traumatic event. In this cluster, changes in the DSM IV TM (American Psychiatric Association, 1994) are in the main focused on providing more specific descriptions within

each criterion, including specific references to children, and the addition of physiological reactivity. The latter was relocated from Cluster D in recognition of physiological reactivity being more than simply an indication of general heightened arousal and rather a measure of the degree to which the traumatic event is emotionally experienced (Orr, McNally, Rosen & Shalev, 2004). This cluster remained unchanged in the DSM IV TR (American Psychiatric Association, 2000).

With reference to Cluster C, the most noticeable changes from DSM III to the DSM III R are amendment of the initial criteria such that they refer directly to the traumatic event and the addition of several more criteria relating to feeling states. Changes to Cluster C in the DSM IV TM were relatively minor and the Cluster remained unchanged in the DSM IV TR.

Cluster D saw the most changes in wording and symptoms specification from the DSM III to DSM III R. These changes sought to provide identifiable and particular symptoms associated with autonomic arousal. In addition, the reference to guilt about surviving when others have not, or guilt about behaviour required for survival (which speaks directly to the Vietnam veterans' experiences) in the DSM III was removed in the DSM III R. In the main, Cluster D remained unchanged from the DSM III R to the DSM IV TM, bar the relocation of physiological reactivity in response to environmental cues from this Cluster to Cluster B.

Criterion E and F were added to the DSM IV TM and remained unchanged in the DSM IV TR and are understood to be attempts at distinguishing normal from pathological responses to trauma on the basis of duration of symptoms and degree of distress caused by the symptoms. The addition of specifiers relating to Acute as opposed to Chronic PTSD and Delayed Onset PTSD was added in the DSM IV TM and remained unchanged in the DSM IV TR.

4.4.3 Summation

Overall, the diagnostic changes appear to provide greater specificity and clarity with regards to symptoms particular to PTSD; thereby ensuring that PTSD is both a coherent and distinctive disorder within the DSM nosology. The changes do not, however, necessarily resolve the broader debates fore-grounded in the previous section (*Section 4.3 The question of whether PTSD belongs in the DSM*). For example, Young notes that with regard to the problem of aetiology and the overlap of PTSD symptoms with other disorders, the changes from the DSM III to the DSM III TR sought merely to unify the diagnosis by linking Criterion B and C through reference to the traumatic event. Nonetheless, the key dilemma

remains across all four DSMs: The patient may complain of symptoms which are in essence indistinguishable from other disorders except for the link drawn by the diagnosis to a specific traumatic event, which then reconstitutes the symptom presentation into the diagnostic category of PTSD. In addition, despite the growing body of research on the neurobiology of trauma there is little agreement on any biological markers of PTSD and the veracity of intrusive re-experiencing through flashbacks, nightmares, and so forth, remains contested territory; as does the nature of traumatic memory, which calls into question whether the inability to remember aspects of the trauma are symptomatic of psychogenic amnesia or simply a normal feature of memory recall when attention is focused on one aspect of an event and not on another (McNally, 2004).

Finally, Criterion E speaks to the debate regarding medicalisation and pathologisation of responses to trauma by suggesting a period of time (one month) in which it would be “normal” for PTSD-like symptoms to be present. However, the criterion still stipulates a normative recovery period and response, which remains at odds with those most strongly opposed to the diagnosis on the grounds of its failure to consider culture, context and medicalisation of distress (Summerfield, 2001). Criterion F has been seen by some as a relic of the Vietnam era and research has suggested that the phenomenon of delayed onset is relatively rare, with delayed presentation of difficulties better understood in terms of delayed help-seeking rather than onset and /or other clinical issues. Criterion F once again reminds us of the socio-political history which underpins the diagnosis itself (Spitzer, et al., 2007).

Changes proposed in the DSM 5 for Clusters B, C and D speak to a number of the aforementioned concerns. Overall changes in phrasing underscore the link between each symptoms and the traumatic event, thereby highlighting a direct link between exposure to a traumatic event and subsequent symptoms which are specific to PTSD. In particular, revisions appear to address the critiques relating to the overlap between PTSD and the diagnostic category of MDD by distinguishing between depressive ruminations and intrusive memories, as well as creating an additional cluster which refers to negative alterations in cognitions and mood directly linked to the traumatic event. This cluster matches recent research (referred to in *Section 4.3.5 Is PTSD distinct from other disorders?*) indications that PTSD constitutes a four- rather than three-symptom cluster (Friedman, et al., 2011). Debates regarding the scientific validity of traumatic memory seem to be addressed by suggesting that dissociation occurs along a continuum which includes the possibility of flashbacks. The issue of cross-cultural applicability is only directly addressed through slight changes to the wording

of the symptom relating to recurrent distressing dreams. Criteria E and F have been retained (as Criteria F and G), but specification of acute or chronic onset has been removed, whilst delayed onset has been retained.

4.5 Chapter summary

In light of the debates discussed in *Section 4.2 Objections to the DSM III nosology*, and *Section 4.3 The question of whether PTSD belongs in the DSM*, it is clear that the diagnostic category of PTSD is highly contested and has been problematised from a number of viewpoints. Even if one accepts the medical model upon which the DSM nosology rests, whether PTSD actually describes a disorder which belongs in the DSM remains a strongly disputed issue. The socio-political roots of PTSD are clear, but this does not in and of itself render the diagnosis meaningless. PTSD as a concept, and the diagnostic criteria for PTSD, are historically and culturally informed; however, even the most sceptical critics recognise that whilst PTSD is “glued together by the practices, technologies and narratives with which it is diagnosed, studied, treated and represented...the reality of PTSD is confirmed empirically by its place in people’s lives, by their experiences and convictions, and by the personal and collective investments that have been made in it” (Young, 1995, p. 5). There are no specific neurological signifiers associated directly with PTSD and it is clear that there is a range of pre-, post- and trauma-related factors influencing the development of PTSD, a diagnosis that shares symptoms associated with other disorders, but that also appears to combine these symptoms with more distinctive symptoms particular to PTSD. Whilst the changes made to the diagnostic criteria for PTSD in the DSM III R, DSM IV TM, and DSM IV TR have, arguably, improved specificity and clarity with regards to both defining a traumatic event and delineating the symptoms particular to PTSD, the changes have not necessarily resolved the broader debates fore-grounded in relation to whether PTSD belongs in the DSM.

In the face of this complex picture, it is suggested that a middle road may be possible; one which acknowledges the problematic nature of the diagnosis, whilst recognising that the diagnosis offers a way, though not the only or best way, of understanding and exploring the impact of trauma. Arguably, like virtually all psychiatric diagnoses, PTSD is something of a work in progress. PTSD does not and cannot capture everything of interest about psychological/psychiatric responses to trauma, but it does offer a way of understanding and engaging with a particular kind of response to trauma seen in a substantial minority of

survivors. Given the inherently developmental nature of the diagnosis, both our conceptualisation of PTSD and the instruments developed to assess it should be approached with some caution and an awareness of the complexity of the debates surrounding the diagnosis itself. In light of this, it is the responsibility of the clinician/ researcher to hold this tension in mind as she/he engages with the lived experience of trauma survivors.

Chapter 5

Method

5.1 Introduction

This chapter delineates the research aims of this study and the research design developed to address these aims. This is followed by a description of the instruments selected for data collection, the subsequent administration of the study, and the procedure employed for data capture and analysis. The chapter concludes with a consideration of the ethical issues relevant to a study of survivors of rape and the ways in which these issues were addressed in this study.

5.2 Research aims

As noted in Chapter 3, there is an established body of international research on the pathogenic consequences of rape, which is dominated by quantitative research conducted in the USA and which, since the 1990s, has in the main come to view a diagnosis of PTSD as the most comprehensive and accurate description of post-rape trauma (Rothbaum, et al., 1992). In contrast to this large body of research, despite the high prevalence of rape in South Africa, there has been very limited research into the psychological impact of rape on survivors in this country. Using international research findings as the point of reference, this research aimed to address this gap by conducting an exploratory study to investigate what the mental health impact of rape is on a group of adult female rape survivors living in a low income, urban setting in South Africa.

Guided by the dominant trends in aforementioned international research, this study sought to investigate the psychological impact of rape on the survivor over a period of 6 months from the time of the rape. Using a predominantly quantitative approach the questions which the research sought to answer were:

- i. What are the mental health consequences of rape?
- ii. What is the nature of the relationship of these mental health consequences to the broader context within which the rape occurred?

5.3 Research design

A longitudinal design was adopted for this study. Survivors participating in the research were asked to attend a total of five face-to-face, one-on-one research interviews. These interviews were timed so as to match the critical time spans identified in the literature with regards to impact and recovery (see *Chapter 3: Section 3.2 Overview of the pattern of impact and recovery and symptomatology amongst rape survivors*). The Baseline interview was administered within 3 to 7 days of the rape, followed by interviews at 1 week, 4 weeks, 12 weeks and 24 weeks post-rape. The research protocol developed for this study was made up of a number of questionnaires relating to details of the rape itself, assessment of social support, self-blame, guilt and self-esteem, psychiatric and physical health, degree of exposure to community violence and perceptions of personal safety. The questionnaires were predominantly quantitative, but did include some open-ended questions where necessary. Whilst it is recognised that open-ended interviews may have yielded richer and more detailed data, the categorisation of such qualitative data for statistical analysis would not have been time-efficient. In addition, research with survivors of trauma suggests that because of the intense emotions associated with trauma and the difficulty of giving words to such experiences, structured interviews may in fact elicit more information than open-ended interviews (Briere & Conte, 1993; Greene & Caracelli, 2003; Mollica, et al., 1996).

With the exception of the Baseline interview, which focused primarily on gaining consent, recording contact details and demographics, and assessing immediate impact, for the most part the research protocol developed for the Week 1, Week 4, Week 12 and Week 24 interviews remained relatively unchanged across the interview time frames, although, where necessary, particular aspects of the research protocol were adapted to suit each of the four particular time frames (all the questionnaires and respective adaptations for each of the time frames are described in detail in *Section 5.4.3* of this chapter).

5.4 Instruments

5.4.1 Selection of instruments

Selection of assessment instruments for this research was informed by a consideration of the tools most frequently used in the assessment of psychological impact of rape in the international literature in the field, which were likely to be most pertinent to this group of

survivors, and which would allow for comparison with international findings (Elhai, Gray, Kashdan, & Franklin, 2005). No instruments specific to the assessment of rape-trauma have been standardised in South Africa, but the standardised instruments selected for use in this study have been standardised in developed countries, in particular the USA, and have evidenced very good reliability and validity (Antony, Orsillo, & Roemer, 2001; Friedman, 2001; W. P. Wilson & Keane, 1997). Due to human resource limitations, instruments were also selected on the basis that they could be administered by trained lay interviewers (not mental health professionals). Whilst some have argued that the use of lay interviewers compromises the collection of accurate data, particularly with regards to psychiatric diagnosis, others have argued that with adequate training and supervision lay interviewers can gather valid and reliable data (Seedat, Pienaar, Williams, & Stein, 2004).

The majority of survivors presenting at the TCC are isiXhosa speaking and the remainder are predominantly Afrikaans or English-speaking. With the exception of the Mini International Psychiatric Interview (MINI), the questionnaires which make up the research protocol were only available in English. The remaining questionnaires which make up the research protocol were translated and back-translated into Afrikaans and isiXhosa using the procedures suggested in order to ensure semantic equivalence (Bontempo, 1993; Brislin, 1986; Foxcroft & Roodt, 2001). Each instrument was translated into isiXhosa and Afrikaans by bilingual Clinical Psychologists (English and isiXhosa, and English and Afrikaans respectively), and then independently back-translated by bilingual persons without mental health experience, but with experience in translation and interpretation between English and isiXhosa and English and Afrikaans. The complexity of translating mental health questionnaires into isiXhosa (Swartz, 1998), required an additional procedure; a four day workshop was held with the back-translator, the isiXhosa research assistant who would be approaching women to take part in the study and would also be conducting all the isiXhosa interviews, the researcher, and a bilingual Grade 7, teacher in order to consider the wording of each questionnaire in terms of the complexities of interpretation and meaning. Where necessary minor modifications were made, or an additional re-framing of the question was added, to be put to the participant should they be unclear as to the meaning of the original question put to them. In addition, a substantial part of the training of the Afrikaans and isiXhosa-speaking research assistants was dedicated to considering each questionnaire in terms of the complexities of interpretation, cultural sensitivity and the meaning of each question in Afrikaans and isiXhosa.

5.4.2 Piloting of the research protocol

The Baseline and Week 1 research protocols were piloted by the researcher with two survivors presenting at the proposed research site – the TCC - in mid-2006. As a result of the pilot interviews minor amendments and alterations were made to the research protocol. Interviews for the study began in October, 2006.

5.4.3 Research protocol

In deciding on the order in which the questionnaires should be administered, priority was given to ensuring that research protocol followed a logical progression, which would provide some scaffolding through the interview for the survivor. In addition, the questionnaires were grouped thematically and ordered so as to avoid, as far as possible, undue influence of earlier questions and responses on subsequent questions and responses. All the interviews began with questions which referred specifically to details of the rape, followed by a series of questionnaires relating to social support, questionnaires relating to self-blame and guilt, questionnaires assessing mental health and health more broadly, and ending with a questionnaire seeking to assess levels of exposure to community violence and perceptions of personal safety. The interviews were formally concluded with a rating by the survivor of her experience of the interview, followed by an evaluation of the interview from the interviewer's point of view.

The following table provides an outline of the instruments used at each interview.

Table 1**Outline of instruments used**

Baseline	1 Week	4 Weeks	12 and 24 Weeks
Consent form	Details of the Rape Report Form	Follow up on Details of Rape Report Form	Follow up on Details of Rape Report Form
Contact Details Report Form	Multidimensional Scale of Perceived Social Support (MSPSS)	MSPSS	MSPSS
Demographics Report Form	Social Support I: Week 1	Social Support II: Weeks 4, 12 and 24	Social Support II: Weeks 4, 12 and 24
Brief Assessment of Initial Reaction	Posttraumatic Cognitions Inventory (PTCI)	PTCI	PTCI
	Self-esteem, Self-blame and Guilt Questionnaire	Self-esteem, Self-blame and Guilt Questionnaire	Self-esteem, Self-blame and Guilt Questionnaire
	Acute Stress Disorder Scale (ASDS)	Posttraumatic Stress Diagnostic Scale (PDS) and PDS Repeat	PDS and PDS Repeat
	MINI: Major Depressive Episode Suicidality Panic Disorder Agoraphobia Social Phobia Specific Phobia – MINI + Obsessive-Compulsive Disorder	MINI Major Depressive Episode + chronology Dysthymia + chronology Suicidality Hypo-manic disorder + chronology Panic disorder + chronology Agoraphobia + chronology Social phobia + chronology Specific phobia – MINI + with chronology OCD + chronology Alcohol abuse and dependence Non-alcohol psychoactive substance abuse disorders Psychotic disorders Generalised anxiety disorder Somatisation Disorder - MINI +	MINI Major Depressive Episode Suicidality (Hypo) Manic Episode Panic Disorder Agoraphobia Social Phobia Specific Phobia Obsessive-Compulsive Disorder Alcohol Abuse and Dependence Non-Alcohol Psychoactive Substance Use Disorders Psychotic Disorders Generalised Anxiety Disorder
	Shortened Interview - Simple Screening Instrument for Substance Abuse (SSI-SA)	SSI-SA	SSI-SA
	Somatisation following rape (Adapted from MINI +)	Somatisation following rape	Somatisation following rape
	Health Questionnaire I	Health Questionnaire II	Health Questionnaire II
	SA Harvard Trauma Questionnaire - Exposure to violence Scale I and II	Exposure to violence Scale II	Exposure to violence Scale III
	General Needs assessment	General Needs assessment	General Needs assessment
Conclude interview	Conclude interview	Conclude interview	Conclude interview
Interview assessment	Interview assessment	Interview assessment	Interview assessment

A Protocol Cover Sheet was attached to each of the set of questionnaires for each of the interview timeframes, which recorded name, number assigned to the survivor, date of Baseline interview, name of interviewer, and the dates upon which each of the interviews had been completed (see Appendix A). A description of the questionnaires and, where applicable, their properties is provided below. The order in which the description of each of the questionnaires has been set out, follows the order in which the questionnaires were administered in the interviews.

5.4.3.1 Baseline Interview

5.4.3.1.1 Contact Details Report Form

This form was designed for the current study and sought to secure at least one adequate means of contacting the survivor, but preferably a range of possibilities, whilst also ensuring that being contacted via cellular/mobile phone and/or landline and/or post would in no way compromise the survivor in terms of either safety or privacy. See Appendix B for a copy of the Contact Details Report Form in English.

5.4.3.1.2 Demographics Report Form

This form was designed for the current study. The data collected through this questionnaire was used to provide descriptive information of the survivors taking part in the research and to allow for the exploration of demographic factors which may impact on or moderate the relationship between the trauma of rape and psychological impact. The questionnaire elicited data relating to age (coded in years), race (the categories listed were based on the categories previously used during the apartheid regime), language (the 11 official languages of South Africa were listed), relationship status, sexual orientation - included because of growing concern amongst activists and civil society with regard to what has been termed 'corrective rape' – the rape of lesbians to 'cure' them of their lesbianism (A. Martin, Kelly, Turquet, & Ross, 2009) - number of children, area of residence, housing type, number of rooms in the abode, number of people living with the participant in the abode, highest level of education, employment status, (and if employed whether the survivor had returned to work since the rape), monthly income and number of people supported on that income. See Appendix C for a copy of the Demographics Report Form in English.

5.4.3.1.3 Brief Assessment of Initial Reaction

This form was designed for the current study. The nature of the information which the assessment form sought to elicit was guided by the literature on the immediate aftermath of rape and the factors which appear to ameliorate or exacerbate post-rape trauma (*Chapter 3: Section 3.4.3.1.1 Initial reactions and coping strategies*). Broadly, the assessment form sought to establish sources of support, if any, in the immediate aftermath of rape, how survivors came to access the TCC and their expectation of the TCC and where survivors went after receiving treatment at the TCC. Finally survivors were asked about their greatest concerns both in relation to medical/health related issues and other worries and their emotional state. See Appendix D for a copy of the Brief Assessment of Initial Reaction form in English.

5.4.3.2 Weeks 1, 4, 12 and 24

5.4.3.2.1 Details of Rape Report Form

This questionnaire was designed for the study. The structure and content of the questionnaire was informed to some degree by the Sexual Assault Case Report Form designed for the study on post-exposure prophylaxis (PEP) following sexual assault in Cape Town (Roland, et al., 2005), with additions and modifications where necessary and the inclusion of open-ended questions allowing for recording of more qualitative data. The questionnaire sought to elicit detailed information pertaining to the survivor, perpetrator (as reported by the survivor), and the circumstances surrounding the rape.

Following questions posed to the participant relating to the date and time of the rape, and date and time of the medical/forensic examination at the TCC and her experience of that examination, an open-ended question was posed asking the survivor to describe what happened. Thereafter, questions posed related to the survivor's reactions, both physical and verbal, during the assault and rape, and injuries sustained, pregnancy status, HIV status pre- and post-rape and treatment received, substance use at the time of the rape, whether the rape was reported to the police and related questions and details of any previous rapes.

With regards to the perpetrator(s), questions sought to establish the number of perpetrators, relationship of the perpetrator(s) to the survivor, age, race, HIV status of perpetrator(s) (if known), substance abuse on the part of the perpetrator(s) at the time of the rape (if known or

suspected), degree of physical violence and use of weapons (if any), types of penetration, if ejaculation took place, and if a condom was used, and details of what the perpetrator(s) said to the survivor.

The follow-up on Details of the Rape Report Form administered at Weeks 4, 12, and 24 related specifically to the contact survivors may have had with the police since the previous interview(s) and any changes in pregnancy and HIV status since the previous interview(s).

See Appendix E for a copy of the Details of the Rape Report Form and Appendix F for the Details of Rape Report Form: Follow-up in English.

5.4.3.2.2 Multidimensional Scale of Perceived Social Support (MSPSS)

The importance of social support and the impact of negative responses for survivors of rape has been highlighted in the literature on the psychological impact of rape (*Chapter 3: Section 3.4.3.2.2 Social support*), and more general research findings have demonstrated that adequate social support can act as a buffer between stressful life events and psychological and physical symptoms (Brugha, 1995; Miyakazi, et al., 2005; Monroe, Imhoff, Wise, & Harris, 1983). Furthermore, researchers have found perceived social support (PSS) to be a better predictor of psychological status than objectively measured social support (B. R. Sarason, et al., 1991; I. G. Sarason, Sarason, Potter, & Antoni, 1985). Thus a measure of perceived social support was deemed necessary for this study.

Zimet, Dahlem, Zimet & Farley (1988) set out to develop a self-explanatory, simple-to-use, and time-efficient self-report measure of perceived social support. The instrument includes 12 items covering three subscales, each addressing a different source of support; these are family, friends and significant other. Each statement is rated by the respondent using a seven point rating scale ranging from Very Strongly Disagree (1) to Very Strongly Agree (7); the higher the score the greater the degree of social support.

Zimet et al. (1988) found that, despite some overlap between the subscales, factor analysis confirmed that support from family, friends and significant other, constitute three separate dimensions of perceived social support. Good internal reliability and test-retest reliability was demonstrated for each of the subscales (Significant Other - .91 and .72, Family - .87 and .85 and Friends - .75 and .75 respectively), and for the scale as a whole (.88 and .85

respectively). In addition, as predicted, social support appeared to be negatively related to reported anxiety and depression symptoms.

The psychometric properties of the MSPSS have subsequently been demonstrated in diverse samples. Zimet, Powell, Farley, Werkman & Berkoff (1990) confirmed their initial psychometric findings with regard to reliability, factorial validity and subscale validity. The psychometric properties of the MSPSS have subsequently been demonstrated in diverse samples (Canty-Mitchell & Zimet, 2000; Clara, Cox, Murray, & Torgrudc, 2003). It is however, noteworthy that in their confirmatory factor analysis study of the MSPSS, using high school students in Hong Kong, Cheng and Chan (2004) found that the Significant Other subscale appeared to measure both friends and family support at the same time.

In South Africa, a relatively recent study (Bruwer, Emsley, Kidd, Lochner, & Seedat, 2008) investigated the psychometric properties of the MSPSS in South African youth. Results confirmed the three-factor structure of the MSPSS. PSS was positively correlated with resilience and negatively correlated with traumatic events. As with previous research, females reported significantly higher levels of PSS than males, in addition youth of white or mixed race reported significantly higher levels of PSS than black youth.

In order to confirm the consistency of the participants' responses to the MSPSS in relation to the three-factor structure of the instrument, a factor analysis was conducted. Eigenvalues were calculated for the MSSPS at Week 1 because sample size was largest at that week. Statistica 10 was used and only eigenvalues greater than one were considered. Principal Axis factoring was selected with Varimax Normalised rotation. Two eigenvalues were evidenced (Factor One = 4.41 – accounts for 36.74% of the variance and Factor Two = 1.36 – accounts for 11.33%). Factor One corresponds to questions relating to degree of support from family, Factor Two relates to degree of support from friends. Questions relating to Significant Other did not cluster into a third factor in our analysis, suggesting that the questions were ambiguous and participants sometimes identified that special person as a family member or friend.

The MSPSS was administered at the Week 1, 4, 12 and 24 interviews. At the Week 1 interview the instructions indicated that the questions referred to emotional support at that moment in time, at Week 4, 12 and 24 the instructions indicated that the questions referred to emotional support since the last interview. The MSPSS is available on request from the authors of the scale.

5.4.3.2.3 Social Support I and II

This questionnaire was designed for this study as a supplement to the MSPSS. Social Support I, administered at the Week 1 interview, seeks to establish key figures of support in the survivors' lives before the rape and also poses questions relating to sources of support (in relation to both the rape and in relation to other worries or concerns), since the rape. Social Support II was administered at the Weeks 4, 12 and 24 interviews, and the questions relating to sources of support refer to the time since the last interview. Research on social support post-rape has suggested that unsupportive or negative responses from key figures in survivors' lives are more predictive of difficulties in post-rape adjustment than neutral or supportive responses (Ahrens, 2006). Thus both Social Support forms ask participants about any negative changes in relationships, and unsupportive or unhelpful responses from significant figures, since the rape (Social Support Form I) and since the last interview (Social Support form II). See Appendix G and H for copies of the Social Support Form I and II in English respectively.

5.4.3.2.4 Post Traumatic Cognitions Inventory (PTCI)

It has been argued that the negative changes in thoughts and beliefs wrought by traumatic events play a critical role in the emotional response to trauma. It has further been hypothesised that the development of PTSD post-rape is informed by cognitive distortions and that individual appraisal of the traumatic event and its sequelae determines whether PTSD persists (Foa & Rothbaum, 1998). Foa, Ehlers and Clark et al. (1999) developed a scale to comprehensively measure negative attributions and appraisals of trauma which have been associated with the development and persistence of PTSD. The PTCI is made up of 33 items, 21 of which are statements representing Negative Cognitions About Self, seven items refer to Negative Cognitions About the World and five items refer to the concept of Self-blame. Participants are asked to rate each statement using a seven point likert scale (1 Totally disagree to 7 Totally agree): The higher the score the greater the degree of negative attributions and appraisals. The PTCI was administered at all four follow-up interviews. At Week 1 interview participants were asked to answer in relation to how they felt since the rape. At the Weeks 4, 12 and 24 interviews participants were asked to answer in relation to how they felt since the last interview. The PTCI is available on request from the authors of the scale.

Reporting on the psychometric properties of the PTCI, following administration of the instrument to 601 volunteers drawn from a diverse range of settings, of whom 392 had experienced a traumatic event including rape, Foa, Ehlers, Clark et al. (1999) noted the following. Very good internal consistency was observed for each factor ($\alpha = 0.86 - 0.97$). Test-retest reliability at one week for each factor and the total score ranged from .75 to .89. At the three week retest interval the test-retest reliabilites for each factor and the total score ranged from .80 to .86. Furthermore, convergent validity was calculated between the PTCI scores and the scores of two other scales that measure trauma-related cognitions – the World Assumption Scale (WAS) and the Personal Beliefs and Reactions Scale (PBRs). Whilst the overall pattern of correlations suggested good, adequate correlations between the subscales of the two other scales and the subscales of the PTCI, the PTCI Self-blame scale correlated only moderately with one of the scales and poorly with the other. An examination of the relationship between the PTCI and PTSD severity (as measured by the PDS) evidenced significant correlations ($r_s = 0.57-0.78$). In addition, differences between traumatised individuals with and without PTSD, and non-traumatised individuals were found to be significant; traumatised individuals with PTSD scored higher on all PTCI scales than either of the other groups. It is noteworthy that on all scales assault victims had higher scores than accident survivors. Overall Foa, Ehlers, Clark et al. (1999) found that the PTCI outperformed both the WAS and the PBRs scales as a specific measure of cognitions associated with PTSD.

A subsequent study re-tested the psychometric properties of the PTCI with a sample of survivors of serious motor vehicle accidents. Beck, Coffey, Palyo et al.'s (2004) results generally supported the three factor structure of the PTCI. The Negative Cognitions of Self and Negative Cognitions About the World subscales evidenced adequate internal consistency and good concurrent and discriminant validity. However, the Self-blame subscale showed poor concurrent validity, appeared to be potentially influenced by social desirability effects, and did not contribute to the categorisation of individuals with and without PTSD. Beck, Coffey, Palyo et al. (2004) suggest that, given the absence of rape survivors in their study and that research has suggested that rape survivors are particularly vulnerable to self blame, the poor performance of the Self-blame subscale in their study is due to the nature of their sample.

As with the MSPSS, a factor analysis was conducted and eigenvalues were calculated for the PTCI at Week 1. Statistica 10 was used, and only eigenvalues greater than one were

considered. Principal Axis Factoring was used with Varimax normalised rotation. The analysis identified three eigenvalues greater than three (Factor One = 8.70, Factor Two = 3.17, Factor Three = 1.51). Factor One corresponds to questions relating to Negative Cognitions About Self (21 questions in total), Factor Two relates to Negative Cognitions About the World (seven questions in total) and Factor Three weakly and negatively relates to Self-blame (five questions in total). The weakness of the Self-blame subscale is noteworthy and warrants some discussion both in light of Beck, Palyo, Coffey et al.'s (2004) hypothesis and the experience of administering the scale in this research.

The weak Eigenvalue for Factor Three may be partly explained by the small number of questions which the instrument uses to measure Self-blame (Qs 1, 15, 19, 22, 31). In addition, responses to the qualitative Self-esteem, Self-blame and Guilt questionnaire, which followed the PTCI, evidenced contradictory responses from participants with regard to the degree of self-blame and/or guilt they felt in relation to the rape. Thus whilst Janoff-Bulman (1992) has argued that self-blame may be seen as an attempt on the part of a trauma survivor to gain control, the stigma of rape and rape mythology appeared to also strongly inform participants' reports of their self-blame and guilt. It is also noteworthy that a number of participants found the PTCI a difficult questionnaire, particularly when responding to the questions relating to self-blame, for example Q 19 ("Somebody else would have stopped the rape from happening") and Q 22 ("Somebody else would not have gotten into this situation") caused confusion for participants and responses evidenced this confusion.

5.4.3.2.5 Self-esteem, Self-blame and Guilt Questionnaire

This questionnaire was designed for the study as a supplement to the PTCI and seeks to gain a more qualitative understanding of any feelings of self-blame, guilt and lowered self-esteem resulting from the rape. The Self-esteem, Self-blame and Guilt Questionnaire I, administered at the Week 1 interview, seeks to establish degree of self-blame, guilt and lowered self-esteem since the rape. Self-esteem, Self-blame and Guilt Questionnaire II was administered at the Weeks 4, 12 and 24 interviews and repeats the questions, but with reference to the time since the last interview. See Appendices I and J for copies in English of the Self-esteem, Self-blame and Guilt Questionnaire I and II respectively.

5.4.3.2.6 *Acute Stress Disorder Scale (ASDS)*

Peri-traumatic and post-traumatic panic symptoms have been shown to be associated with the development of ASD (Bryant & Panasetis, 2001), and a diagnosis of ASD has been identified as an acute post-traumatic stress reaction which is a precursor to the development of PTSD (Bryant, Moulds, & Guthrie, 2000; Nixon & Bryant, 2003). Brewin, Andrews, Rose & Kirk (1999) found that whilst the symptom clusters of dissociation, intrusion, avoidance and arousal of ASD predicted PTSD, an overall diagnosis of ASD was the best predictor of PTSD and correctly classified 83% of their sample – the rate of ASD was 19% and the rate of subsequent PTSD was 20%.

The Acute Stress Disorder Interview (ASDI) was the first standardised instrument to measure ASD. The ASDI is a 19 item interview schedule and is based on the DSM-IV ASD criteria. As such it assesses presence or absence of dissociative, intrusive, avoidance and arousal symptoms. Three studies were conducted to assess the validity and reliability of the ASDI. The studies suggest that the ASDI satisfies standard criteria for content validity; specificity and clarity of items was established and then cluster scores were shown to correlate adequately with standard measures for each of the symptoms. With regard to concurrent validity, internal consistency was strong ($r = .90$), as was sensitivity (91%) and specificity (93%). Test-retest reliability was also strong ($r = .88$), and diagnostic agreement for presence (88%) or absence (94%) of an ASD diagnosis was high (Bryant, Harvey, Dang, & Sackville, 1998).

The need for a self-report measure was identified by the authors of the ASDI on the basis that structured clinical interviews are often not feasible in the aftermath of large-scale disasters where early identification of acutely traumatized individuals who are at risk for the development of PTSD would be advantageous (Bryant, et al., 2000). The ASDS is made up of 19 questions and asks respondents to rate the extent to which each symptom of ASD is present on a five point likert scale (1 = not at all, 5 = very much), thus the higher the total score the greater the severity of ASDS symptomatology. As advised by the authors of the scale, for this study a cut off score of 56 was used to diagnose ASDS. For the purposes of this research, the ASDS provides a measure whose psychometric properties have been evaluated and which does not need to be administered by a mental health professional. The ASDS is available on request from the authors and is also available in the public domain via the 2000 journal article describing the ASDS (Bryant, et al., 2000).

Psychometric evaluation of the ASDS was based on five studies (Bryant, et al., 2000) and evidenced the following. Since the items on the ASDI and ASDS were identical content validity was already established. Convergent validity was shown to be, in the main, strong with the exception of the dissociative cluster. Test-retest reliability was strong ($r=.94$). With reference to the predictive validity of the ASDS in relation to PTSD, using an overall severity of ASDS scores, an optimal cut off score of 56 identified 91% of those who developed PTSD and 93% of those who did not. However, this cut off also incorrectly identified 33% of participants to be at risk for developing PTSD, who subsequently did not develop PTSD. Bryant, Moulds and Guthrie (2000) attribute this, in part, to an expected acute stress reaction, the symptoms of which fluctuate markedly within a short period of time, but which tend to subside over the longer term for the majority of trauma survivors. Furthermore they note that predicting PTSD prevalence is difficult because different types of trauma have different PTSD prevalence rates. On the basis of these findings the authors caution that the results of the ASDS should be supplemented by additional assessments to predict those at risk of developing PTSD. Finally, factor analysis based on three separate samples evidenced substantial variability in factor structure which Bryant, Moulds and Guthrie (2000) attribute to the interdependence and co-morbidity of the symptoms assessed on the ASDS.

As with the MSPSS and the PTCI, eigenvalues were calculated for the ASDS at Week 1 using Statistica 10. Whilst there appear to be three distinct factors (Factor One – 4.60; Factor Two – 1.43 and Factor Three – 1.16), the factors do not seem to reflect any particular coherence around a construct or symptom cluster. This finding is understood to be related to the interdependence and co-morbidity of the ASDS symptom clusters and seems to be in keeping with Bryant, Moulds and Guthrie's (2000) observations, noted above in relation to their factor analysis.

5.4.3.2.7 Mini International Neuropsychiatric Interview (MINI)

Although PTSD has come to dominate the literature on the psychiatric impact of rape, a number of additional psychiatric disorders have been associated with rape trauma (see *Chapter 3: Section 3.3.1.2. Other psychiatric disorders*) and this research sought to assess this fuller range of psychiatric disorders in relation to the trauma of rape. The MINI (Sheehan, et al., 1998) was designed as a brief structured interview for the major Axis I

psychiatric disorders in the DSM IV and ICD-10. The MINI also assesses current and lifetime presence of disorders. The MINI retains high concordance with the Structured Clinical Interview (SCID) for DSM IIR (Spitzer, Williams, Gibbon, & First, 1990) and the Composite International Diagnostic Interview (CIDI World Health Organisation, 1992). Comparison of clinician rated diagnoses between the MINI and the SCID evidenced good or very good kappa values, sensitivity of .70 or greater for all but three diagnoses, specificity and negative predictive values were .85 or higher for all diagnoses and positive predictive values ranged from acceptable to very good. When compared with the CIDI, clinician rated MINI diagnoses evidenced kappa values which were good or very good, sensitivity was .70 or greater for all diagnoses, negative predictive values were very good and positive predictive values ranged from acceptable to very good for all but one of the diagnoses - GAD - (Kaminer, 2005; Sheehan, et al., 1998). In addition administration of the MINI is more time-efficient than the SCID or the CIDI; mean administration time for the MINI is estimated to be under twenty minutes as compared with approximately half an hour for the SCID and over an hour for administration of the CIDI. The MINI has very good inter-rater reliability; the majority of kappa values reported in the literature were .90 or higher and none lower than .75 (Sheehan, et al., 1998). Overall, values for test-retest reliability were good; 14 of the 23 values were above .75 and only one (for current mania) was below .45 (Sheehan, et al., 1998). Thus the MINI is a well-validated structured diagnostic interview which is comprehensive yet succinct, making it a suitable instrument for this study. In addition the MINI has been previously translated into both Afrikaans and isiXhosa and although it has not been validated, it has been used in research conducted in the South African context (Kaminer, 2005).

With regards to administration, unlike the SCID and the CIDI, which have to be administered by a clinician, the authors of the MINI note under the 'General Instructions' for administration of the MINI, that the instrument may be used by clinicians following a brief training session and by lay interviewers after more extensive training. The two research assistants in this study received intensive training in terms of the DSM IV classification system, and of the major Axis 1 disorders in relation to administration of the MINI itself. This intensive input formed part of the training provided for the research assistants prior to the start of data collection described in more detail in *Section 5.4.1* of this chapter. It should also be noted that the administration of the MINI is highly structured, allowing for only 'yes' or 'no' answers, and scoring instructions to the interviewer are very precise regarding how to

add up the number of 'yes' answers in order to decide whether a respondent meets all the criteria for each disorder. Finally, all MINI protocols for Weeks 1, 4, 12 and 24 were double checked by the researcher, an experienced clinician, at the point of data capture.

For this study, two adaptations were made to the MINI. Firstly, the MINI was included in this study in order to assess psychiatric impact following rape and the first quantitative interview took place within a week of the rape. Timeframes for all of the disorders covered by the MINI require at least a month of persistent symptoms before a diagnosis can be made, thus the MINI could not be administered at the Week 1 interview. However, the literature indicates that in the immediate aftermath of rape many survivors report a range of symptoms which are suggestive of a number of psychiatric disorders – in particular MDD or a Major Depressive Episode (MDE) and suicidality, Panic Disorder, Agoraphobia, Social Phobia, Specific Phobia and OCD. In order to investigate the prevalence of these disorders-like symptoms in this sample the modules for the aforementioned disorders were included at the Week 1 interview, all of which were prefaced with the phrase “Since the rape have you...”. At the Week 4 interview the full MINI was administered which assesses for current and lifetime presence of disorders. At Week 12 and Week 24 participants were assessed only for current disorders and where necessary the phrase “Since we last met have you...” was inserted to indicate the timeframe the questions regarding symptomatology referred to.

Secondly, because research on the impact of rape has highlighted the prevalence of somatisation in rape survivors, the somatisation scale from Mini Plus (Sheehan, et al., 1998) - a version of the MINI which includes less common subtypes of disorders and several additional disorders not covered in the MINI - was included at the Week 4 interview. The DSM-IV stipulates that for a diagnosis to be made the somatic complaints must begin before age of 30 years and occur over a period of several years - Criterion A - (American Psychiatric Association, 1994). Thus the Somatisation scale only needed to be administered at the Week 4 interview in order to establish if a participant met the criteria for a diagnosis of somatisation. The issue of somatisation as a result of the rape across Weeks 1, 4 12 and 24 was addressed through an adaptation of the somatisation module from the MINI Plus and the Health Questionnaire, both of which are described later in this section.

The MINI is copyrighted and has therefore not been appended, but is available from the authors of the MINI upon request.

5.4.3.2.8 Posttraumatic Stress Diagnostic Scale (PDS)

Module I of the MINI screens respondents for PTSD. However, given the research questions outlined at the start of this chapter and the centrality of the PTSD diagnosis in describing the aftermath of rape, several limitations with regards to the MINI's assessment of PTSD were identified. Firstly the MINI does not provide a means to quantify symptom severity. Secondly, the PTSD Module in the MINI does not make allowance for the possibility of multiple traumatic experiences. The screening question for PTSD in the MINI asks: "*Have you ever experienced or witnessed or had to deal with an extremely traumatic event that included actual or threatened death or serious injury to you or someone else?*" If the respondent replies in the affirmative subsequent symptoms questions focus on what is termed "this event" or "the event" without identifying the nature of the index trauma. Thus, if the respondent has experienced more than one traumatic event and is symptomatic, it is not possible to identify which traumatic event or combination of traumatic events is causing the PTSD symptoms. For clarity of administration, the two screening questions on the PTSD Module of the MINI were rephrased so as to refer specifically to the rape, and an additional instrument to assess for PTSD, the PDS, was incorporated into the study.

There are a number of clinical interviews for PTSD which provide information about symptom severity (the PTSD Symptoms Scale-Interview (PSS-I), the PTSD Interview (PTSD-I), the Clinician Administered PTSD Scale (CAPS) and the Structured Interview for PTSD (SI-PTSD), but none screen for multiple trauma (Foa, Cashman, Jaycox, & Perry, 1997). In addition, whilst all have demonstrated adequate reliability and validity, the majority of the psychometric studies on the instruments were conducted on combat veterans (Foa, et al., 1997) .

The PDS is a self-report measure which, unlike a range of other self-report PTSD instruments, assesses for PTSD using all the criteria for PTSD in the DSM IV, assesses severity of symptoms and provides detailed information on all previous traumatic events experienced by the respondent and the nature of the traumatic event that produced the symptoms. In addition the psychometric properties of the PSS-I, the precursor to the PDS, was assessed using a sample of female rape survivors (Foa, Riggs, Dancu, & Rothbaum, 1993). The wording of the PDS was designed to match a reading level of between 7th and 11th grade, which was deemed to be advantageous in light of the anticipated average level of education for participants in this study (see *Chapter 6: Section 6.2.6 Education*).

The psychometric properties of the PDS were assessed on a diverse sample with equal numbers of men and women who had experienced a variety of high magnitude stressors and a control group (Foa, et al., 1997). It demonstrated high internal consistency ($r = .92$) for Total Symptom Severity, .78 for Re-experiencing, .84 for Avoidance and .84 for Arousal. Test-retest reliability was good; $r = .74$ for the diagnosis of PTSD and .83 for symptom severity and the percentage of agreement between two diagnoses at the two times was 87%, indicating a high degree of reliability. It showed good diagnostic agreement with the SCID for DSM IV, $r = .65$, with 82% agreement between the two measures. Sensitivity of the PDS was .89 and specificity was .75. In terms of concurrent validity higher PTSD total and cluster scores were associated with greater depression on the Beck Depression Inventory, higher scores on the State-Trait Anxiety Inventory and higher scores on the Revised Impact of Events Scale's Intrusion and Avoidance Scales (Foa, et al., 1997).

The PDS begins with a checklist of 12 traumatic events, including an 'other' category, following which the respondent is asked to indicate which event has disturbed them most in the past month and to refer to this event when completing subsequent sections. Criterion A is assessed by four yes-no questions, followed by 17 items corresponding to the DSM IV PTSD criteria – five questions refer to re-experiencing, seven questions refer to avoidance, and five questions refer to arousal. The frequency of each symptom in the past month is rated on a four point scale (0 = not at all to 3 = five or more times a week/almost always). To assess Criterion F in the DSM IV PTSD diagnosis, the last section of the scale includes nine items assessing impairment in different life areas (i.e. work, household duties, friendships, leisure activities, schoolwork, family relationships, sex life, general satisfaction with life, overall level of functioning) within the past month, using a yes-no format. Diagnosis of PTSD requires that the individual's responses meet the following criteria: presence of physical injury or perception of life threat; a sense of feeling helpless or being terrified during the event; endorsement (rating of one or higher) of at least one re-experiencing symptom, three avoidance symptoms, and two arousal symptoms; duration of at least one month; and impairment in at least one area of functioning. The PDS also provides a symptom severity score, which is obtained by adding up the scores of the 17 symptom items (Foa, 1995).

With reference to the checklist at Week 1 instructions to the participants were amended to read as follows (additions/amendments in italics): "Below is a list of traumatic events. *Please tell me* all of the events that have happened to you or that you have witnessed, *including your recent experience of rape*". At the Week 12 and 24 interviews the instructions to participants

were amended to read as follows: “*When we last met I asked you about traumatic events that you may have experienced or witnessed in your life. Other than the events you told me about at our last meeting could you please tell me if any of the following events happened to you or whether you have witnessed any of these events since we last met*”. If the participant indicated that they had experienced more than one traumatic event and that a traumatic event other than the rape was currently causing them the most distress, the remainder of the self-report questionnaire was posed to the respondent with reference to the event identified as currently causing the greatest distress to the participant. Thereafter the PDS self-report questionnaire was repeated (PDS Repeat) with explicit reference to the recent rape. The PDS can be scored by hand using a detailed scoring sheet. The PDS is copyrighted and has therefore not been appended.

5.4.3.2.9 Shortened Interview Simple Screening Instrument for Substance Abuse (SSI-SA)

The MINI does include modules for the assessment of Substance abuse or Dependence, however, given that research suggests a noteworthy relationship between sexual violence and substance abuse on the part of both perpetrator and victim (Abbey, BeShears, Clinton-Sherrod, & McAulsen, 2004; Bureau of Justice, 2007), it was considered important to include a screening instrument which would allow for the assessment of substance abuse which is not guided strictly by the DSM criteria for such a diagnosis, but rather allows for a more generalised assessment of substance abuse at each of the interviews.

The Simple Screening Instrument for Substance Abuse (SSI-SA) was developed by the Centre for Substance Abuse Treatment (CSAT) of the United States Substance Abuse and Mental Health Services (SAMHSA). The instrument was designed by a team of experts who constituted a Treatment Improvement Panel (TIP), IP 11, in 1993. The instrument draws on the World Health Organisation’s understanding of Substance Abuse as a biopsychosocial disorder, which causes impairments in physical, emotional and social domains. As a screening instrument it was designed to be sensitive enough to identify individuals who have a potential substance abuse problem, regardless of the specific substance(s) being abused (Center for Substance Abuse Treatment, 1993). The screening questions were adapted from existing tools found in the published literature, which were then adapted to encompass both alcohol and drug abuse. The 16 item measure screens for substance abuse through five domains: Substance consumptions, preoccupation and loss of control, adverse consequences, problem recognition, and tolerance and withdrawal. (Segal & Hersen, 2010).

The SSI-SA was initially designed as a tool for outreach workers and as such does not require any training specific to the instrument, but does assume an adequate degree of skill in conducting interviews, particularly in relation to sensitive topics. As a government-supported document, the SSI-SA is in the public domain, (C. L. Scott, 2010).

Since its publication the SSI-SA has been widely used (Mears, Winterfield, Hunsaker, Moore, & White, 2003; Sacks, 2008). With regard to the psychometric properties of the SSI-SA, in a study examining the effectiveness of screening instruments in detecting substance abuse amongst prisoners, Peters et al. (2000) found the SSI-SA to be one of the most effective screening instruments in identifying prisoners with Substance Abuse Disorders. Test-retest reliability was found to be excellent (.97) and validity was also very good - accuracy in detecting alcohol or drug dependence disorder, 81.9% (sensitivity: 92.6% and specificity: 72.7%) and accuracy in detecting Alcohol or Drug Abuse or Dependence Disorder, 83.9% (sensitivity: 87.0% and specificity: 79.9%).

In a study aimed at assessing internal consistency and test-retest reliability of the SSI-SA, Knight, Goodman, Pulerwitz and DuRant (2000) administered the instrument to adolescent medical patients during routine medical visits and then again one week later. Results indicated that the SSI-SA is a reliable substance abuse screening instrument in their particular target population – internal consistency of the instrument was very good (alpha -.83) and test-retest reliability excellent (kappa -.9).

A study of clients from a drug evaluation programme reported by the Minnesota Department of Health Services, found a sensitivity of 97.0% and specificity of 55.2% for the SSI-SA. The overall classification accuracy of the instrument was 84.2%, indicating that false classifications occurred in 15.8% of cases, the majority of which were false positives argued to be the preferred type of error for a screening test (Minnesota Department of Health Services, No Date).

Given that the MINI offers detailed modules on both alcohol and substance abuse and dependence, the short version of the SSI-SA interview form was used for this research. The short version is made up of 4 of the 16 questions which constitute the SSI-SA interview form and is recommended where time limitations or other conditions preclude the use of the entire test. The four questions – questions 1, 2, 3 and 16 – were selected by the TIP 11 for the short form because they represent the prominent signs and symptoms covered by the full screening instrument and it is suggested that they offer a starting point in a screening process

(Minnesota Department of Health Services, No Date). The SSI-SA was included at the Week 1, 4, 12 and 24 interviews. In order to ensure specificity of responses, at the Week 1 interview the questions were prefaced by the phrase: “Since the rape...” At the Week 4, 12 and 24 interviews the questions were prefaced by the phrase: “Since we last met...”.

5.4.3.2.10 Somatisation Following Rape

As noted in the description of the MINI, in order to establish if a participant met the criteria for a diagnosis of somatisation the Somatisation Disorder scale from the Mini Plus (Sheehan, et al., 1998) was included at the Week 4 interview. The module offers a comprehensive overview of a range of physical complaints which are relevant to the kind of increase in somatic difficulties reported in the literature in relation to rape survivors (Koss, et al., 2002a). In order to assess whether the survivors participating in this study experienced an increase in a range of physical complaints post-rape, an adapted version of the Somatisation Disorder module was incorporated into the research protocol at the Week 1, 4, 12 and 24 interviews. The module was adapted so as to allow for a focus on the range of somatic symptoms rather than on the Somatisation Disorder diagnostic criteria and the phrase: “Since the rape...” was added to each of the symptom clusters in order to specify relevant timeframe. The MINI Plus is copyrighted and has therefore not been appended, but is available from the authors of the MINI Plus upon request.

5.4.3.2.11 Health Questionnaire

This questionnaire was designed for the study as a supplement to the adapted Somatisation Disorder questionnaire described above and sought to gain a more detailed account of both physical and mental health. At Week 1 questions sought to establish whether women participating in the study had suffered from any particular physical and/or mental health difficulties prior to the rape. In addition, at Week 1, and at the successive interviews at Weeks 4, 12 and 24, the questionnaire sought to gain an understanding of any physical and/or mental health difficulties experienced subsequent to the rape and, if such difficulties were present, if any medical assistance had been sought/received (see Appendix K and L for copies of the Health Questionnaire I and II in English).

5.4.3.2.12 Exposure to Violence Scale (EVS)

Given that the women taking part in this research live in contexts which hold multiple possibilities for exposure to violence on a number of levels it was deemed important to explore the impact of exposure to such violence on post-rape trauma. An adapted version of the Harvard Trauma Questionnaire (HTQ) was used to assess degree of exposure to violence, over and above the rape itself, in the women participating in this study.

The HTQ is a checklist written by Harvard Program in Refugee Trauma (HPRT). It was originally designed for use with refugee populations and there are currently six versions of the questionnaire; each one was adapted for use with particular groups of survivors (Harvard Program in Refugee Trauma). The questionnaire is divided into two sections; the first section inquires about exposure to a variety of trauma events and the second section measures PTSD symptoms. Three Indochinese versions of the HTQ evidenced good validity and the authors of that validation study also suggest that the HTQs cultural sensitivity might make it useful for assessing other traumatised non-Western populations (Mollica, et al., 1992). These versions of the HTQ have subsequently been adapted for use in a range of other contexts including South Africa (Ward, Flisher, Zissis, Muller, & Lombard, 2004).

For the South African context the HTQ was adapted for use in epidemiological investigations of adolescents' exposure to violence and related PTSD symptoms and reliability of the measure was assessed. The first section of the scale was adapted to assess for a variety of traumatic experiences that are most likely to occur in South Africa. As with the HTQ, questions distinguished between having witnessed or directly experienced traumatic events. In addition questions were included which sought to establish the different degrees of closeness of perpetrator and victim to the respondent, since research suggests that both different types of exposure (direct and indirect) and violence in different settings lead to different outcomes (Brandt, Ward, Dawes, & Flisher, 2004). Thus there were, for example, several questions concerning stabbings that referred to strangers, acquaintances and family members separately, first as victims and then as perpetrators (Ward, et al., 2004). The second section, relating to PTSD symptoms remained unchanged. Questionnaires were developed in English and translated into Afrikaans and isiXhosa and the translations were then checked and back-translated.

Although the questionnaire was adapted in order to measure South African adolescents' exposure to violence, the questions were deemed to be relevant and appropriate for adult female survivors of rape. Given that there are already two measures for the assessment of PTSD in this research protocol - the PTSD module in the MINI and the PDS – both of which allow for a detailed assessment of PTSD symptomatology, the second section of the HTQ was not used in this research. With regards to the psychometric properties of the first section of the HTQ as assessed by Ward et al. (2004), the 49 items dealing with exposure to violence evidenced good test-retest reliability as demonstrated by Cohen's kappa scores for 27 of the questions (ranging from 1.00 to .60 for 24 of the questions and .41 to .60 for 3 of the questions) and by high percentage agreement for 20 of the questions which had prevalence of less than 5% (ranging in the main between 92% and 100% observed agreement). Two questions had significant changes in their marginal distributions as evidenced by significant values of the McNemar test (Ward, et al., 2004).

It has been suggested that perceived degree of safety might have some impact on recovery, though research has produced contradictory findings (Herman, 1992b; Wasco, 2003). In order to explore this issue in relation to the survivors taking part in this study, four additional questions were introduced at the start of the questionnaire relating to perceived degree of safety at work, at home, outside home and with family. In addition, a severity rating for each of the exposure to trauma questions was included in the questionnaire. Finally, because the adapted South African HTQ was developed for use amongst adolescents, reference was made to "Grown-ups at home", for this study the phrase was replaced with "People at home". At the Week 1 interview the Exposure to Violence Scale was administered twice. The EVS I posed the questions with reference to the 12 months prior to the rape and the EVS II posed the question with reference to the time period since the rape and the Week 1 interview. At Weeks 4, 12 and 24 the EVS II was administered with reference to the time frame between the last interview and the current interview. The South African version of the HTQ is included in the article published by Ward et al. (2004). See Appendix M and N for the English version of the adapted EVS used in this study.

5.4.3.2.13 General Needs Assessment Questionnaire

In seeking to explore whether the psychological impact of rape in a group of women living in a context very different from the context within which much of the research on psychological impact of rape trauma has been conducted, it was deemed important to gain some indication

of the multiple needs of the women participating in the study as they relate to both the trauma of the rape itself and to living in low socio-economic contexts. The General Needs Assessment Questionnaire is a modified version of the Needs Assessment Questionnaire developed for the Trauma Center Integrated Clinical Services Study undertaken at the Trauma Recovery Center (made available for this study by kind permission of Clinical Professor Alicia Boccellari, Director Trauma Recovery Center, Division of Psychosocial Medicine, Department of Psychiatry, San Francisco General Hospital, University of California, San Francisco). The questionnaire was administered at the Week 1, 4, 12 and 24 interviews and was divided into two parts. The first part was made up of 11 questions requiring a 'yes' or 'no' answer which relate to what the survivor might need to make life easier for her. The second part of the questionnaire referred to the most pressing need as identified by the survivor at that particular moment in time, and what difficulties were preventing her from having that need met.

5.4.3.2.14 Concluding the Interview

Given the traumatic circumstances which led to survivors being part of this research, the lengthy interview process and the arduous and demanding nature of many of the questionnaires which made up each of the interviews, it was considered important to explore and record the survivors' experience of the interview process itself. In order to do this every interview was brought to a close with two questions focused on the survivor's experience of each of the interviews – the first question related to how the survivor was feeling at that moment, and the second question enquired of the survivor what it was like to have had to answer all the questions in the interview (see Appendix O for the English version). The questionnaire provided a likert scale for both questions as well as space for recording of the survivor's own comments and/or observations in relation to each question. Although the questionnaire was very brief and followed immediately after the interviews themselves, it was hoped that recording survivors' experience of the research interviews might allow for some evaluation and consideration of the possible negative and positive consequences of participating in this research – a critical ethical issue, which is considered more fully in the *Section 5.9 Ethical considerations* of this chapter.

5.4.3.2.15 Interview Assessment

In order to make some assessment of the quality of the information gathered in the interview, and in order to ensure that any particular survivor needs were noted and addressed, an evaluation of the interview from the interviewer's point of view was also included in the research protocol. The Interviewer Comments form is a modified version of the Interviewer Comments form designed for the Trauma Center Integrated Clinical Services Study undertaken at the Trauma Recovery Center (made available for this study by kind permission of Clinical Professor Alicia Boccellari, Director Trauma Recovery Center, Division of Psychosocial Medicine, Department of Psychiatry, San Francisco General Hospital, University of California, San Francisco). The form was filled in after every interview and records the total length of the interview and number of interruptions during the interview. Using a likert scale, the form also requires the interviewer to rate the survivor's engagement with the interview in terms of the interviewer's assessment of the survivor's understanding of questions, ability to articulate answers and degree of honesty and openness in responding to questions. Although the answer to these questions depended very much on the interviewer's own perceptions and experience of the interview, they allowed for some evaluation of the veracity and validity of the responses at each interview and for the identification of any trends or generalised difficulties with specific questionnaires which made up the research protocol at each of the interviews.

Finally, the form requires the interviewer to make observations with regards to any noteworthy aspects of the survivor's physical appearance and behaviour, any particular concerns with regards to the survivor's emotional demeanour, whether the survivor had difficulty talking about anything in particular, and if the survivor raised any specific questions or concerns. On the basis of all the above, the interviewer was asked to note whether any particular action was necessary, such as referral to any service provision agencies or follow-up on issues such as liaison with the TCC. Where such referral or follow-up was provided the outcome of such action was checked at the subsequent interview. Given the researcher's limitations with regard to the first language of the majority of the survivors taking part in the research, this form allowed for close monitoring by the researcher of each interview. In light of the degree of trauma the women partaking in this research had endured, the arduous nature of the interview process itself and the likelihood of ongoing vulnerability

to further trauma in this group of women, this tool proved invaluable in ensuring appropriate assistance and referral where possible.

5.5 Participants

5.5.1 Inclusion and exclusion criteria

To be eligible to participate in the study participants had to be adult (18 years or older) female survivors, presenting at the TCC at G.F. Jooste Hospital with a complaint of having been raped within the last 72 hours.

Children and adolescents were excluded on the basis that they are at particular developmental stages, cognitively and emotionally, which are likely to inform the psychological impact of rape (Lewis, 1999). In addition, it was thought that inclusion of females under the age of 18 would raise complex ethical dilemmas both in terms of obtaining parental consent and the onerous nature of the interviews.

Male rape survivors were excluded from the study for several reasons. First, epidemiological research has established that gender profoundly informs vulnerability for particular types of assault (Kilpatrick & Acierno, 2003). International and local research has demonstrated that women are more likely to be survivors of early childhood sexual abuse, and are more at risk for domestic violence and rape, whilst men have a greater chance of being non-sexually assaulted by other men (Gavranidou & Rosner, 2003; Statistics South Africa, 2000). South African research suggests that when male rape does occur it takes place predominantly in prison settings whilst the rape of women is pervasive across a number of settings (E. Harvey, 2002). As with female rape, male rape is under-reported and the low rate of reporting for male rape has been attributed, at least in part, to the social construction of masculinity which creates a particular kind of stigma and negative stereotyping for male rape survivors (Eagle, 1998; Pino & Meier, 1999). The social construction of masculinity also impacts on post-rape responses amongst male rape survivors, thus whilst there appear to be some similarities in the psychological impact of rape for men and women, research suggests that there are several fundamental differences in psychological impact of rape between men and women (Roos, 2003), for instance confusion about sexual orientation and gender shame appear to be specific to heterosexual male survivors of rape (Porche, 2005; Singh, 2004). In light of the above and given the focus of this research male survivors of rape were not included in this study.

For the purposes of this study the definitions of rape and sexual violation were initially informed by the definitions proposed in the Criminal Law (Sexual Offences) Amendment Bill B50-2003 Gov. Gazette No.25282 of 30 July 2003. With regard to rape the definition is, in essence, gender neutral, does not make a distinction between different forms of penetrative assault, and recognises penetration as being unlawful if it occurs under false pretences, and/ or in respect of a person unable to appreciate the nature of an act which causes penetration and/ or under coercive circumstances. With reference to sexual violation, the Bill created the offence of oral genital violation together with sexual violation. The subsequent Criminal Law (Sexual Offences and Related Matters) Amendment Act 32 of 2007 retains many aspects of the proposed Bill, but the legal definition holds to the notion of ‘absence of consent’ rather than of ‘coercion’, which has sparked much debate (Naylor, 2008). With regard to this study, all the survivors reported having experienced sexual violence which would meet the criteria for the definition of rape as opposed to sexual violation as set out in both the proposed Bill and the Act.

Since this study seeks to elucidate the pattern of reaction in survivors of rape trauma from the time of the rape to six months later, only survivors presenting with the complaint of having been raped within the last 72 hours were eligible to participate in the study.

5.5.2 Enrolling survivors into the study

5.5.2.1 Research site

Survivors were drawn from the TCC, located within G.F. Jooste Hospital. This secondary public hospital is located in Manenberg, an area previously designated for coloured residents in the Western Cape. At the time of the study the hospital served approximately 1.1million people drawn from a predominantly urban population of African, coloured and Indian people from Mitchell’s Plain, Phillipi, Gugulethu, Crossroads, Khayelitsha, Strandfontein and Nyanga. These areas were previously designated for African and coloured residents only and they remain areas with poor service delivery, high levels of unemployment, poverty and crime. The hospital comprises four major departments – medical, surgical, orthopaedics and a smaller gynaecological department – and patients are referred to the hospital via community clinics, day hospitals and private practitioners (Marszalek & De Villiers, 2006).

The TCC at G.F. Jooste hospital was launched in 2000 and served as a pilot project for the TCC model, which seeks to provide a centralised multi-disciplinary service for survivors of

rape. Since 2000 an additional 10 TCCs have been opened in public hospitals across South Africa in communities where the incidence of rape is particularly high. The centres are a joint initiative between the Department of Health, the National Prosecuting Authority (NPA), the South African Police Service and several non-governmental organisations (NGOs).

Survivors are most often escorted to the TCC after having reported the rape to police stations in the hospital's catchment area, but may also be referred via other routes – community clinics, day clinics, private practitioners, NGOs – or may self-refer. According to the TCC model, upon arrival at the TCC survivors are offered medical services, which include a physical examination, during which forensic evidence is collected, prescription of medication to prevent pregnancy and the transmission of STIs, including a rapid HIV test and where appropriate administration of PEP medication. Thereafter survivors are given the opportunity to bath or shower and are provided with clean clothes. Both HIV and trauma counselling is available, as is referral for longer term counselling. In terms of the legal aspect, survivors are able to give their statement to the investigating officer at the TCC and a victim assistance officer provides them with details of their case. Survivors are then escorted home by ambulance or by the investigating officer or, if necessary, may be taken to a place of safety. Follow-up medical treatment is provided at the TCC at three days, four weeks and three months post-assault. The victim assistance officer based at the TCC is available to provide information with regard to the status of the case, informed by ongoing liaison with the specialist prosecutors at one of two specialised sexual offences courts based at the Wynberg and Mitchell's Plain magistrates' courts, and to provide court preparation for the survivor if necessary (National Prosecuting Authority, No date).

5.5.2.2 Enrolment procedure

After discussion with the TCC staff the following recruitment procedure was agreed to. During working hours from Monday to Friday a research assistant – a trained Rape Crisis Counsellor employed full-time to both enrol survivors and to conduct the isiXhosa interviews - would be present at the TCC and would approach female rape survivors 18 years or older presenting at the TCC. Survivors presenting after hours or over weekends would be asked by the attending nurse if they would be willing to be contacted by a researcher in connection with a research study based at the TCC. If the survivor agreed to be contacted the attending nurse would note the survivor's contact details and would then notify the research assistant who would then contact the survivor as soon as possible to set up an appointment within a

week of the survivor's initial visit to the TCC. The survivor would be asked to meet the researcher at the TCC and at this initial meeting (the Baseline interview) the researcher would explain the study to the survivor and also present a consent form explaining the study (see Appendix P for the English version). The consent form was available in English, Afrikaans and isiXhosa.

Given the realities of a busy centre and the degree of trauma suffered by the survivors, it soon became evident that the after hours and weekend referral system was neither practicable nor efficient. More often than not survivors were approached directly by the research assistant during working hours from Monday to Friday either immediately following the survivor's first visit to the TCC or more often at the three day follow-up visit.

In total, between October 2006 and July, 2007, 64 female survivors of rape were enrolled into the study.

5.5.2.3 Challenges in enrolling survivors into the study

The total of 64 women willing to take part in the research in no way reflects the number of women seeking treatment at the TCC who met the criteria for inclusion in the research in that period of time – a total of 426 women presented with a complaint of rape in the 10 month enrolment period; a monthly average of 42.6 women per month (statistics provided by Ms M. Ngonongono-Mdladlana, Sit Co-ordinator, TCC, with kind permission of Advocate B. Pithey, Head: Western Cape Sexual Offences and Community Affairs, Department Public Prosecutions, National Prosecuting Authority).

A formal log of how many survivors were approached and what reasons were given for declining participation in the study was not kept, however, the research assistant based at the TCC reported that in general survivors who decided not to participate offered a range of reasons including a lack of interest in the research, discouragement from family members, a fear of being re-traumatised by the interviews, a reluctance to commit to a series of interviews and logistical difficulties in taking part in the research directly linked to socio-economic status and living circumstances - these included having no fixed address, no mobile/cellular phone or landline number and difficult family circumstances. These reasons are similar to the more systematic and detailed account provided by Edross (2008) of the challenges experienced in recruiting participants into a smaller study conducted under the broader umbrella of this research.

It is recognised that for the purposes of statistical analysis, a larger group of participants would have been preferable, but the number of survivors enrolled into the study was as high as was reasonably feasible. As noted above, a total of 426 women presented with a complaint of sexual violence at the TCC in the 10 month enrolment period, and 64 women were enrolled into the study during that time. The participation rate for this study was therefore 15.02%, which falls within the lower range of the 12% to 69% participation rate for non-intervention studies of rape survivors at first-response sites reported by Campbell, Brown Sprague, Cottrill and Sullivann (2010).

5.6 Interview process

5.6.1 Interview procedure

Two research assistants were employed to assist with interviews. One research assistant was a Psychology Research Masters student who was conducting a smaller qualitative study under the broader umbrella of this research and conducted interviews in English and Afrikaans. The other research assistant was a first language isiXhosa-speaking research assistant, who was also employed to approach survivors at the TCC and ask if they would take part in the research, and had contributed to the four day back-translation workshop of the research protocol described in *Section 5.4.1 Selection of Instruments*⁹. Both research assistants were trained and experienced Rape Crisis counsellors. In addition, both research assistants had attended five days of training facilitated by the researcher. The workshop focused on the development of appropriately sensitive interviewing skills with survivors of rape - including discussion of the management of very distressed participants, holding an empathic engagement whilst conducting a research interview, raising awareness of judgemental attitudes and assumptions and the possibility of vicarious traumatising and a consideration of the challenges of being culturally sensitive - and a sound understanding of the purpose and function of each of the instruments included in the protocol, in order to standardise administration and to explain and clarify scoring procedures.

All survivors were interviewed in their home language – the majority of the interviews were conducted in isiXhosa by the isiXhosa-speaking research assistant, and the balance of the

⁹ Funding for the two research assistants was provided through the Thuthuka Research Programme, of the National Research Foundation. Over and above the data collected for this study the Psychology Research Masters student collected qualitative data from five of the women taking part in this doctoral research for her masters research project.

interviews were conducted in either English or Afrikaans and were conducted by either the researcher or the research student. On completion of each interview survivors were given R20.00 for transport costs and a R50.00/\$7.36 Pick 'n Pay gift voucher in acknowledgement of their participation in the research. Some researchers argue that payment of research participants might be viewed as coercive of women who are socio-economically disadvantaged, thereby creating a further power imbalance between the researcher and the participant (Hollway & Jefferson, 2000). In contrast, researchers have argued that payment might in fact contribute to the equalisation of the relationship between the researcher and the participants, and should be offered in respect of the willingness of participants to share personal details and to give of their time (Sullivan & Cain, 2004). Given that most of the women taking part in this study were from economically disadvantaged areas it is likely that receiving payment was an incentive for them to participate in this study, however, most of the survivors agreed to take part in the study before payment was mentioned and many expressed gratitude for being compensated for their involvement in the study (Edross, 2008).

Participants in this study were drawn from areas associated with a low level of education and thus, given the complexity and length of the research protocol, each questionnaire was administered verbally to the participants. The interviewer read the questions from the hard copies to the survivor and recorded responses by hand on the questionnaire. In addition, all interviews were recorded using a digital audio recorder and all interviews were subsequently downloaded onto the researcher's computer with password access. Once completed the questionnaires were stored in numbered folders in a locked filing cabinet at the interview site.

5.6.2 Interview site

The one-on-one, face-to-face interviews were conducted in an office - rented for the duration of the data-collection period and for the exclusive use of conducting the research interviews- housed within the Saartjie Baartman Centre for Women and Children (SBC). The centre is in close proximity to G.F. Jooste Hospital and on a main transport route and provides a range of services for female survivors of domestic violence and their children, including a shelter. In addition, the centre houses a number of partner NGOs working in the area of gender-based violence, and at the time of the research interviews Rape Crisis, an NGO which provides counselling to survivors of rape, had a satellite office in the building. The building is enclosed by fencing around the perimeter and is guarded 24 hours a day by a security company.

5.6.3 Retention and attrition of survivors taking part in the study

The literature suggests that in developing countries attrition of participants in longitudinal/ panel surveys seems to be linked to logistical difficulties - related to lack of physical address and telephone numbers - and residential mobility - linked to social and economic disruptions such as loss of a job and subsequent search for employment, HIV/AIDS related illnesses and family events such as marriage, birth of a child or dissolution of a family (Lee, 2003). These events are more often associated with young adults (Lee, 2003). It is noteworthy that in comparison with other developing countries, South African panel studies evidence relatively high attrition rates, suggesting that the aforementioned challenges are particularly marked in this context (Lee, 2003).

Of the 64 women who initially agreed to participate in the study, four women did not keep the follow up appointment for the Week 1 interview; two participants did not respond to follow-up phone calls, one participant was not contactable via phone or post and one survivor indicated that she was no longer interested in taking part in the research. The greatest attrition occurred between the Week 1 ($n=60$) and Week 4 ($n=42$) interview, with a subsequent slight drop from Week 4 to Week 12 ($n=37$), and remaining stable from Week 12 to Week 24 ($n=37$). In total 34 women completed all five interviews - three of the women missed either the Week 4 or Week 12 interview, but returned to complete the subsequent interviews.

Over and above the factors mentioned at the start of this section, the high attrition rate between Week 1 and Week 4 may be attributable, in part, to the degree of trauma survivors were suffering in the immediate aftermath of the rape, which is likely to have exacerbated any difficulty with answering questions posed in an unfamiliar questionnaire format, the arduous nature of the interview (which at Week 1 included the Details of the Rape Report Form and often included the Baseline interview as well), and the overall length of the interview (Mean = 100.56 minutes, Median = 95 minutes, SD = 32.33). In comparison the Week 4 interview was somewhat shorter and did not include a detailed retelling of the rape itself (Mean = 92.33 minutes, Median = 82.5, SD = 27.45). The two subsequent interviews were similar in length and structure to the Week 4 interview, however, perhaps due to a growing familiarity with the interview structure and the fact that some time had elapsed since the rape, the interviews took less time for survivors to complete than the Week 4 interview: Week 12 (Mean = 77.11 minutes, Median = 75.00, SD = 17.85) and Week 24 (Mean = 72.85, Median = 70.00, SD = 15.48).

In developing countries, keeping track of participants between interviews/survey waves can be particularly onerous in terms of time, resources and commitment, but failure to track participants who have moved or prove difficult to contact may result in attrition bias which may skew research results (Lee, 2003). It is noteworthy that in order to ensure ongoing participation both the researcher and research assistants made numerous phone calls reminding participants of follow-up appointments and re-scheduled a number of missed appointments. Reasons given for missed appointments included lack of money for transport costs, finding the questions too difficult, feeling better and no longer 'needing the interview'. In addition, several participants indicated a willingness to attend, but did not come for re-scheduled appointments. Contact via post was the least effective way of ensuring ongoing participation, whilst cellular/mobile telephones proved to be an invaluable way of retaining contact with participants. On several occasions when no landline or cellular/mobile phone number was available, or where no response was received from messages left on cellular/mobile phones or landlines and where the survivor had indicated in the Baseline interview that contact via a home address would be acceptable, and a good relationship had been established with the participant, the isiXhosa research assistant sought out the survivor at her home address. This raises some difficult ethical issues, however, it is noteworthy that the survivors who were visited by the research assistant expressed gratitude to the researcher for caring enough to seek them out, rather than seeing her arrival as a problematic intrusion on their privacy. This echoes the experience of researchers at the TCC working in the area of adherence to ART in the aftermath of rape (Arend, et al., 2013; Roland, et al., 2005).

Each of the 64 survivors who agreed to take part in the study was asked to attend the five interviews as described in *Section 5.3 Research Design*. Table 2 below provides details of the number of days which had elapsed since rape at each of the interviews for each of the survivors.

Table 2**Number of days from date of rape to each interview**

Interview	Number of participants	Mean	Median	Standard Deviation
Baseline	60*	7.62	6.50	4.41
Week 1	60	8.97	9.00	4.65
Week 4	42	31.60	31.00	5.28
Week 12	37	92.57	88.59	13.78
Week 24	37	182.32	179.00	27.74

**It should be noted that although 64 women completed the Baseline interview, 4 of the women did not return for the Week 1 interview in which the date of the rape was established, hence only the 60 participants who completed the Week 1 interview are included in this data.*

As noted previously, most of the women were approached to take part in the study at their three-day follow-up appointment at the TCC, as a result the majority of Baseline interviews were administered within a day or two of the Week 1 interview or at the Week 1 interview. This is evidenced by the mean and median for the Baseline interview as presented in Table 2 above. With reference to Table 2, it is noteworthy that with each subsequent interview there is an increase in the standard deviation, partly explained by the increasing number of days since the rape, but also indicative of the difficulty in ensuring ongoing participation as time passed. Hence, at the Week 24 interview a relatively equal number of women attended within a range of five months (approximately 20 weeks) to seven months (approximately 28 weeks) post-rape. Neither of the aforementioned variations to the Baseline or Week 24 timeframes is seen to critically compromise the aim of matching the interview timeframes of this study to those identified as critical in the literature.

5.7 Monitoring the data collection process

In order to ensure ongoing monitoring of the data collection process, a spreadsheet was kept by the researcher which recorded key details of each survivor including name, study number assigned to the participant, date of the rape, dates of each of the interviews as they were completed and notes relating to any particular concerns, referrals or follow-ups that needed to be made. In addition, throughout the administration of the questionnaires, regular research team meetings provided an opportunity to discuss questions of administration, interpretation and scoring in order to ensure a reliable and valid data collection process. Recorded interviews allowed for revisiting the interview where queries as to how to score a response were raised and also allowed for an ongoing check of administration and scoring of the protocol.

In addition to providing a means of monitoring the needs of participants and providing referral and follow-up where necessary, the Interview Assessment form (see *Section 5.4.3.2.15* for details of the form) offered a way of assessing the veracity of the data collected in the interviews. Overall, in terms of the interviewers' assessments of the participants' understanding of questions, ability to articulate responses and perceived degree of honesty in responding to questions at all four interviews approximately two thirds of the participants were seen to have a good understanding, ability to articulate response and degree of honesty, and a third were rated as questionable in relation to the three measures. The number of participants whose responses were rated as questionable was highest at Week 1 for all three variables. This may be, in part, attributable to the particularly onerous nature of the Week 1 interview, the lack of familiarity with the research protocol for survivors at Week 1, the degree of trauma in the immediate aftermath of the rape and that those survivors who were least able to engage with the research protocol might have chosen not to return for subsequent interviews.

5.8 Procedure for data capture and analysis

On completion of the interviews a data spreadsheet was set up using Statistica, 2007. Participants were identified by the numbers assigned to them in the study, thus there were a total of 64 rows representing each of the 64 participants enrolled into the study at Baseline and a total of 1618 variables constituted the columns, which comprised of all the data collected and entered at each of the time frames (i.e. Baseline, Week 1, 4, 12 and 24). Blank blocks denoted missing data as a result of either non-return of the survivor or data omitted due to error or responses which could not be scored.

Data was entered by two postgraduate Psychology students who had received a day long training session relating to the research protocol and the Statistica, 2007 spreadsheet. Along with entry of the raw data into the spreadsheet, the research assistants were asked to keep a log noting any complications or difficulties with the Statistica, 2007 spreadsheet and data entry in general, and a separate log for each participant noting any obvious or noteworthy aspects of the information gathered at each of the time frames the participant attended, and any difficulties with scoring or queries on how to enter the response etc. The researcher then went through each of the research assistants' logs and, where necessary, revisited and adjusted the Statistica, 2007 spreadsheet: More often than not this involved adding or amending text labels for some of the variables and clarifying parameters of a number of

scales, in order to ensure consistent and reliable data entry. In addition, queries and difficulties relating to specific participants were considered and where necessary decisions were taken about how to score specific responses. On completion of the data entry a one page profile of each participant was drawn up. The profile was divided into Weeks 1, 4, 12 and 24. The profile comprised a three to four sentence description of the rape and degree of support as elicited from the Week 1 interview, and under each of the time frames a sentence or phrase was entered summarising the survivor's response to each of the key measures and any particular difficulties with interpretation of responses or scoring.

Once all the data was entered, the principal researcher, with the help of one of the research assistants who had entered the data, conducted a final check of the entire spreadsheet – firstly ensuring that all variables had been included and that text labels were used consistently throughout the spreadsheet and then cross checking data entered against the summary sheet and the raw data for each participant.

Aspects of the data presented in Chapters 6 and 7 were analysed using the Statistica, 6 - 2007, 7 – 2008, 8 - 2009, 9 - 2010, 10 -2011 spreadsheet and Microsoft Office Excel, 1997 - 2003 and data presented in Chapters 8 and 9 was analysed using PASW (SPSS) 17, PASW (SPSS) 18 and PASW (SPSS) 19.

5.9 Ethical considerations

Given the highly traumatic nature of sexual violence and that women taking part in this study were drawn from previously disempowered and marginalised communities associated with ongoing socio-economic deprivation and disenfranchisement, ensuring the development of an ethical research protocol for this study was of primary concern. With reference to international and national literature in the field, the challenges and complexity of ensuring ethical research practice in this study are discussed below.

Central to the consideration of ethics in trauma-related research is the concept of vulnerability. Levine (2004) notes the difficulty of defining vulnerable groups in research, where such a definition is neither overly inclusive nor too narrow and is not based on stereotyping or stigmatisation. The women who were approached to take part in this study were seen to be vulnerable in so far as they had survived a highly traumatic event within a disempowering and poorly resourced context, all of which were likely to compromise their ability to make truly voluntary choices in relation to whether to participate in the research or

not. This vulnerability extends beyond the initial stage of approaching a survivor to take part in the research; should a survivor agree to take part the vulnerability of the survivor needs to be considered throughout the subsequent research process. Drawing on feminist philosophy and feminist research principles, Campbell (2002) refers to an ethic of caring in research which she argues involves “attuning to those affected by the research, and allowing that concern to guide the many decisions researchers make over the course of the project” (p. 128). Campbell argues that approaching research in this way will not only minimise harm and control and limit adverse effects of the research on participants, but may actually allow for the participants to gain some benefits from the research.

In essence, the central concerns with regard to the potential for harm and adverse effects of research with survivors of traumatic events, relate to the possibility of re-traumatisation because of painfully evocative focus on the trauma itself. Griffin, Resick, Waldorp and Mechanic (2003) have further delineated the key concerns as follows: That it may not be sufficient to warn potential participants of emotional distress because survivors may not be able to predict the degree of distress they may feel and may be too fragile to endure any emotional distress, and that given the power differentials between researchers and participants it may be difficult for potential participants to decline participation in the research, which may be further exacerbated if participants are approached in the immediate aftermath of the traumatic event.

In light of these concerns a number of recommendations have been made with regards to research with survivors of trauma in order to minimise adverse effects of trauma-related research on both participants and researchers. The table below presents an overview of these recommendations, and the concomitant measures suggested to ensure the recommendations are addressed, along with a description of the measures taken in this study in relation to each recommendation.

Table 3

Recommendations and concomitant measures for the development of ethical research with trauma survivors

Recommendations	Suggested Measures	Measures taken in this study
Cost-benefit ratio of the research	Ensuring that any distress a participant may experience as a result of the research is warranted when balanced against the anticipated contribution the study will make towards the greater societal good.	Despite the high prevalence of rape in South Africa, there has been very limited research into the psychological impact of rape on survivors in this country and this study aims to make a contribution in this regard. As such it was hoped that any distress experienced by participants would be counterpoised by the greater aim of the study.
Consent	Ensure that the consent procedures allow for a potential participant to be fully informed with regards to the objectives, method, anticipated benefits and risks of taking part in the research. This includes an explicit warning of possible distress as a result of taking part in the research, that there are no anticipated individual benefits to taking part in the research and asserting the participant's right to withdraw at any time from the research.	At the Baseline interview the researcher explained the study to the survivor and presented a written consent form. The consent form explained the study, outlined the interview process and highlighted possible risks of participating. It also stated that the participant was free to withdraw from the study at any time and that such withdrawal would in no way compromise or affect any medical or counselling care which the participant may have been receiving at the time. (See Appendix P for a copy of the Consent form in English).
Confidentiality	The consent procedure must make explicit the procedures which will be followed in order to ensure confidentiality; this should include details with regard to the safe storage of all data, the use of codes rather than names and the omission of any identifying detail in the presentation of any results.	A study number was assigned to each participant. Completed questionnaires were stored according to the number assigned in a locked filing cabinet in the research office. Data analysis was conducted with reference to the number not the name of the participant. Audio tapes were downloaded onto the researcher's computer with password access only. All members of the research team, including data processors, were asked to sign confidentiality agreements.
Logistics	Clear and comprehensive planning with regards to logistics of the project, including compensation for any costs the participant may incur by taking part in the research	For a detailed account of logistical details see <i>Section 5.5 Participants</i> and <i>Section 5.6 Interview Process</i> . Participants were compensated both for travel costs and for the interview itself.
Research protocol	In order to minimise under-reporting ensure that the phrasing of research questions is broad enough to capture a range of responses, is not offensive and does not draw on stigmatising and oppressive stereotypes, and that instruments are culturally sensitive. Piloting of the research protocol is important in order to identify and address any of the aforementioned difficulties.	See <i>Section 5.4.1 Instruments</i> for details of how research instruments were selected, ensuring satisfactory translation and back translation of research instruments, addressing issues of cultural sensitivity and piloting procedures.
Safety and Privacy	Safety and privacy for interview or data collection process.	All interviews took place at an accessible, private and safe office at the SBC. Since the SBC provides a number of services for the surrounding community, survivors were able to come

		to the interviews without fear of being identified as a survivor of rape or of being a research participant. See <i>Section 5.6.2 Interview site</i> for details.
Training of interviewers	Adequate training of interviewers with regard to developing facilitative interviewing skills, including learning how to manage the distress of interviewees, knowing when and how to terminate interviews if necessary, and addressing any prejudices with regard to trauma survivors and interviewers' own traumatic history, which may negatively influence the facilitation of a compassionate interview.	Both research assistants were trained and experienced Rape Crisis counsellors. In addition, both research assistants had attended a five day training on the interview process and administration and scoring of the research protocol facilitated by the researcher. See <i>Section 5.6.1 Interview Procedure</i> for details.
Matching interviewer and interviewee	Match interviewers with interviewees as far as is possible in terms of race, age, gender and class in order to allow for an equitable interview process.	All participants were interviewed by a female, in their first language and were, as far as was possible, interviewed by someone of the same race. Whilst it was not possible to match interviewers and interviewees in terms of age and class these issues were addressed in depth in the training provided to research assistants prior to the data collection period.
Referral and support network for participants	Adequate resources for referral of participants in need of additional support must be in place and accessible to participants.	Weekly team meetings allowed for identification of participants who seem to be in need of care, psychologically or physically. Medical care, through Jooste Hospital, and counselling, through Rape Crisis based at the SBC, were freely available and accessible. A referral was only made after consultation with the Thuthuzela staff in order to ensure that there was no duplication of referral or miscommunication with regard to the care of the survivor. In addition, referrals were made and facilitated by the research team for assistance in relation to emergency safe housing and assessment for eligibility for disability grants.
Support of research team/ interviewers	Support for researchers through regular team meetings, debriefing and careful consideration of work loads.	Regular research team meetings allowed for check-in with research assistants, review of interview schedules and also provided a forum to discuss any particularly distressing aspects of the interview process.
Linking research to outcome	Linking research with outcome, ensuring adequate feedback, and appropriate dissemination of results in order to assist in improvement of services for survivors.	Feedback of findings will be given to the staff of the TCC. In addition, it is envisaged that dissemination of findings in academic forums will contribute to a body of knowledge informing the development of best practice with regards to services for survivors of sexual violence.

(Sources: Fleischman & Wood, 2002; Jewkes, Watts, Abrahams, Penn-Kekana, & Garcia-Moreno, 2000; Newman, Risch, & Kassam-Adams, 2006; Seedat, et al., 2004; World Health Organisation, 2001)

Studies which have explored trauma survivors' experiences of participating in research, which is in the main research with survivors of sexual violence and intimate partner violence, suggests that if the aforementioned recommendations and measures are adhered to the majority of participants do not report negative effects (M. G. Griffin, et al., 2003). Overall, though not without consequence, both quantitative and qualitative research with survivors of trauma appears to be less traumatic than might have been expected; most participants correctly anticipate the distress taking part in the research might cause and such distress does not lead to regret in having participated in the research (E. A. Walker, Newman, Koss, & Bernstein, 1997). The subset of participants who do report strong negative emotions and an unanticipated degree of distress, appear to have a greater lifetime exposure to trauma and are more symptomatic (Johnson & Benight, 2003; E. A. Walker, et al., 1997).

Research suggests that positive gains are reported by participants including feelings of relief, experiencing the research as having provided an emotionally therapeutic space for reflection on traumatic experiences leading to insight for the survivor, gratitude for an opportunity to share difficult experiences and to develop a coherent narrative of those experiences, and feeling supported, acknowledged and offered a sense of purpose by making a contribution to the development of knowledge to assist other survivors (Campbell, 2002; Draucker, 1999; Du Mont & Stermac, 1996; Newman & Kaloupek, 2004; Seedat, et al., 2004).

After each interview survivors were asked to evaluate the interview in terms of their emotional state at the end of the interview and their experience of answering the questions posed to them (see the Concluding the Interview evaluation questionnaire described under *Section 5.4.3.2.14*). With regards to their emotional state the majority of survivors reported feeling relieved - Week 1 (77.97%), Week 4 (65.85%), Week 12 (91.89%) and Week 24 (86.11%). Whilst a subset of the participants reported feeling distressed - Week 1 (20.34%), Week 4 (24.39%), Week 12 (2.70%) and Week 24 (5.56%) – but with a marked decrease in number of distressed participants between the Week 4 and the subsequent interviews. Similarly, the majority of survivors found answering the questions helpful - Week 1 (78.33%), Week 4 (78.57%), Week 12 (83.78%) and Week 24 (91.89%), whilst a minority were distressed by the interview questions - Week 1 (21.67%), Week 4 (16.67%), Week 12 (13.51%) and Week 24

(8.11%)¹⁰. Open-ended questions asking for elaboration of their evaluation of the interviews evidenced a range of responses which fell into one of three categories very similar to those noted in the literature (Seedat, et al., 2004) namely that the interview was in the main either a positive experience because it allowed for reflection and emotional catharsis, boring, difficult and time-consuming, or distressing because it brought memories of the trauma to the fore again. The increase in positive evaluations of the interviews and concomitant decrease in negative evaluations of the interviews over time may be attributable to several factors; the natural course of recovery with time, growing familiarity with the interview format and the interviewer and/or that only those participants who experienced the interviews as positive returned for follow-up interviews. Nonetheless, in keeping with the dominant trends in the findings on the impact of research with survivors of trauma, the majority of the participants in this study reported positive gains as a result of their participation in the research.

The research protocol was approved by the ethics committee of the Department of Psychology, Faculty of Humanities, University of Cape Town in April 2006. In addition, following submission of a written research proposal to the Research Committee at Jooste Hospital, written permission for the study to be conducted at G.F. Jooste Hospital was obtained from the superintendent of the hospital in April, 2006.

5.10 Chapter summary

This chapter has described the specific research aims of the current study: Guided by the main trends evident in the international literature, to investigate the psychological impact of rape on the survivor over a period of six months from the time of the rape, and to consider the nature of the relationship of these mental health consequences to the broader context within which the rape occurred. The research instruments and protocol used for collecting data have been described as has the research process. In conclusion, the ethical considerations raised by research with survivors of sexual trauma were considered in relation to this current study. The following four chapters present the findings yielded by the quantitative data analysis.

¹⁰ Although some referencing styles recommend against the use of percentages in sample sizes of less than 100, throughout this dissertation percentages will be used to facilitate easier interpretation and comparison when describing aspects of the data collected for this study.

Chapter 6

Results I

6.1 Introduction

This chapter begins with a detailed report of the demographic profile of the total number of women who were enrolled in the study at Baseline ($N=64$). This is followed by a description of the details of the rape as elicited by the 'Details of the Rape Report Form' from the women interviewed at the Week 1 ($n=60$) interview.

As highlighted in the Method chapter, the women of this study are not representative of rape survivors who report rape in South Africa or in the Western Cape, however, in order to locate this particular group of survivors within a broader context, where relevant, comparative international, national and regional data has been provided.

6.2 Demographic profile of the sample

The demographic information presented in this section has been drawn from the data collected at the Baseline interview from the 64 women who initially agreed to take part in the study.

6.2.1 Age

The average age of the women was 27.33 (Median = 24, SD = 10.56), with the youngest participant being 16 and the oldest 56¹¹. This is similar to the median age of the general population of females in the Western Cape which is 28.3, though slightly higher than the median age for African females (24.2) and for coloured females (26.4) (Marindo, 2008). In terms of the relationship between age and vulnerability to rape, research based in the United States suggests that 60.3% of all rape victims are 20 years of age or older (Bureau of Justice, 2007). Of all the rapes reported to the South African Police Service in 1998, 60% of the victims were 18 years of age or above (Hirschowitz, Worku, & Orkin, 2000). Similarly, Vetten et al. (2008) found that in a

¹¹ Although female survivors under the age of 18 were excluded from this study, one 16 year old was included because of her and her mother's wish to take part in the study and the difficulties experienced in enrolling a sufficient number of survivors into the study (see Section 5.5.2.3 Challenges in enrolling survivors into the study).

sample of 2068 rape cases in Gauteng, women aged 18 years and older comprised 60.2% of rape victims.

6.2.2 Race and language

Of the 64 women, 46 (71.88%) classified themselves as African and reported their mother tongue to be isiXhosa. Sixteen (25.00%) women classified themselves as coloured, ten (15.63%) of whom were Afrikaans-speaking, 5 (7.81%) were English-speaking and 1 (1.56%) was bilingual, speaking both Afrikaans and Sesotho. One (1.56%) woman classified herself as white and was Afrikaans-speaking and 1 (1.56%) woman classified herself as being of mixed race (white father, coloured mother) and was English-speaking. This profile is markedly different from the demographics of the city of Cape Town Metropolitan Area, which has a population of 3 497 097, 44% of whom are coloured, 34.9% African, 19.30% white and 1.8% Indian/Asian (City of Cape Town, 2008). Within the city of Cape Town, 41.4% of the population speak Afrikaans, 27.9% speak English and 28.7% speak isiXhosa (Marindo, 2008). The difference in the demographic profile between the research sample and the city of Cape Town is not surprising given that the areas which the TCC services are largely African townships.

6.2.3 Disability

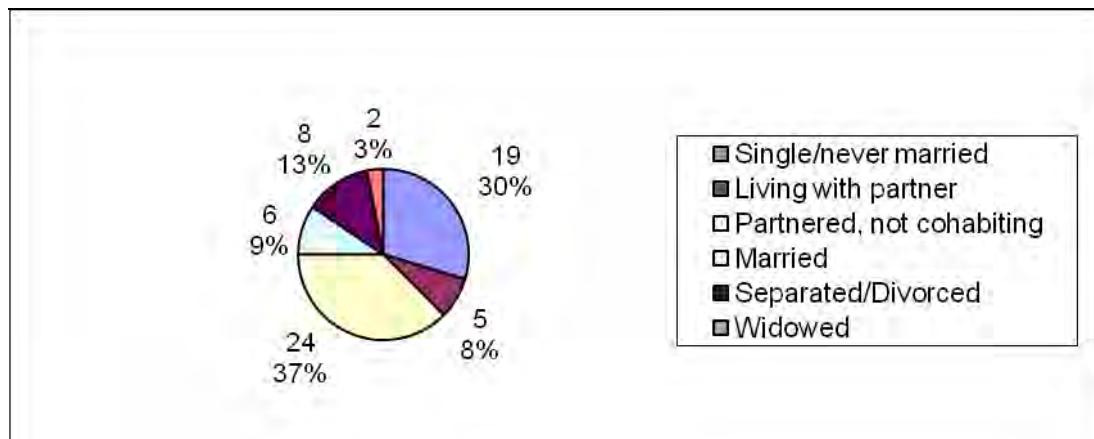
Two women (1.9%) were physically disabled, a figure which falls well below national disability prevalence rates of 6.6% (excluding those in institutional care) or 12.8% (including those in institutional care) (The Child Health Policy Institute, 2001). Vetten et al (2008) found 1.1% of adult victims to be disabled. They note that these figures fall below the prevalence of disability in Gauteng and suggest that this low figure may be due to under-reporting of rape of disabled victims.

6.2.4 Relationship status

With regards to sexual orientation all 64 women described themselves as heterosexual. Figure 2 below graphically depicts the relationship status of the women.

Figure 2

Relationship status (N=64)



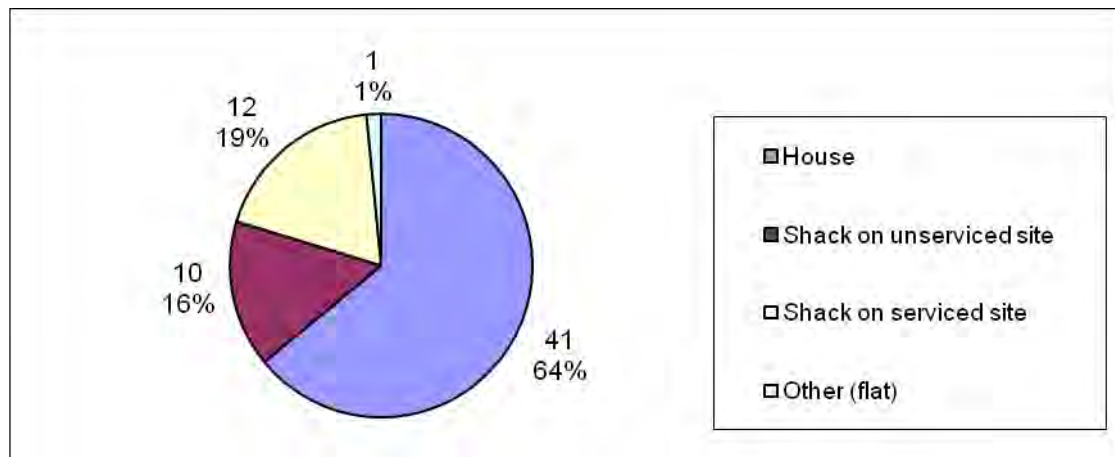
On average the women who participated in this research had 1.13 children (Median = 1, SD = 1.34) which is lower than the overall fertility rate for South Africa, which is 3.3 children per woman and also lower than the Western Cape's fertility rate estimated at 2.28 children per woman (Marindo, 2008).

6.2.5 Housing

In South Africa access to formal housing, piped water, mains electricity and flush, chemical or pit toilets is historically determined and thus race related. Across South Africa almost 100% of the white population have access to all the aforementioned facilities, followed closely by the Indian population (98.00%), then the coloured population (94.75%), and finally the African population, who have the least access to services and facilities (64.59%) (Kraak & Press, 2008). The Khayelitsha/Mitchell's Plain Survey (KMP) (Centre for Social Science Research, 2003) reported that of the African respondents living in Khayelitsha, 35.7% live in a house, and 54.5% live in a shack. Of the coloured respondents surveyed by the KMP, 90.7% live in a house and 1.7% live in a shack. Figure 3 below graphically represents the type of housing occupied by women in this study. Given that the majority of the women were African it seems that more women lived in houses than might be expected from the aforementioned KMP data.

Figure 3

Type of housing (N=64)



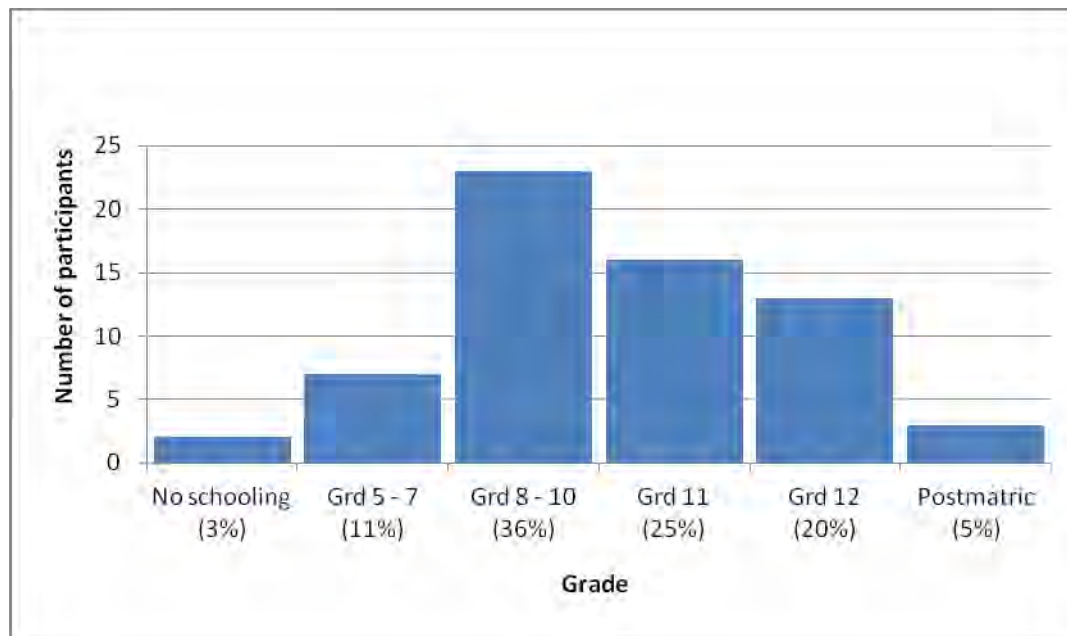
Each dwelling had an average of 2.12 rooms (Median = 1.71, SD = 1.40). On average women lived with 4.88 people (Median = 1.71, SD = 2.10), which translates to an average of 2.12 people per room (Median = 1.71, SD = 1.40). This is slightly higher than the average household size in the Western Cape, which is 3.70 people per dwelling (Statistics South Africa, 2007a), and also slightly higher than the mean household size for Khayelitsha/Mitchell's Plain, which is 4.03 for Africans and 4.83 for coloureds (Centre for Social Science Research, 2003).

6.2.6 Education

National survey data indicates that 9.3% of all individuals over 20 have had no education and disaggregated according to gender, 11.3% of females as opposed to 7.1% of males have had no formal education (Statistics South Africa, 2007b). Nationally, the number of individuals over 20 who have completed a Grade 12 education was calculated to be 23.6% (Statistics South Africa, 2007b). Data which provides proportional indicators of educational levels in the Western Cape, suggests slightly lower levels: No schooling - 18.7% and Grade 12 - 20.4% (Marindo, 2008). Data from the KMP survey (Centre for Social Science Research, 2003) found that 17.5% of Africans and 21.5% of coloureds over 18 had completed Grade 12, which is generally in keeping with the number of women who reported having completed Grade 12 in this study. The level of education for the total sample is graphically represented in Figure 4.

Figure 4

Level of education (N=64)



6.2.7 Employment

The employment status of the 64 women is represented in Figure 5a below, which further depicts source of income for unemployed women. Using a strict definition of unemployment (those actively seeking employment), South Africa's unemployment rate between 2000 and 2004 was calculated to be approximately 27% (Nattrass, 2006a) and the national unemployment rate for women 26.3% (Statistics South Africa, 3rd Quarter 2008). The Western Cape has an unemployment figure of approximately 18% (both sexes) (Statistics South Africa, 3rd Quarter 2008), the lowest of all the provinces (Marindo, 2008). The national unemployment rate for female coloureds is 19.5%, but is markedly higher for female Africans at 30.9%.

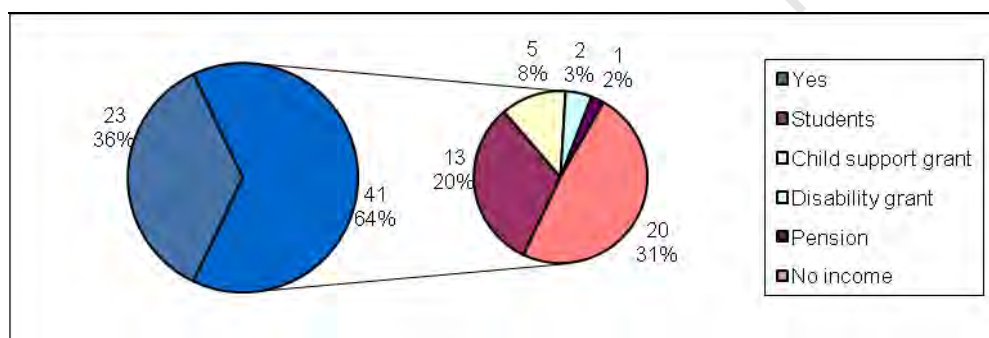
The KMP survey (Centre for Social Science Research, 2003) found a similar difference in unemployment rates between coloured and African females: The unemployment rate for African women in the KMP survey was approximately 33.5% (strict definition – actively seeking employment) or 56.5% (using the broad definition –general joblessness), and for coloured women 21% (strict definition) and 41.6% (broad definition). In sum, the unemployment rate (strict definition) in the KMP survey was 28.4% and 46.3% (broad definition). The unemployment rates reported by

the women of this study (using a broad definition) are slightly higher than the rates cited in the KMP survey (Centre for Social Science Research, 2003).

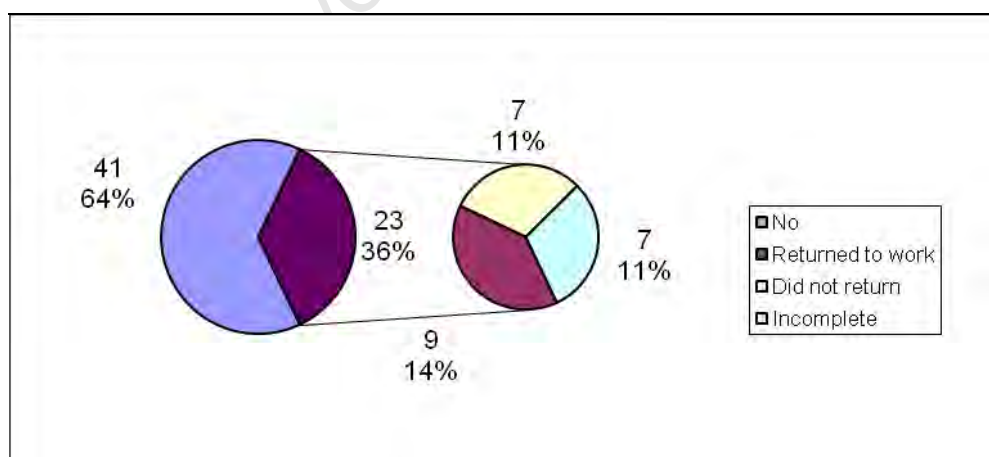
Of the employed population assessed in the KMP survey (Centre for Social Science Research, 2003), 77.5% were regular wage workers, 16.5% were self-employed and 6% were casual workers. In this research of the women employed at the Baseline interview, 6 (26.09%) were regular wage workers, 6 (26.09%) said they were employed but their occupation was unclear, 7 (30.44%) were self-employed and 4 (17.39%) were casual workers, thus, excluding those whose source of employment was unknown, the figures suggest generally higher levels of self-employment and casual work and lower levels of regular wage workers than the KMP survey data.

Figure 5¹²

a. Employment status (N=64)



b. Return to work post-rape (N=64)



¹² For clarification, in Pie of Pie charts the colour key will always exclude the colour in the larger pie chart which is broken down in the smaller pie chart; thus there will always be one less colour in the colour key than the total number of colours reflected in both pie charts.

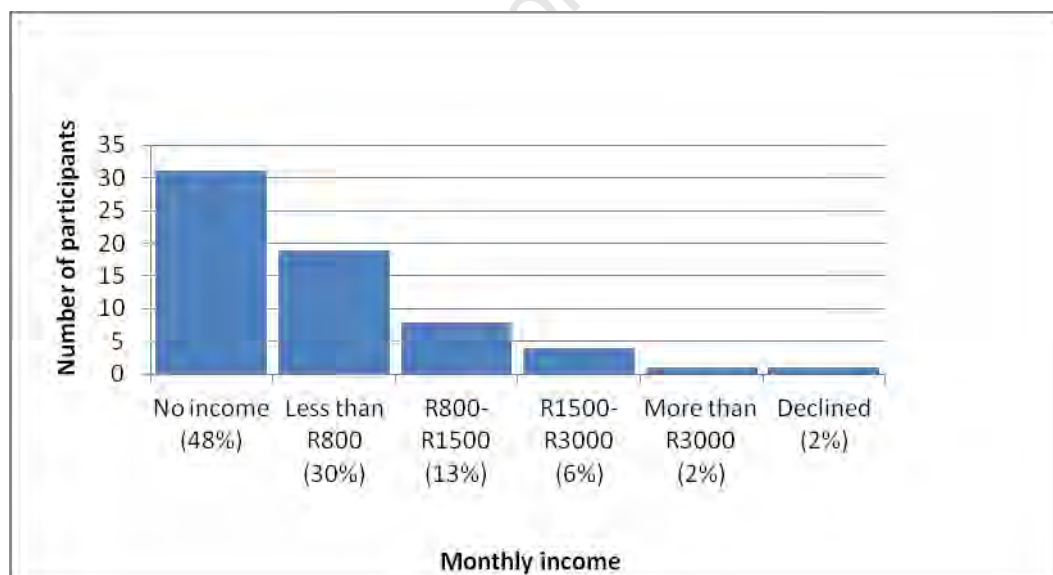
Figure 5b above graphically represents the number of employed women who had or had not returned to work post-rape. Of the 7 (11%) women who were employed at the time of the rape, but who had not yet returned to work, four were unsure about whether they would return to work, two intended to return and one response was incomplete. These figures are higher than figures reported in the literature; data from the United States suggests that 7% of victims report losing time from work (Greenfield, 1997). More recent data from the United States suggests a race differential; 13.8% of white rape victims reported loss of time from work as opposed to 8% of African rape victims (Bureau of Justice, 2006).

6.2.8 Income

Per capita monthly income (including income from formal employment, disability grants, and informal sources of income such as money from a partner, and casual work such as braiding hair or selling fruit etc.) was reported as follows:

Figure 6

Income (N=64)



The average yearly income in South Africa per capita in 2000 was calculated to be R11 755.00/\$1 268.00 or roughly R 1 000.00/\$143.00 per month (Kraak & Press, 2008). Fifty-five percent of households were earning less than R250 per capita per month (Kraak & Press, 2008). The average annual income per capita or per household, is strongly correlated with both race and gender. Thus the median annual

income by race is R12 213 for Africans, R16 354 for coloureds, R42 803 for Indians/Asians, and R 64 968 for whites. Males have a median annual income of R21 048 versus R17 035 for females (Statistics South Africa, 2001). However, the KMP survey (Centre for Social Science Research, 2003) reported a mean per capita monthly household income of R488.54 which is more in keeping with the figures reported by the majority of the women in this study who were earning an income. Three women (5%) reported receiving state grants; two women were physically disabled and received disability grants and one woman received a pension. This figure is lower than the 10% of the general population calculated to be on pensions or disability grants (Statistics South Africa, 2007b). It should be noted that the figure excludes the 5 women (8.33%) who reported receiving child support grants.

6.2.9 Prior history of rape

Table 4 provides details of the women's prior experiences of rape drawn from the data collected at the Week 1 interview. Of the 60 women 11 (18.33%) reported that they had been raped before in their lives. This figure may be an under representation because of the way in which the question pertaining to prior history of sexual violence was phrased. The question read: "Other than this rape, have you ever been raped before?" The use of the term 'rape' rather than a broader one such as 'unwanted sexual contact' has been shown to draw fewer disclosures of rape (including childhood sexual abuse) because respondents may hold a narrow definition of what constitutes rape (Koss, 1992). National figures reported in the Victims of Crime Survey (Statistics South Africa, 1998) found that 8.9% of female victims said they had been raped on more than one occasion. However, international figures suggest much higher rates for sexual re-victimisation. Roodman and Clum's (2001) meta-analysis of 19 empirical studies suggests that the overall effect size for sexual re-victimisation among survivors is .59 (i.e. 59% of survivors have been previously sexually abused). In their meta-study Classen, Palesh and Aggarwal (2005) found that in two probability samples approximately two of three individuals reporting sexual victimisation also reported sexual re-victimisation. In an earlier study Russell (1986) found that approximately 63% of the 152 women who experienced intra-familial sexual abuse before the age of 14 years also experienced rape or attempted rape after the age of 14 years. In comparison, 35% of the 53 women who did not experience

childhood sexual abuse also reported rape or attempted rape after the age of 14 years. This data suggests that childhood sexual abuse may double the risk of sexual re-victimisation.

Table 4

Prior history of rape ($n=60$)

Participant number	Age at prior rape	Age at current rape
3	26	28
15	14	25
18	37	38
27	4-11, 13	30
31	20	27
39	12	47
45	16	18
46	35	37
47	17	18
48	16	20
54	19	20

6.3 Details of the rape

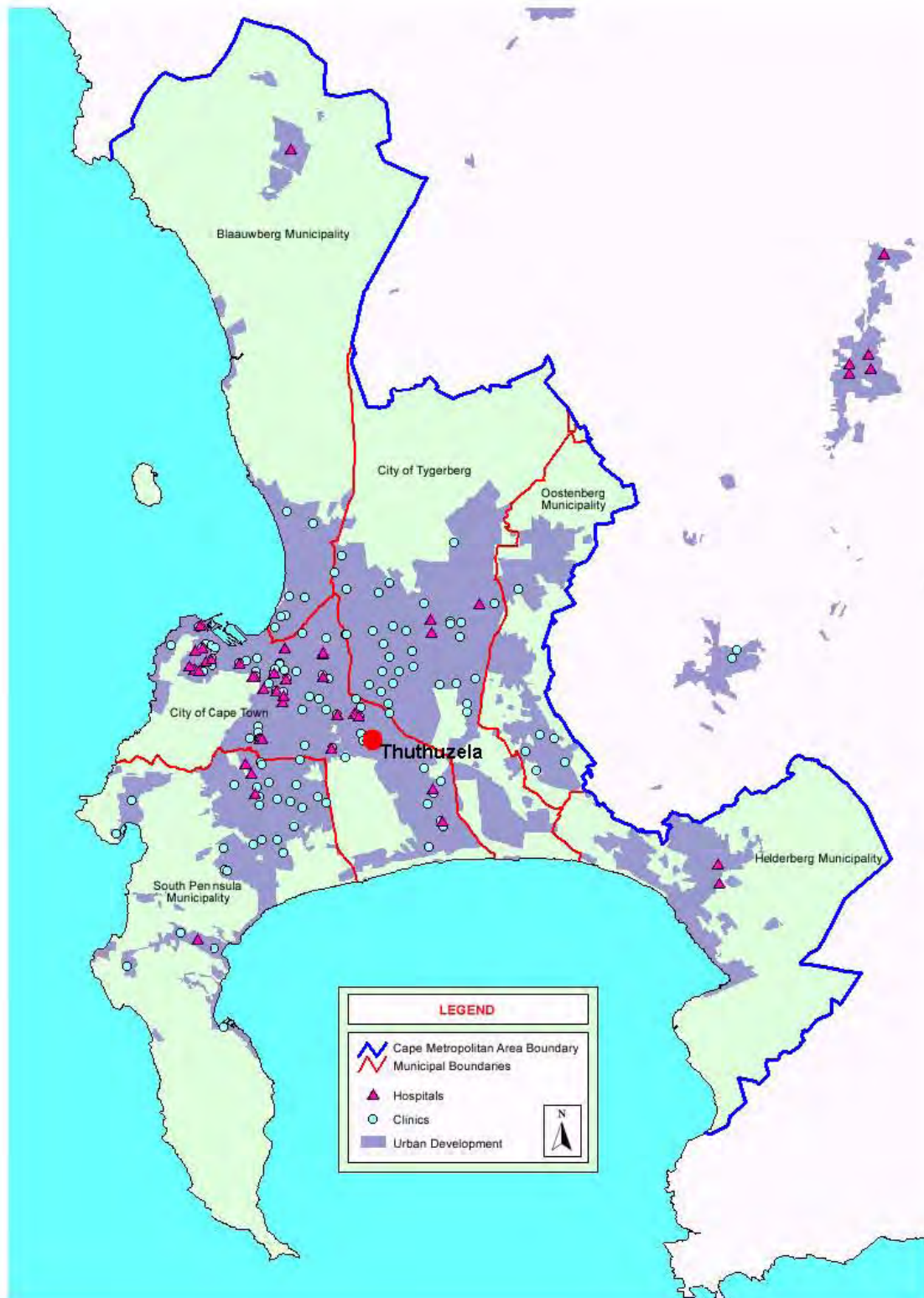
The details of the rape are drawn from the Week 1 interview ($n=60$). For clarity a distinction has been drawn between what has been termed the assault, taken to mean when the woman was accosted by the perpetrator(s), and the rape itself - the act of sexual violence perpetrated in the course of the assault.

6.3.1 Geographic location, time and place of rape

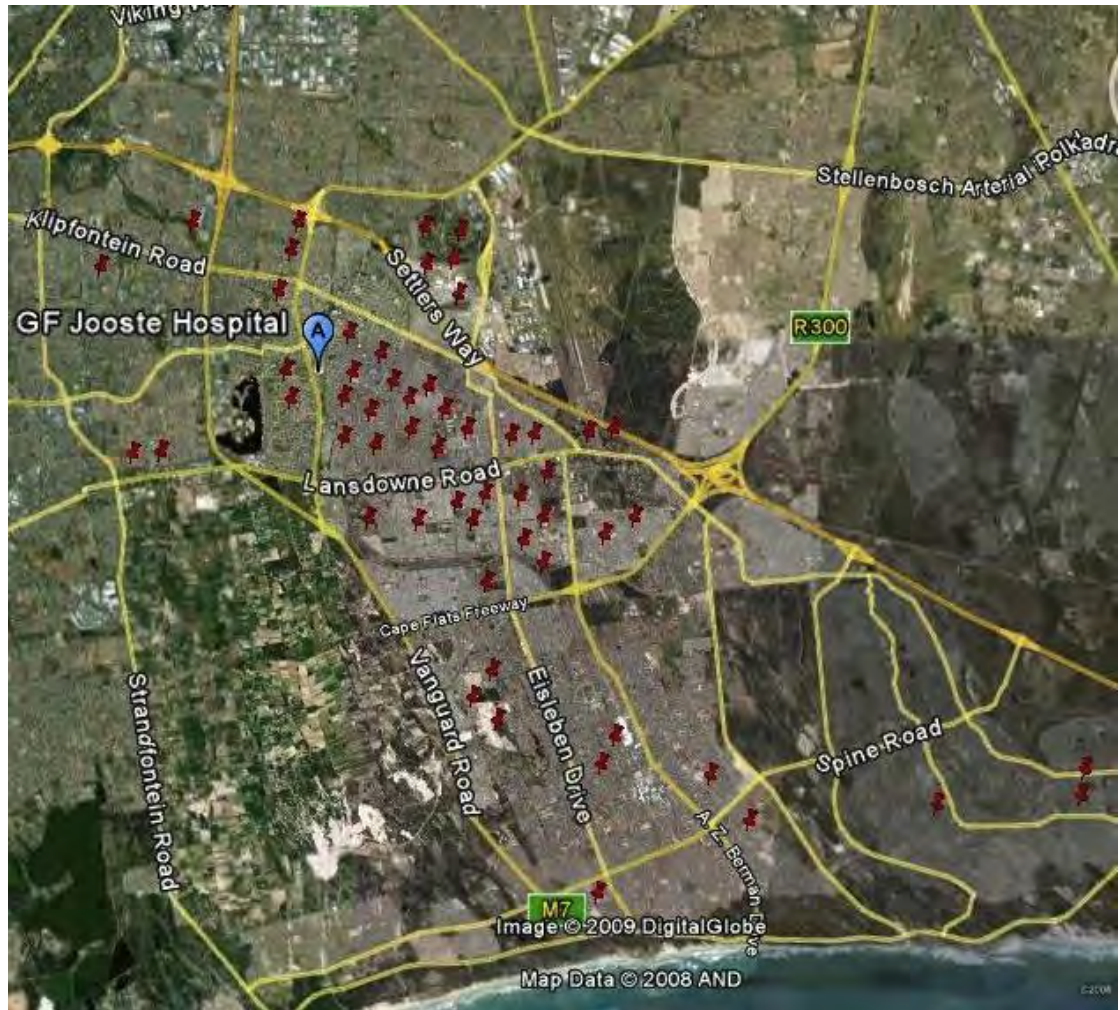
The maps below provide a graphic representation of a. the Cape Metropolitan area and b. where the women who participated in this study lived in relation to both the larger Cape Metropolitan map and in relation to the TCC.

Figure 7

- a. Map of the Cape Metropolitan area, denoting municipal boundaries, areas of urban development and location of hospitals and clinics in relation to the Thuthuzela Care Centre**



- b. **Map of the Cape Metropole indicating where all the women who participated in this research lived in relation to the Thuthuzela Care Centre**



Note: The drawing pins denote where the women who participated in this research lived in relation to the TCC

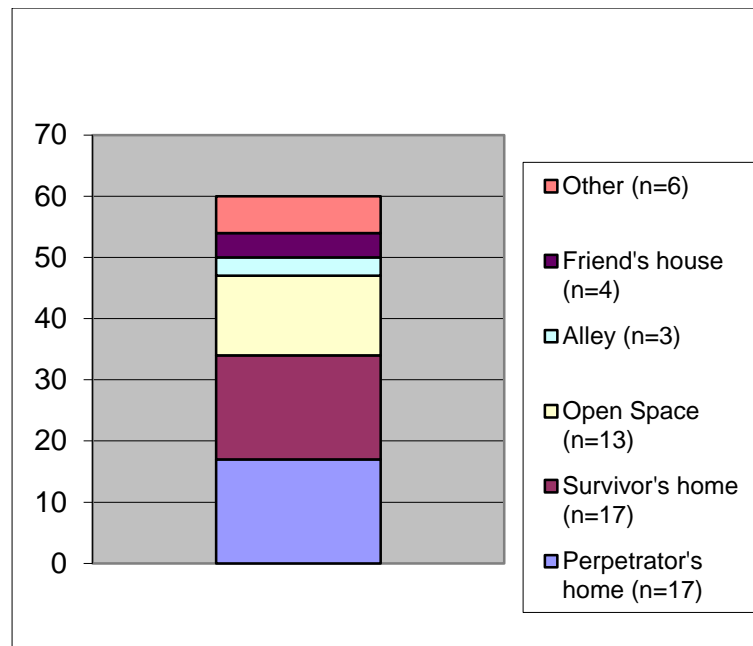
The majority of rapes – 30 (50.00%) - took place in the evening between 18h00 and 24h00, 18 (30.00%) took place between 00h00 and 06h00, 6 (10.00%) between 06h00 and 12h00 and the remainder, 5 (8.33.00%) took place between 12h00 and 18h00 (in some cases women were abducted and held for several hours and in that case the time of the rape was taken to be from the time the woman was abducted). One woman was unable to recall the time of the assault and/or rape. The majority of the rapes, 39 (65%), took place on the weekend (Saturday – 21 (35%), Sunday – 15 (25%) or on a public holiday - 3 (5%). These patterns are in keeping with both national and international findings. Findings from rape docket analysis show that of those cases reported to the police, rapes occurred most frequently on Saturdays (23.70% of reported cases), between 19h00 and 01h00 (Hirschowitz, et al., 2000). Similarly data

from the United States indicates that almost two-thirds of rapes/sexual assaults occurred at night from 18h00 to 06h00 (Greenfield, 1997).

Figure 8 graphically represents the places where the rapes occurred. Of the 60 women 43 (71.67%) were raped in a private space, the majority of these being either in the home of the perpetrator or the victim. The category of “Other” includes two rapes which took place in a car, two in the home of a friend of the perpetrator, one in a public toilet and one in an unknown house. These figures are in keeping with the trends noted in both international and national data. Research from the United States indicates that over two thirds of all rapes occur in someone’s home, the majority of which occur either in the perpetrator’s or victim’s home (Abbey, et al., 2004; Bureau of Justice, 2006). Similarly, the South African Victims of Crime Survey (Statistics South Africa, 1998) found that almost half of all rapes, 47.5%, took place inside a dwelling and 12.7% took place in an open space. Furthermore, Vetten et al. (2008) found that adult women were the group most likely to be attacked outdoors with 24.9% of adult women raped in an open space and 7.8% of adult women being raped in an alleyway or road. In addition, Vetten et al. (2008) found that 49.5% of the rapes perpetrated against adult women involved abduction where the perpetrator encountered the woman in one place and then forcibly took her to another. This figure is slightly lower than the figure found in this study; 66.67% of the women were abducted.

Figure 8

Place of rape (n=60)



6.3.2 Acquaintanceship status, race and age of perpetrator(s)

Data from the United States and from the United Kingdom suggests that approximately two thirds of rapes of adult women are perpetrated by someone known to the victim, and that approximately half of the known perpetrators are well known to the victim (Greenfield, 1997). In South Africa the pattern is similar. The Victims of Crime Survey (Statistics South Africa, 1998) found that 76% of rapes involved people known to each other. Results from the Medical Research Council survey (1999), found that 29.6% of survivors of sexual violence reported that the perpetrator was a relative or someone close to them, 37.7% were raped by school teachers or principals and 19.8% were raped by strangers. Vetten et al (2008) found that adult women were three times more likely to be raped by strangers than girls (48.1% as opposed to 14.6%), but that when the rape was perpetrated by someone known to the victim, a fifth of those rapes were perpetrated by a current or former male partner. Hirschowitz, Worku and Orkin (2000) found that of the women who they interviewed, 34.6% said they were raped by relatives or men who were intimate with the victim, however, they also note that in cases of rapes reported to the police a higher proportion (55.3%) were said to have been committed by strangers.

The data from this study suggest a similar pattern. Thirty six (60%) of the women were raped by someone they knew; 20 (33.33%) of those by someone they knew well to relatively well; of those, ten women were raped by an ex-partner, two were raped by their current partner, three were raped by their husbands and one woman was raped by her brother. Twenty-four (40%) of the 60 women were raped by strangers, which is a slightly higher number than the comparative statistics would suggest, however this elevated figure is in keeping with the finding noted by Hirschowitz, Worku and Orkin (2000) which suggests that a greater number of stranger rapes than acquaintance rapes are reported to the police.

With the exception of one woman (who identified herself as coloured and was raped by six men she identified as African) all the rapes were intra-racial and where women were raped by more than one perpetrator all perpetrators were of the same race. Given the highly politicised debate in South Africa in relation to race and perpetrators of rape, it is perhaps not surprising, but nonetheless noteworthy, that none of the South African studies reviewed for this research identified the race of the perpetrators of rape, though the race of the victim was regularly reported. Data collected for the Tracking Justice report (Vetten, et al., 2008) did include the race of both perpetrator and victim but the race of the perpetrators was not reported in the published document. The unpublished statistics suggest that the majority of rapes were intra-racial, though it should be borne in mind that the data was drawn from police dockets and that the police arrested only half of the perpetrators and therefore the data may be somewhat skewed (L. Vetten, personal communication, 18 June, 2010).

According to figures from the US National Crime Victimization survey (Bureau of Justice, 2007), for white female victims of rape 75.50% of the perpetrators were white, 7.60% were black and the remainder were designated as other (3.80%) or unknown (13.10%). For black female victims of rape 100% of the perpetrators were black (it should, however, be noted that data for black female victims is accompanied with a footnote which reads: "Estimate is based on 10 or fewer samples" with no further explanation given for this). Findings from a pilot study on multiple perpetrator rape in the United Kingdom indicated that 32.7% of the 101 alleged rape cases analysed were intra-racial and that the majority of perpetrator groupings were categorised as mixed (Hovarth & Kelly, 2009). This finding prompted the authors of that research to observe that ethnicity of victim and perpetrator cannot be understood

as simply intra or inter-racial, and that more research is needed to answer the question of whether variations in race of perpetrator and race of victim is a function of the country or area from which the data is drawn or of sampling techniques.

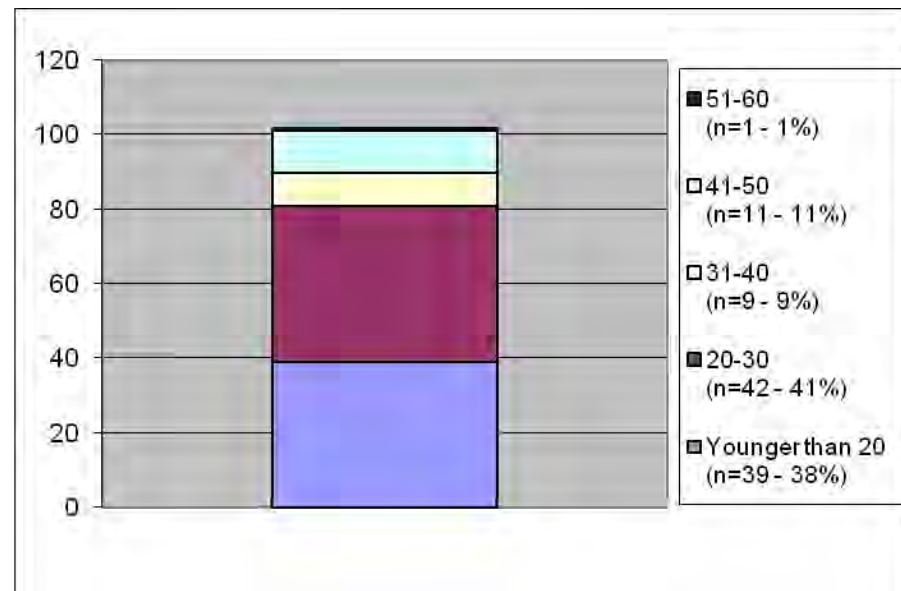
There were a total of 102 perpetrators; 96 (94.12%) of whom perpetrated both assault and rape. Of the 60 women interviewed at Week 1 20 (33.33%) were *assaulted* by more than 1 person (Mean = 1.77, SD = 1.32). Of those 20 women 18 (30%) were *raped* by more than one person (Mean = 1.7, SD = 1.20). One woman was unsure as to the number of rapists because she was unconscious at the time of rape, but estimated that she was raped by four men. The number of assaults/rapes perpetrated by more than one offender in this research, appears to be markedly higher than those reported in international studies, and relatively higher than those reported in national figures. This may be, to some degree, attributable to an increased likelihood of survivors of group rapes reporting the rape to the police and /or seeking crisis services (Koss, 1990; Ullman, 2007b). It is noteworthy that studies which note that survivors of group rape are more likely to access services, also observe that survivors of group rapes are likely to have experienced a greater degree of physical violence during the rape, and to evidence a higher degree of distress in the aftermath of rape than survivors of single offender rapes (Koss, 1990; Ullman, 2007b).

The figures from the United Kingdom (Walby & Allen, 2004) and the United States suggest figures of 6% and 8.9% respectively. The National Victims of Crime Survey found that 11.9% of rapes were perpetrated by multiple offenders (Hirschowitz, et al., 2000). Data from a sample of cases seen at three medico-legal facilities in greater Johannesburg showed 27% of rapes involved multiple perpetrators (Swart, Gilchrist, Butchart, Seedat, & Martin, 2000) and a review of rape dockets at six central Johannesburg police stations reported a similar percentage of rapes involving two or more perpetrators (Vetten & Haffeejee, 2005b). Data drawn from rape cases in Gauteng in 2003 shows that adults were twice as likely as young girls to be the victims of gang rape and 17.4% of rapes involved two or more perpetrators (Vetten, et al., 2008). In this study, as with the patterns suggested in both national (Hirschowitz, et al., 2000) and international literature (Greenfield, 1997), the majority of assaults/rapes involving multiple offenders were perpetrated by strangers.

The age of the perpetrators is presented in Figure 9 below. Women estimated the age of 81 of the perpetrators and knew the age of 21 of the perpetrators.

Figure 9

Age of perpetrator (n=102)



The majority of perpetrators ($n=81$, 79%) were 30 years or younger, 39 (38%) of whom were under 18 years of age. Greenfield (1997) found that the majority of offenders were under 30 (57.7%), 10.9% of whom were under the age of 18. Vetten et al. (2008) found the majority of offenders fell between the ages of 20 and 40, with the greatest cluster falling within the 20 to 30 year range.

As noted in the previous section - *Section 6.3.2 Acquaintanceship status, race and age of perpetrator(s)* – a third of the survivors who took part in this study were assaulted by more than one assailant and just under a third of the survivors were raped by more than one perpetrator. With the exception of three perpetrators, all of the group assaults/rapes were perpetrated by men 30 years old or younger, equally divided into younger than 20 and between 20 and 30 years of age. In the United Kingdom Hovarth and Kelly (2009) report the age of perpetrators in multiple perpetrator rapes from their sample ranged from 10 to 70, with a mean of 22.64 and median of 19. Statistics from the United States Department of Justice suggest that the majority of perpetrators of group rapes were 20 years old or younger, followed by men in the age range of 18 to 29 (Greenfield, 1997). Vetten et al. (2008) reported a median age of 27

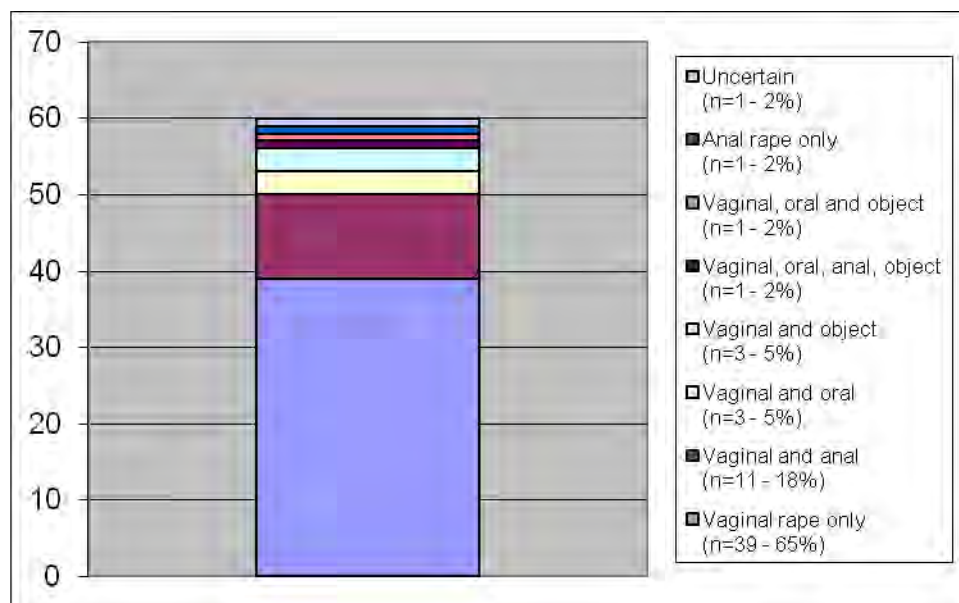
for the main perpetrator, 20 for the second and third perpetrators and 15 for the fourth perpetrator.

6.3.3 *Type of rape(s) perpetrated, weapons used and degree of additional violence*

Figure 10 below depicts the types of rape perpetrated, the majority of which included vaginal rape (97.00%).

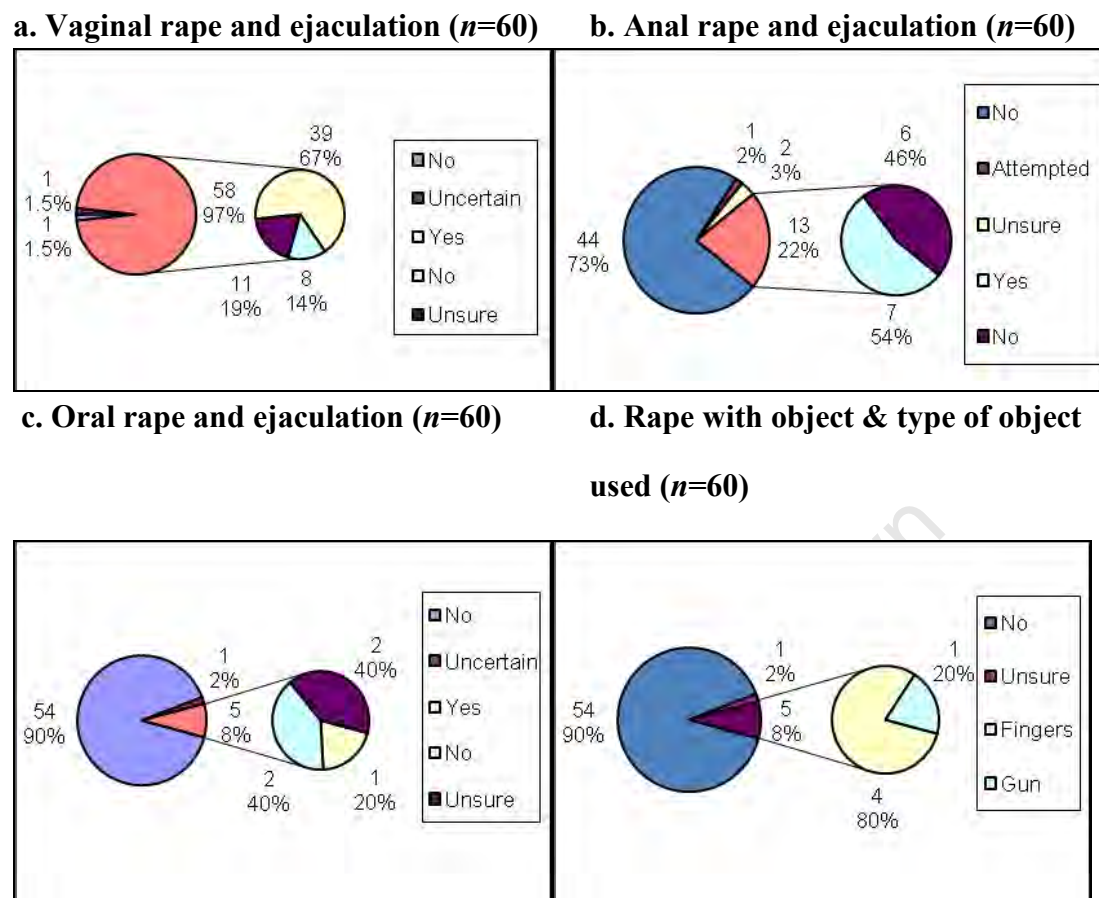
Figure 10

Type of rape (n=60)



The three figures (11a, 11b, and 11c) below combine the aforementioned figures and speak to all rapes involving vaginal (Figure 11a), anal (Figure 11b) and oral rape (Figure 11c) and whether ejaculation took place. Figure 11d describes all rapes involving an object.

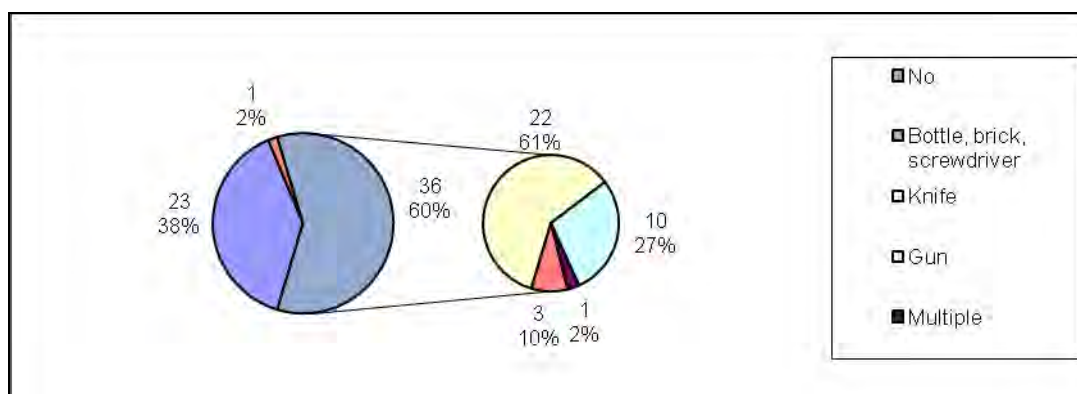
Figure 11



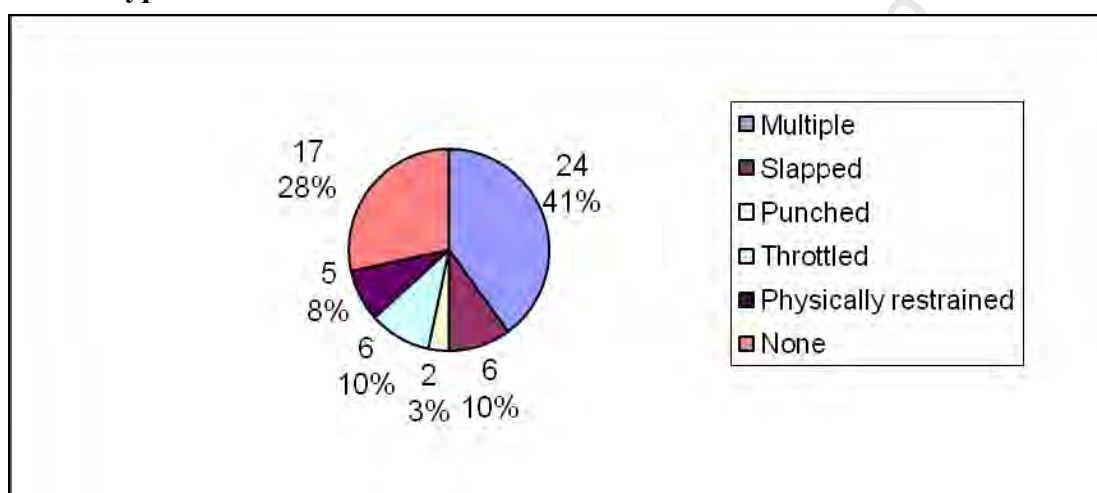
In 36 (60.00%) of the rapes weapons were used by the perpetrator(s). Furthermore, over and above the rape itself, 43 (71.67%) women reported additional acts of violence used against them during the assault and rape. The figures below provide details about (a) the weapons used and (b) the form the additional violence took. The category “Physically Restrained” in Figure 12b includes physical restraint during which a woman’s arm was broken, an attempted stabbing, being pushed and being forcibly held down – the nature of these reported incidents suggest the degree of additional violence may be under-reported given that a number of women might not have reported being forcibly held down, pushed etc. because they considered that violence to be part of the rape itself. With reference to the 24 (40%) women who experienced multiple forms of violence represented in Figure 12b, with the exception of three women, all experienced at least three forms of violence. The majority were slapped (18 women) and/or punched (14 women) and/or hit (14 women). In addition women who experienced multiple forms of violence reported being throttled (11), and/or kicked (9) and/or stabbed (6).

Figure 12

a. Weapons used and type of weapon (n=60)



b. Type of additional violence used



Statistics from the United States indicate that less than a third of all rapes involve the use of a weapon; the US National Crime Victimization Survey notes a general trend from 1994 to 2001 (Bureau of Justice, 2001a) of fewer weapons being used, with figures ranging from 29% (Bureau of Justice, 1994), 16% (Greenfield, 1997), 11% (Bureau of Justice, 2001b), 7.1% (Bureau of Justice, 2006), and 5.6% (Bureau of Justice, 2007). South African research suggests a higher number of rapes involve the use of a weapon, particularly when the victim is an adult woman. The Victims of Crime Survey (Statistics South Africa, 1998) indicates 56.1% of single offender rapes involved the use of a weapon, whilst 87.2% of multiple offender rapes involved the use of a weapon. Knives or sharp objects were most commonly used (68.00%) to threaten victims, followed by the use of guns (16.5%) and other objects (5.9%), (Hirschowitz, et al., 2000). Similarly, Vetten et al. (2008) found that some sort of weapon was used in 40.90% of rapes of adult women. Findings from this research are generally in keeping with South African data.

With regards to injuries, data from the United States indicates that in 27.80% of rapes the victim sustained injuries from the assault/rape (Bureau of Justice, 1994, 2007). Vetten et al. (2008) found that 70.1% of rapes directed against adult women involved some form of bodily force, 38.3% were threatened with death or injury and 39% were likely to be injured and 50% sustained some form of genital injury. In this research 24 (40.00%) of the survivors sustained physical injuries as a result of the assault and/or rape. With regards to internal injuries, 54 survivors complained specifically of bruising or tearing of the vagina and three complained of bladder infections. Bodily injuries included bruising (five survivors) and body pain (three survivors), scratches (two survivors), bites (one survivor), stab wounds (three survivors) and one survivor sustained a broken arm. In terms of facial injuries, four women had black eyes and one woman had to have stitches above her eye. Over and above the additional violence and types of rape(s) reported, 25 (41.67%) of the women described further sexual humiliation such as being kissed on the lips, touching, kissing, sucking, pulling or biting breasts, and/or kissing or biting elsewhere on the body.

6.3.4 Substance use

Research suggests a relationship between violent crime and substance abuse. The National Crime Victimization Survey (Bureau of Justice, 2007) reported that 36.80% of rape victims believed the perpetrator had used substances at the time of the rape. Victims believed that a third of the perpetrators (30.6%) were under the influence of alcohol (Bureau of Justice, 1998, 2007). Similarly Abbey et al. (2004) note that substance use, especially alcohol, is frequently involved in rapes. Based on interviews with 139 survivors of rape, they observe that in 47% of rapes both the victim and the perpetrator had been drinking, whilst in 17%, only the perpetrator had been drinking and in 7% only the victim had been drinking. In approximately a third of rape cases (29%) there was no reported substance use by either victim or perpetrator (Abbey, et al., 2004).

The findings of this study generally reflect this trend. Of the 60 women interviewed at Week 1, 29 (48.33%) reported that they believed the perpetrator(s) was (were) under the influence of alcohol at the time of the rape, 26 of whom (43.33%) reported smelling alcohol on the breath of the perpetrator(s). Twenty-four (40%) of women did not think the perpetrator(s) was (were) under the influence of alcohol at the time of

the rape and 7 (11.67%) were unsure. When women were asked if they thought the perpetrator(s) was (were) on drugs at the time of the rape 20 (33.33%) replied yes; six women thought the drug might be Marijuana, four thought it was Crystal Metamphetamine (Tik), four thought it was Tik mixed with Marijuana, Ecstasy or Mandrax, one thought the perpetrator was on Speed and one thought the perpetrator was on Mandrax and four were unsure. Nineteen women (31.67%) did not think the perpetrator(s) was (were) on drugs at the time of the rape and 21(35%) were unsure.

Nineteen (31.67%) women reported that they had been drinking alcohol prior to the rape and 15 (25%) stated that they were under the influence of alcohol at the time of the rape. Four (6.67%) of the women said that they were under the influence of drugs at the time of the rape and 2 (3.33%) stated that they were under the influence of both alcohol and drugs at the time of the rape.

6.3.5 Details of the interactions between perpetrator and victim during the assault and the rape

With the exception of one woman, who was drugged when abducted and was unconscious at the time of the rape, all the women were conscious at the time of the assault and rape. However, 8 (13.33%) women reported some amnesia for aspects of the assault and/or rape. Three (5%) women were drugged by the perpetrators during the assault/rape, 3 (5%) women woke to being raped and 2 (3.33%) women were so severely assaulted that they were rendered unconscious for a period of time during the assault and/or rape.

In describing the assault 52 (86.67%) of the women recalled the perpetrator(s) saying something to them. In the main women who recalled the perpetrator(s) saying something to them, reported being threatened with violence and were warned to do as they were told otherwise they would be injured or killed. In addition, perpetrators were reported to have made crude sexual comments – “Eat me baby. Give it to me.”, “Vanaand smaak ek om te naai” [Tonight I feel like fucking], “I want your vagina”.

At times perpetrators told the women why they were being raped – one woman was told that she was being raped in order to shame her cousin who was the ex-girlfriend of one of the rapists. Another woman was told he was going to rape her because he had a fight with his girlfriend because of her, another woman recalled the perpetrator

telling her that he was going to rape her to show her that he was not her fool, and another said he knew what he was doing was rape and that she could report him afterwards. Less frequently perpetrators convinced women to accompany them on false pretences, for example being asked to accompany the perpetrator to a friend's house on an errand, or in the case of a woman raped by an ex-partner, being told by him that he wanted to talk to her about their child.

A number of perpetrators also demanded items like cellular phones and money. Findings from the United States indicate that approximately 1 in 11 rape victims reported that they suffered some economic loss as a consequence of the crime. The average economic loss was about \$200 (Greenfield, 1997). The South African Law Reform Commission has suggested survivors of violent crime should be compensated approximately R2000.00 by the state for general damages, plus additional payments for other 'special' heads of damages (South African Law Reform Commission, 2001). Data collected for unrelated doctoral research into economic loss resulting from rape, from 47 female survivors of rape, including the 37 survivors who attended the Week 24 interview of this study, indicated that the majority of survivors estimated financial loss of approximately R1000.00 or less (Greenbaum, 2005). The research noted, however, that many survivors were unable to identify economic losses resulting from their victimisation because of their disempowered position in society (Greenbaum, 2005). Given the low socio-economic status of this group of survivors these financial costs, recognised or not, were likely to place an additional burden on the women.

During the rape itself 34 (56.67%) of the women recalled the rapist(s) talking to them, most recalled threats, in particular being warned not to look at the rapist(s); one woman recalled how a rapist suggested to the other perpetrators that they strangle her and pulled her panties off and pushed them into her mouth, and another woman who was struggling against the rapist was told to "Hou jou vokking hande weg" [Keep your fucking hands away]. In addition, a number of women recalled crude sexual comments such as being told she had a nice body and needs to use it more, or being told by the perpetrator that he had had his eye on her for a long time, another remembered the rapist saying he wanted to see her vagina and used the light from his cellular phone to do so and another woman recalled being told to "Open up, bitch". Several women recalled the rapist(s) suggesting that the women might take pleasure in the rape. One woman recalled being asked if she was enjoying it and was satisfied,

another woman recalled the rapist saying that he wanted her to be his girlfriend and not to date anyone else. Another woman recalled the rapist apologising to her whilst raping her and telling her not to cry.

Forty (66.67%) of the women reported that they had said something to the perpetrator(s) during the assault and/or rape. The majority of these women asked the assailant(s) to stop what they were doing and a number of women provided reasons for why the assailant(s) should not rape them – one woman begged the assailant not to rape her because she was pregnant, another begged the perpetrator to stop because she had had a bladder operation, another woman asked the perpetrator how he would feel if it was his sister being raped, to which the perpetrator replied that his sister had actually been raped. In addition to attempts at reasoning with the perpetrator(s) women recalled crying and apologising and a number of women reported begging for their lives. Three women recalled asking the perpetrator to use a condom, one of whom reported that the perpetrator had used a condom.

Women's descriptions of their reactions to both the assault and the rape suggest a relatively equal split between active resistance, both physical (pushing, kicking, scratching and attempting to run away) and verbal (screaming and crying), and giving in or submitting to the assault and/or rape. This seems to be in accordance with international findings. According to the National Crime Victimization Survey (Bureau of Justice, 2006, 2007), victims took self-protective measures in 66.10%% of reported rapes. However, this figure rises to 69.4% of rapes involving strangers and decreases to 51.5% of rapes involving non-strangers. Greenfield (1997) found that roughly seven out of ten victims of rape/sexual assault reported that they took some form of self-protective action during the crime.

Women's explanations for their reactions are also equally divided between resisting in the hope of stopping the assault and/or rape – one woman said that she saw no point in lying still because she believed the assailant was going to stab her anyway, another hoped that by screaming and struggling she might draw the attention of passers-by who would intervene on her behalf – or freezing and submitting to the assault and/or rape out of fear of being killed – one woman reported that she was so shocked by the unexpected attack that she was unable to respond, another woman said she knew no one would help her because she was in a relationship with the perpetrator, whilst a

third woman was sure that any resistance would antagonise the assailant and that he might harm her further or kill her. In general the survivors in this study seemed to feel that by not resisting, the attack would be over sooner and they were more likely to survive it. Overwhelmingly almost all women described their feeling during the assault and rape as being that of terror. Only 7 (11.67%) women recalled thinking about the physical pain being experienced during the attack and only 2 (3.33%) women remembered feeling angry at the time of the attack.

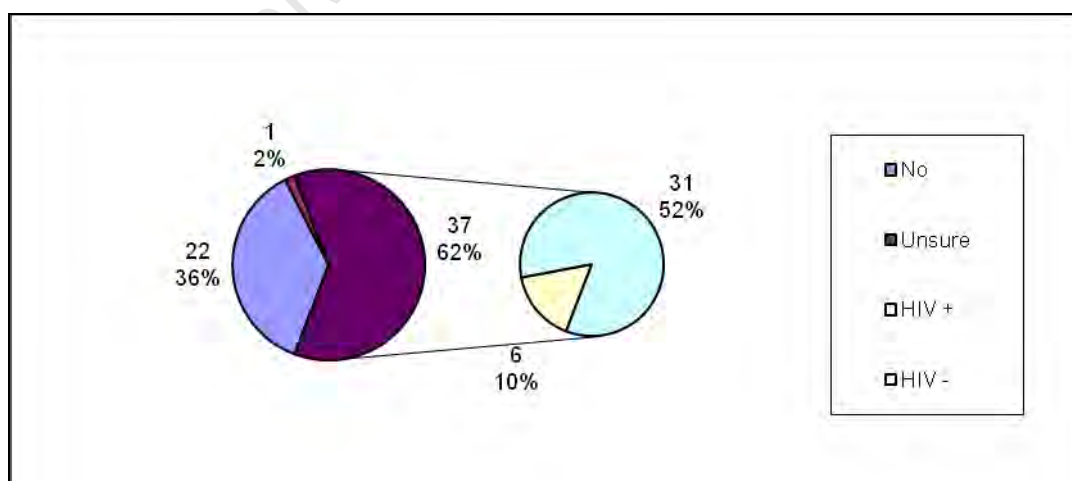
6.3.6 Pregnancy and HIV/AIDS

At the time of the rape one woman was in the last trimester of her pregnancy. Of the remaining 59 women 52 (86.67%) reported receiving treatment from TCC to prevent pregnancy, 4 (6.67%) said they had not received treatment and 2 (3.33%) were unsure. At the Week 1 interview 55 (91.67%) women reported that they were not pregnant as a result of the rape and 5 (8.33%) were unsure. At the follow up Weeks 4, 12 and 24 no pregnancies were reported.

With regards to the HIV status of the 60 women, 21 (35.00%) were diagnosed as HIV positive post-rape. Figure 13 below provides a breakdown of the women's knowledge of their status prior to the rape.

Figure 13

HIV status known prior to rape? If known, status positive or negative? (n=60)



Of the 31 (51.67%) women who reported they were HIV negative prior to the rape, 5 (8.33%) were diagnosed as HIV positive post-rape. Of the 22 (36.67%) who did not

know their HIV status prior to the rape, 9 (15%) were diagnosed as HIV positive post-rape. The woman whose response was unclear in relation to knowledge of her HIV status prior to the rape was subsequently diagnosed as HIV positive. There were no subsequent sero-conversions reported. However, since no further medical follow-ups were conducted as part of this study, this cannot be taken to mean that there were no further sero-conversions amongst the HIV negative women in the study. In sum, 21 (35%) women in the study were HIV positive, 15 (25%) of whom first became aware of their HIV positive status in the immediate aftermath of rape.

Calculating prevalence rates for HIV is a notoriously complex task and figures tend to range quite widely. Drawing on data from the ILO (International Labour Organization), the World Bank and UNAIDS (Joint United Nations Programme on HIV/AIDS) in comparison with 15 other countries with an HIV prevalence of 0.1% or more and for which adequate data exists, South Africa's adult HIV prevalence rate seems to be reliably estimated at 23% of the adult population, second only to Botswana (38%) (Nattrass, 2006a). HIV prevalence is strongly correlated with age and socio-economic status, with the highest prevalence rates amongst people aged 15 - 49 (Nattrass, 2004), those who are unemployed with lower levels of skill (Nattrass, 2002) and living in informal settlements, with Africans having the highest prevalence compared to other race groups (Shisana, Rehle, Simbayi, & Mbelle, 2005). In 2006 area level surveys reported HIV prevalence of the Western Cape at 15.1%, with prevalence in Khayelitsha at 33% (Marindo, 2008).

A survey of national households suggested that 55% of the HIV positive population is comprised of women (Marindo, 2008) and several national studies have demonstrated that the highest HIV prevalence rates, generally above 25-29%, occur among young women aged 25 – 29 (Dorrington, Johnson, Bradshaw, & Daniel, 2006; Nattrass, 2004; Shisana, et al., 2005). The pattern of increased vulnerability of women to HIV is reflective of an international trend and is particularly apparent across Africa (Nattrass, 2004). Estimates of HIV prevalence rate of women aged 15-49 in the Western Cape are estimated to be substantially lower at 11.7% (Actuarial Society of South Africa (ASSA), 2005).

The number of HIV positive women in this study is higher than the majority of the aforementioned figures would predict, however the number is in keeping with the

figures cited for Khayelitsha by Marindo (2008). It should be noted that although 15 (25%) women became aware of their HIV positive status in the aftermath of the rape this cannot be taken to mean that the sero-conversion was as a direct result of the rape itself. Whilst there are a limited number of studies assessing the risk of transmission through rape, it is generally agreed that risk of transmission through rape is likely to be higher than through consensual sex (Linden, Oldeg, Mehta, McCabe, & LaBelle, 2005). This increased risk has been attributed to a number of factors associated with rape including the likelihood of genital trauma, inflammation, ulcers, bleeding, lacerations and multiple perpetrators (Garcia, et al., 2005; Moe & Ledray, 2001). In addition, in a context of high HIV prevalence like South Africa the risk of transmission is likely to be even higher (Jewkes, Sikweyiya, Morrell, & Dunkle, 2009; Meel, 2003). As noted in *Chapter 3: Section 3.3.1.2.4 Somatic Disorders*, given this increased risk, since April 2002 the provision of PEP for survivors of rape has been part of the South African government's policy, and a key element of the services provided at the TCC is the provision of PEP.

Of the 60 women interviewed at Week 1, 50 (83.33%) women reported that they had received PEP, 8 (13.33%) reported that they had not (this number includes the six women who knew they were HIV positive prior to the rape, and the remaining two might be accounted for by the delay in reporting to the TCC – one woman was seen 193 hours post-rape and the other 98 hours post-rape – and after 72 hours PEP cannot be administered). Two women were unsure as to whether they had received PEP treatment. It is possible that given the cocktail of drugs prescribed to rape survivors in the aftermath of a traumatic experience, the women might have been confused with regard to what the different medications given to them at the TCC were for. All 50 women who stated they had received PEP reported that they had taken the full course of ARVs. Research on adherence to PEP with survivors of sexual assault suggests that this reported level of adherence is unlikely (Kagee, 2008; Meel, 2005; Vetten & Haffeejee, 2004). More specifically research conducted at the TCC suggests that even with intensive case management and one-on-one follow up, a quarter of the women (N=131) in the study reported missed doses and ongoing HIV risk behaviour was common, especially among those with prior high risk sexual activity which is likely to have resulted in the sero-conversions recorded in that study (Roland, et al., 2005)

Thus the high number of HIV positive women in this research is likely to be attributable to an interplay of factors including the age range of the women, their socio-economic status, and to a complex and indirect link between sexual violence and its associated risk for HIV infection (Dunkle & Decker, 2013; Dunkle, et al., 2004; Jewkes, Levin, & Penn-Kekana, 2003). Kalichman & Simbayi (2004), demonstrated that there is a close connection between rape and women's risks for STIs and HIV. They found that women who had been raped were more likely to have shared injection drug equipment, exchanged sex to meet survival needs and used alcohol. They were also significantly more likely to have multiple male sex partners, greater rates of unprotected vaginal intercourse, lower rates of condom protected anal intercourse, more sexual contacts involving blood, more STIs and genital ulcers. In addition, they were more likely to have been non-sexually abused by relationship partners and were more likely to be afraid to ask partners to use a condom.

6.3.7 Contact with the police

Given the close links which the TCC has with police stations, it is not surprising that at Week 1 59 (98.33%) of the 60 women reported that they had laid a complaint of rape at a police station. At the subsequent interviews two women reported that they wished to withdraw the charge, citing pressure from the perpetrator's family as the reason. In one case the charge was withdrawn and in the other the woman reported that the police refused to withdraw the charge.

With regards to ongoing contact with the police, at Week 4, 17 (40.48%) women reported contact with the police, at Week 12 16 (43.24%) women reported contact with the police and at Week 24 17 (45.95%) women reported contact with the police. However, closer scrutiny of the descriptions given by the women of their contact with the police, showed that contact did not necessarily mean that the police had contacted the survivor, nor did it mean that contact indicated progress in the case. At Week 4 and Week 12, close to half of the contacts (47% and 50% respectively) with police were initiated by women wanting information about the progress in their case. By Week 24 most contact with the police was initiated by police (76.47%). When police contacted women they did so mainly to inform the survivor about the status of their case, to inform them of court dates or to collect additional information.

At the Week 1 interview 50 (83.33%) women reported that they were satisfied with the service they had received from the South African Police Service. Nine (15%) were dissatisfied and the reasons ranged from having been told a charge could not be laid because the victim could not identify the perpetrator, to being sent from one police station to another, delayed response from the police, and a lack of information about who was in charge of the case and what would happen next. According to the Victims of Crime Survey (Statistics South Africa, 1998) 70.1% of people dealing with the police in the Southern Cape were satisfied. Among victims in the survey who reported the crime to the police, 52.00% said that the perpetrators were arrested, while 35.1% said that the offenders were not arrested.

By the Week 24 interview women expressed much less satisfaction as evidenced in their Needs Assessment responses, which showed a marked increase in the number of women wanting assistance with making contact with the criminal justice system (see *Chapter 7: Section 7.5. Psycho-social needs assessment*). The difficulties experienced by women in bringing the case to trial are, unfortunately, reflective of difficulties reported in both international and national research. Over and above the low reportage rate for rapes, the low conviction rates for the crime of rape remain cause for serious concern worldwide. In the United Kingdom average conviction rates for sexual offences are estimated to be between 5.00% and 9.00% (Kelly, Lovett, & Regan, 2005). In the USA estimates of the number of sexual offences reported range from 16% to 72% with conviction rates for sexual offences reported across states ranging from 17% to 38% (Campbell, Bybee, Ford, & Patterson, 2009).

South African Police Service statistics show that 47.6% of rape cases reported to the police were referred to court for investigation, but of the cases referred to court, 45.6% were withdrawn in court, and a further 4.5% settled out of court (Hirschowitz, et al., 2000). According to Vetten et al.(2008) adult women fared the worst at the hands of the Criminal Justice System relative to girls and teenagers. Less than half of their cases (46.8%) result in arrests, with a trial commencing in about 1 in 7 (14.7%) matters and a conviction for any crime resulted in 6.2% of cases. At the time of the last Week 24 interview, conducted 15 months after the first Week 1 interview was undertaken, 2 (5.41%) of the 37 women still taking part in the research reported that their cases had been brought to trial and both had secured convictions.

6.4 Chapter summary

The first part of this chapter provided a detailed report of the demographic profile of the 64 survivors initially enrolled into the study. The majority of the survivors were between the ages of 20 and 30, predominantly African (71.00%), isiXhosa-speaking women, or coloured (25.00%), Afrikaans-speaking women. Most of the women reported having a partner and had either no children or one child. All the participants were living in the City of Cape Town at the time of the rape. Sixty-three percent of the women lived in houses and 19.00% lived in shacks on serviced sites with an average of 2.12 rooms per dwelling and approximately 4.88 people in each dwelling. The majority of the participants (81.00%) had between a Grade 8 and Grade 12 level of education, were unemployed (64.00%) and had an income of less than R800.00 per month (78.00%). Eleven (18.33%) of the 60 women reported having been raped previously and 35.00% were HIV positive.

With regards to the details of the rape, most of the rapes (80.00%) took place between 18h00 and 06h00 on weekends or public holidays. The overwhelming majority of rapes were intra-racial. Two thirds (60.00%) of the survivors were raped by someone they knew – half (33.33%) of whom were well known to the survivor and over two thirds of the rapes (71.67%) took place in a private space, most commonly either the perpetrator's or victim's home. Seventy-nine percent of the perpetrators were under 31 year of age and 30.00% of the women were raped by more than one person. The overwhelming majority of rapes were vaginal (97.00%), 32% of which also included oral and/or anal penetration. Weapons were used in 60.00% of the assaults and over and above the rape itself 71.67% of survivors reported additional acts of violence perpetrated against them. An equal number of survivors reported actively resisting the assault and rape or submitting to the rape for fear of additional violence if they resisted. With regards to substance use on the part of the perpetrators, 48.33% of survivors believed that the perpetrator was under the influence of alcohol and/or drugs at the time of the rape and 25.00% of the survivors reported being under the influence of alcohol and/or drugs at the time of the assault and rape. The vast majority of the survivors taking part in this study reported the rape to the police (98.33%) and approximately 40.00% reported contact with the police at the subsequent research interviews, but with growing dissatisfaction at the nature of that contact. At the Week

24 interview ($n=37$) two (5.41%) of the cases had been brought to trial and had secured a conviction.

As noted at the start of this chapter, the women taking part in this study were not seen to be representative of rape survivors who report rape in South Africa or the Western Cape. Nonetheless, relative to the comparative international, national and regional data referred to throughout this chapter, it may be argued that the survivors taking part in this study are similar in relation to the demographics reported in the national and regional research and in relation to the details of the rape, as reported in the regional, national and international literature cited in this chapter. This is noteworthy in so far as it could, therefore, be argued that the results of the data analysis presented in subsequent chapters may be generalised to a broader group of survivors who present at a public facility with a complaint of rape. The next chapter provides an account of the impact of rape across time as reported by the survivors taking part in this study at the Weeks 1,4,12 and 24 interviews.

Chapter 7

Results II

7.1 Introduction

This chapter provides a detailed report of the impact of the rape across time as reported by the women who participated in this research. This data was drawn from the questionnaires which focused on assessing degree of social support, impact of the rape in relation to self-esteem, self-blame and guilt, assessment of psycho-social needs, perceived degree of safety and exposure to violence other than the rape itself, both prior and subsequent to the rape, physical and mental health, and psychiatric sequelae as elicited at the Baseline ($N=64$), Week 1 ($n=60$), Week 4 ($n=42$), Week 12 ($n=37$) and Week 24 ($n=37$) interviews.

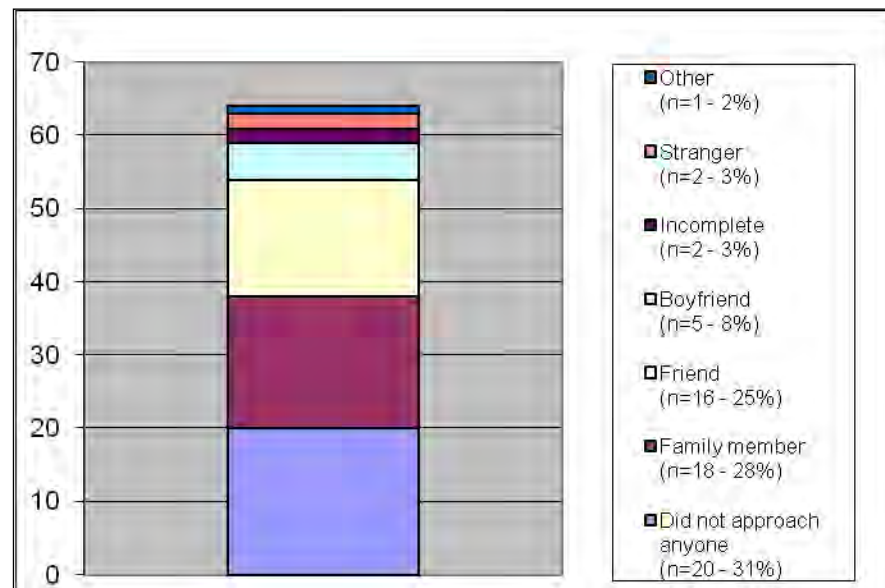
7.2 Social support

7.2.1 Support in the immediate aftermath of rape

In deciding what to do immediately after the rape 43 (67.19%) women sought advice from someone, 20 (31.25%) did not and 1 (1.56%) response was incomplete. Figure 14 provides details about who women turned to for advice; in the main a third of women looked to a family member and just under a third turned to friends. Immediately thereafter the majority of women, 47 (68.75%) went directly to a police station.

Figure 14

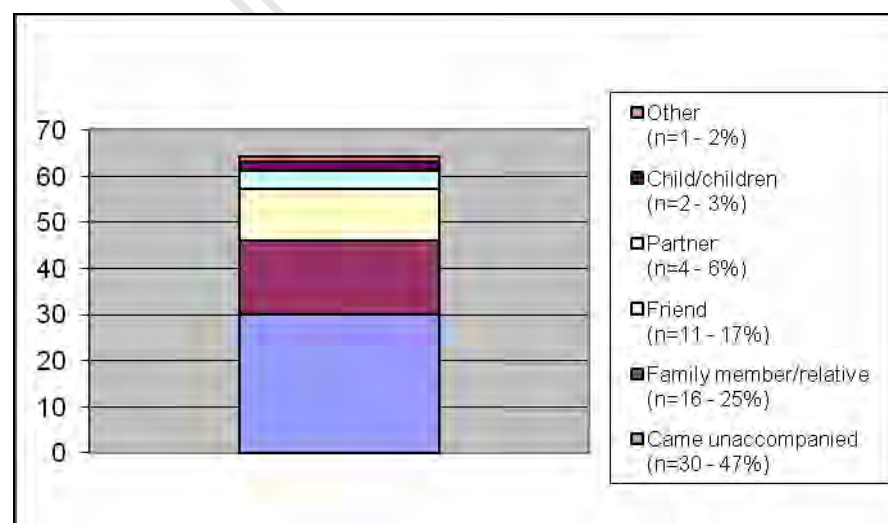
Person survivors sought for advice post-rape (N=64)



Sixty (93.75%) of the 64 women were taken to the TCC by the police, 3 (4.69%) were taken by friends and 1 (1.56%) woman was unconscious and was thus not sure how she reached Jooste Hospital where, due to the severity of her injuries, she was admitted into the Trauma Unit and then transferred into a general ward. The majority of women were not accompanied by anyone other than the police to the TCC. Figure 15 provides details about who accompanied women to the TCC.

Figure 15

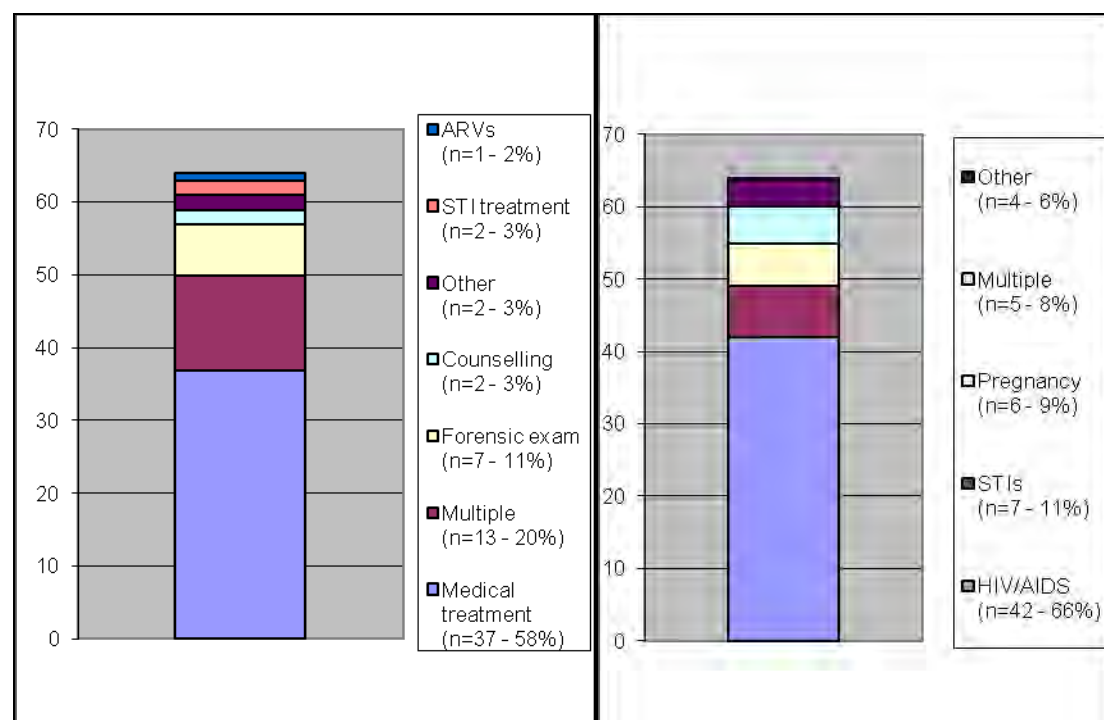
Person who accompanied woman to TCC (N=64)



On arrival at the TCC the majority of women expected medical treatment. Figure 16a provides a graphical representation of the services women expected from the TCC and Figure 16b indicates the survivors' primary medical concerns in the immediate aftermath of rape. It is interesting to note that whilst the majority of women expressed their greatest concern as being related to HIV/AIDS only one woman explicitly stated that she expected treatment from the TCC for HIV/AIDS.

Figure 16

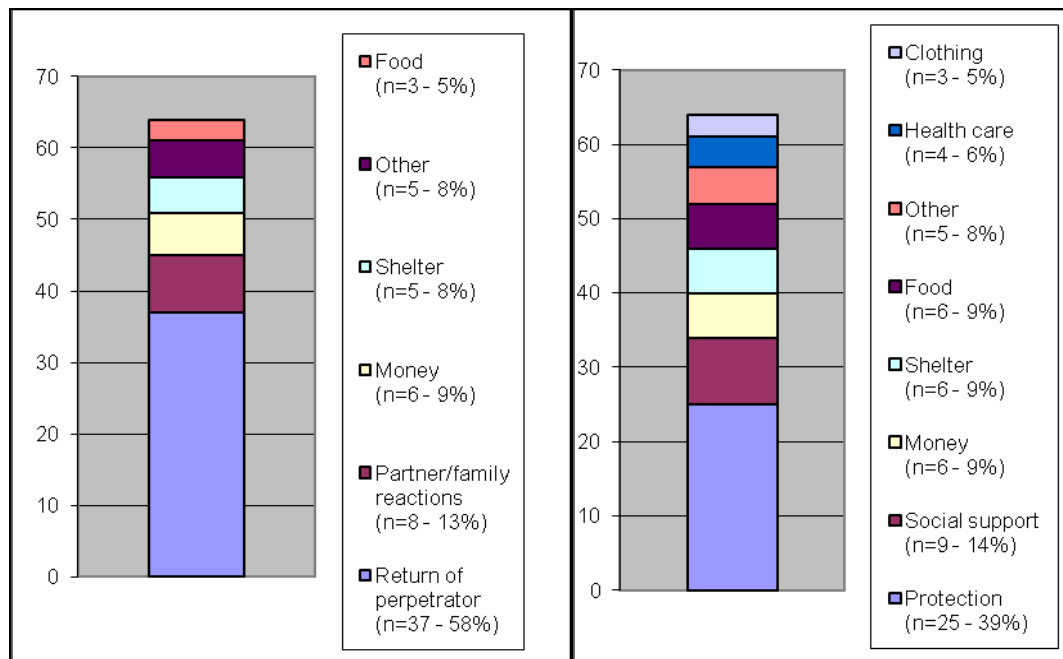
a. Services expected from TCC (N=64) **b. Women's primary medical concern (N=64)**



Figures 17a and 17b present in graphic form the survivors' primary fears, needs and medical concerns in the immediate aftermath of rape. The majority of survivors were extremely concerned that the perpetrator(s) might return and were thus most in need of protection.

Figure 17

a. Women's primary worries (n=60) b. Women's primary needs (n=60)



After being treated at the TCC 23 (35.94%) of the 64 women returned to their own homes, 30 (46.88%) went to the home of a family member, 7 (10.94%) went to a friend's home and 1 (1.56%) went to a shelter. As per TCC policy most of the women, 58 (90.63%), were transported by the police, 1 (1.56%) woman was transported by ambulance, 3 (4.69%) were escorted by a family member or friend, 1 (1.56%) woman walked and 1 (1.56%) was taken to a women's shelter by the researcher. Forty-seven (73.44%) women reported that they would/did feel safe at the place they went to after being seen at the TCC and 17 (26.56%) stated that they would not/did not feel safe there.

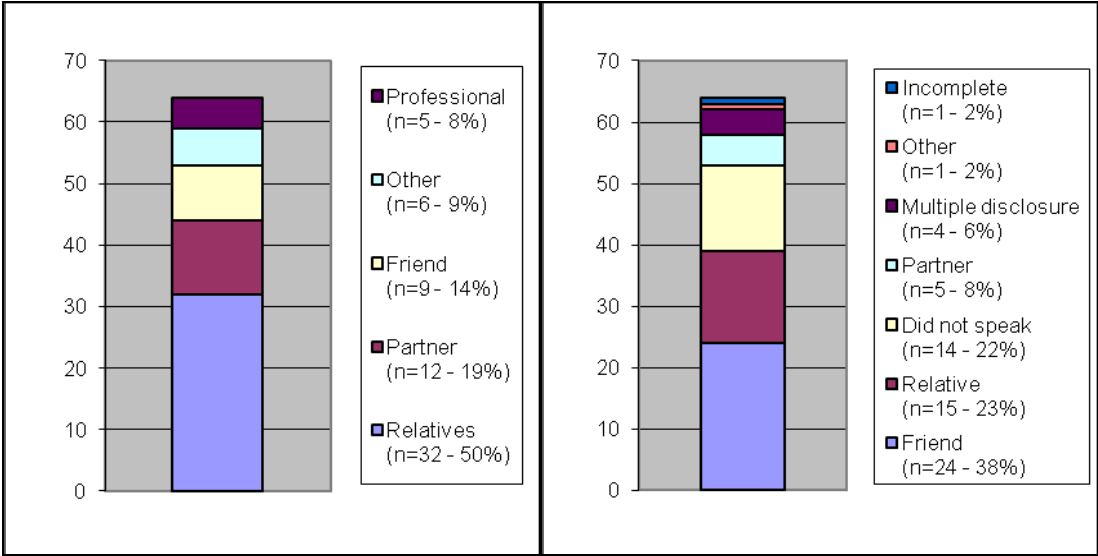
The majority of the 64 women, 50 (78.13%) reported having spoken to someone about the rape and 14 (21.88%) had not. Of the 14 women who had not spoken to anyone, 5 (7.8%) said they had not yet seen anyone, 5 (7.8%) were not sure who to tell, 1 (1.56%) was afraid of the reaction she might receive, 1 (1.56%) woman said she had no one to speak to, 1 (1.56%) woman said she didn't want to speak to anyone and 1 (1.56%) woman stated that she did not feel ready to talk to anyone. Figure 18a provides information about who women thought would be most helpful to them in the immediate aftermath of rape and Figure 18b provides information about who women chose to speak to post-rape. It seems clear that family and friends were perceived to

be the greatest source of possible support and, not surprisingly, it was to family and friends that the majority of survivors turned to post-rape.

Figure 18

a. Who women thought would be most helpful post-rape (n=60)

b. Who women spoke to post-rape (n=60)



Overall support from family and friends, in conjunction with adequate institutional care (as provided by the police and medical personnel), are clearly the primary needs in the immediate aftermath of rape and the majority of women of this study seemed to have received adequate care in this regard.

7.2.2 Assessing social support over time

In order to assess social support across time, two measures were used – the MSOPSS and the Social Support Questionnaire - the results from these measures follow.

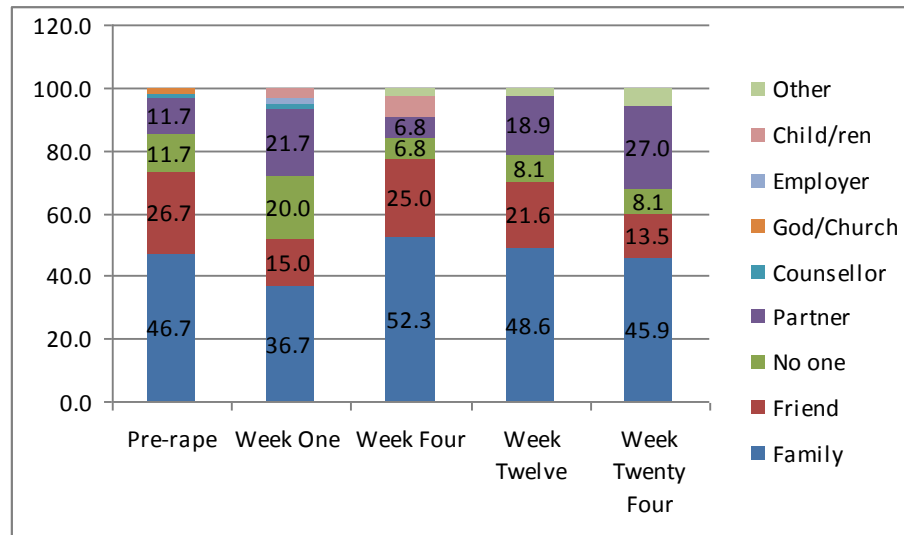
Table 5**Social Support as measured by the MSOPSS at Weeks 1, 4, 12 and 24 (Means and SDs)**

	Significant other	Family	Friend	Total
Week 1 (<i>n</i> =60)	5.63 (0.94)	5.02 (1.56)	4.42 (1.77)	5.02 (1.14)
Week 4 (<i>n</i> =42)	5.63 (1.62)	5.48 (1.56)	4.24 (1.93)	5.12 (1.36)
Week 12 (<i>n</i> =37)	6.07 (1.09)	5.30 (1.64)	4.22 (1.83)	5.20 (1.09)
Week 24 (<i>n</i> =37)	5.94 (1.17)	5.72 (1.39)	4.05 (1.98)	5.24 (1.14)

In general, across all four interview, women reported that they had received support from a significant other; on a likert scale ranging from 1 (Very Strongly Disagree) to 7 (Very Strongly Agree), responses ranged from Neutral (4) to Very Strongly Agree (7). With regard to support from family, overall, across the Week 1, 4, 12 and 24 interviews, women reported that they received support from their families; the majority of women selected responses ranging from Mildly Agree to Strongly Agree. The subscale measuring support from friends evidenced slightly more variability than the subscales relating to support from family or from a significant other; responses indicated slightly less support from friends ranging from Mildly Disagree to Mildly Agree. Overall, the majority of women reported that they had received support from a significant other, family and/or friends, with some variability ranging between Neutral and Strongly Agree.

Figure 19

Social Support as measured by the Social Support Questionnaire at Weeks 1, 4, 12 and 24 (reported in percentages)



As with the MSOPSS, the primary source of support for the majority of the women across time remained family members, followed by support from friends.

Table 6

Number of women reporting negative changes and unsupportive responses post-rape

	Negative changes in relationships	Unsupportive responses
Week 1 (n=60)	15 (25.00%)	14 (23.33%)
Week 4 (n=42)	9 (21.43%)	7 (16.67%)
Week 12 (n=37)	7 (18.92%)	7 (18.92%)
Week 24 (n=37)	6 (16.22%)	5 (13.51%)

The negative changes in relationships and unsupportive responses reported by women were primarily associated with family members and secondly with friends, with only a few women referring to negative changes and/or unsupportive responses in relation to a partner.

7.3 Self-esteem, self-blame and guilt

In order to assess the degree of lowered self-esteem, self-blame and guilt experienced by women post-rape across time two measures were used – the PTCI and the Self-esteem, Self-blame and Guilt Questionnaire - the results from these measures are reported below.

Table 7

Descriptive statistics for PTCI subscales (Means and SDs)

	Negative cognitions: self	Negative cognitions: world	Self-blame	Total
Week 1 (<i>n</i> =60)	3.92 (1.23)	5.67 (0.75)	2.77 (0.98)	135.89 (28.98)
Week 4 (<i>n</i> =42)	3.25 (1.29)	5.44 (0.81)	2.70 (1.27)	117.94 (31.08)
Week 12 (<i>n</i> =37)	2.82 (1.24)	5.36 (0.60)	2.17 (0.93)	107.51 (29.25)
Week 24 (<i>n</i> =37)	2.65 (1.18)	5.39 (0.75)	2.53 (1.25)	106.08 (29.71)

In general across Weeks 1, 4, 12 and 24 women did not report negative cognitions about themselves; based on a likert scale ranging from Totally Disagree (1) to Totally Agree (7), in relation to statements evidencing negative cognition of the self, responses tended to range from Disagree Very Much (2) to Neutral (4). In contrast, most women reported some negative cognitions about the world, with women tending to choose responses ranging from Neutral (4) to Agree Very Much (6). Scores on the Self-blame subscale suggest that overall and across time women did not tend to blame themselves for the rape, choosing in the range between Disagree Very Much (2) and Neutral (4). This finding contrasts to levels of self-blame as measured by the Self-esteem, Self-blame and Guilt Questionnaire discussed below, which may be, at least in part, attributable to the different ways in which answers are elicited between a quantitative questionnaire and a qualitative qualitative one. It should, however, also be noted that the eigenvalues calculated for this factor were weak (see *Chapter 5: Section 5.4.3.2.4 PTCI*) and this therefore effects the interpretability of the scores on this subscale. The highest score possible on the PTCI is $36 \times 7 = 252$. It appears that in general women did not report negative cognitions, with women selecting responses ranging from Neutral (4) to Disagree Very Much (6). There was, however, generally more support for the ‘Negative cognitions about the world’ subscale.

Table 8**Number of women reporting self-blame and guilt**

	Do you think you were raped because of something you did or said? Yes.	Do you blame yourself for the rape? Yes.	Do you think you could have prevented the rape? Yes.
Week 1 (n=60)	8 (13.33%)	37 (61.67%)	16 (26.67%)
Week 4 (n=42)	4 (9.52%)	24 (57.14%)	8 (19.05%)
Week 12 (n=37)	4 (10.81%)	21 (56.76%)	7 (18.90%)
Week 24 (n=37)	5 (13.51%)	17 (45.95%)	8 (19.05%)

With reference to the first column, the reasons given by the women who responded in the affirmative to this question, ranged from not having locked the door to their house, to drinking and walking late at night, being too friendly, or in several cases women stated that they had ‘provoked’ the rape by having in some way humiliated or rejected the perpetrator prior to the rape.

In contrast to the relatively small number of women who thought they had done or said something which led to the rape, a greater number of women blamed themselves in some way for the rape. The majority of these women blamed themselves for being where they were at the time of the rape and this frequently related to being out at night, staying with a friend rather than staying at home, or agreeing to accompany the perpetrator(s) or his friends, and a smaller number blamed themselves for drinking at the time or for being involved or having been involved with the perpetrator.

Overall, relatively few women felt they could have done something to prevent the rape. In the main women who felt they could have done something to prevent the rape most frequently stated that they should have fought back physically, screamed and tried more actively to get help. Fewer women felt that their choosing to be at a particular place at a particular time had rendered them vulnerable to rape and that they should have been aware of this.

It is perhaps noteworthy that across all three questions related to self-blame and guilt, a small number of women evidenced changeability in their responses across Weeks 1, 4, 12 and 24, which seems to suggest that at least for some women, feelings of self-blame and guilt are subject to change in either direction over time.

Table 9**Number of women reporting lowered self-esteem**

	Do you feel you are worth less?	Have your feelings about yourself changed in a negative way?	Do you feel that the rape has taken something away from you?
Week 1 (n=60)	28 (46.67%)	35 (58.33%)	41 (68.33%)
Week 4 (n=42)	15 (35.71%)	14 (33.33%)	24 (57.14%)
Week 12 (n=37)	9 (24.32%)	9 (24.32%)	12 (32.43%)
Week 24 (n=37)	9 (24.32%)	4 (10.81%)	11 (29.72%)

With reference to both feelings of worthlessness and negative feelings towards the self, there was a steady decline over time. Responses to the open-ended question on the Self-esteem, Self-blame and Guilt Questionnaire relating to what had changed in a negative way, could be categorised broadly into the following themes: A change for the worse in terms of relating to people, heightened irritability, a feeling of emptiness, a withdrawal from contact with others and a sense of having lost the best parts of who they were prior to the rape. In a sense these experiences informed another broad theme, that of a profound sense of a loss of dignity and self-worth, often associated with feeling dirtied, disempowered and stigmatised by those around them. Women also spoke of being preoccupied with the rape, not surprisingly this was most evident at the Week 1 interview, as was a concern with physical health, particularly in relation to HIV and the possibility of scarring due to physical injuries sustained as a result of the rape.

As with the women's responses to the previous two questions, there appears to be a steady decline in feelings of loss over time. In elaborating on what had been lost, women almost uniformly spoke about a loss of dignity, pride and freedom. The rape was described by many women as having changed their lives irrevocably, with a concomitant sense of damage to their ability to relate to family and friends, to enjoy life and to imagine a positive future. In addition, a number of women spoke of a change in their perception of their own body resulting in a sense of shame, a loss of privacy and self-respect in relation to being women.

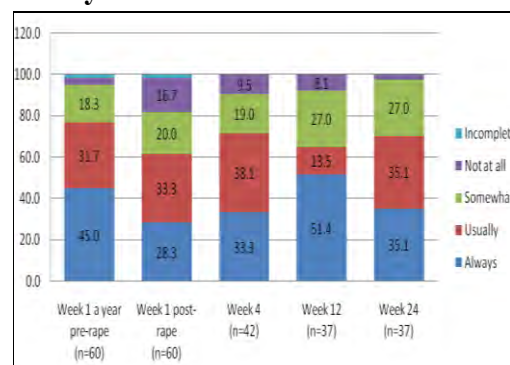
As noted in the previous section it is noteworthy that across all three questions related to self-esteem, a minority of women responded affirmatively to questions of negative feelings across all interviews, approximately half of the women evidenced a monotonical decrease in negative feelings and the remainder evidenced changeability in their responses across Weeks 1, 4, 12 and 24, which seems to suggest that for some women feelings of self-worth and self-esteem wax and wane over time.

7.4 Perception of safety and exposure to violence

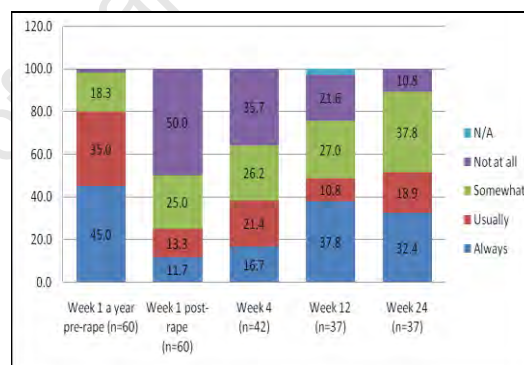
The women's perception of safety within the family, at home, outside of the home and at work in the year prior to the rape and at Weeks 1, 4, 12 and 24 post-rape as measured by the Exposure to Violence Questionnaire are graphically represented in percentages in the figures below.

Figure 20

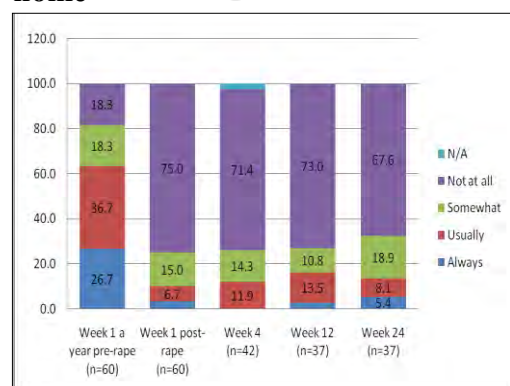
a. Women's perceived safety with family



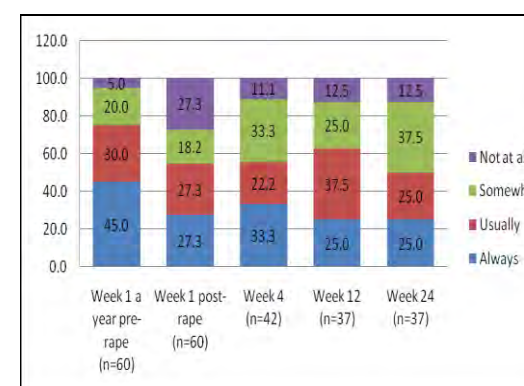
b. Women's perceived safety at home



c. Women's perceived safety outside home



d. Women's perceived safety at work



There appear to be marked changes in feelings of perceived safety within the family, at home and outside the home over time. Not surprisingly there was a particularly

marked drop in perceived safety from prior to the rape to the Week 1 post-rape interview in all three areas, but this was most evident in perceived safety outside of the home. With reference to Figure 20d, it should be borne in mind that a minority of the women taking part in the study were employed - at Baseline 23 (35.94%) of the 64 women taking part in the study were employed - and thus this figure only refers to this minority across the study timeframe. As with perceived safety within the family, at home and outside the home, there was a marked drop in feelings of safety at work, from prior to the rape to the Week 1 post-rape interview which then stayed at approximately the same level over Weeks 4, 12 and 24.

Results from the Exposure to Violence scale, which assesses being both a witness to, and victim of, violence, showed little variation across time in the year prior to the rape, and at Weeks 1, 4, 12 and 24 post-rape. In general, women reported either no incidents or one incident of either witnessing violence or being a victim of violence other than the rape, with little difference evident with regard to whether the violence was stranger-, acquaintance- or family-related. Given that all the women taking part in this research live in areas with high levels of crime and concomitant high levels of fear (see *Section 7.5 Psycho-social needs assessment* below) these findings are surprising and may be in part attributable to perceptive and coping processes which may impact on the ability to accurately recall and report experiences of violence, not least of all when exposure to violence is chronic (Brandt, et al., 2004).

7.5 Psycho-social needs assessment

It was hoped that assessment of the general needs of the women at Weeks 1, 4, 12 and 24 would provide some indication of how, in relation to this specific group of survivors, the needs born of rape trauma interface and interact with the multiple needs likely to be experienced by women living in low socio-economic contexts.

Table 10**Psycho-social needs assessment**

	Week 1 (n=60)	Week 4 (n=42)	Week 12 (n=37)	Week 24 (n=37)
Counselling	45 (75.00%)	26 (61.90%)	13 (35.14%)	13 (35.14%)
Safe Housing	40 (66.67%)	25 (59.52%)	16 (43.24%)	19 (51.35%)
Education	36 (60.00%)	27 (64.29%)	24 (64.86%)	19 (51.35%)
Employment	34 (56.67%)	27 (64.29%)	20 (54.95%)	18 (48.65%)
Medical Care	34 (56.67%)	16 (38.19%)	9 (24.32%)	12 (32.43%)
Food	17 (28.33%)	8 (10.05%)	7 (18.92%)	4 (10.81%)
Assistance with Family Problems	16 (26.67%)	12 (28.57%)	8 (21.62%)	3 (8.11%)
Help Contacting Professionals	13 (21.67%)	6 (14.29%)	34 (91.89%)	33 (89.19%)
Disability Grant	9 (15.00%)	5 (11.90%)	6 (16.22%)	7 (18.92%)
Assistance with Substance Abuse				
Abuse	6 (10.00%)	5 (11.90%)	4 (10.81%)	1 (2.70%)
Home Assistance	5 (8.33%)	1 (2.38%)	0 (0.00%)	0 (0.00%)

With reference to Table 10, broadly speaking, the four needs most frequently reported across the four time frames were the need for: Counselling, Safe Housing, Education and Employment. Medical Care was cited in the top five needs at Weeks 1 and 4, but was supplanted by the need for Help in Contacting Professionals, such as police, lawyers medical personnel etc., which became the primary need at Weeks 12 and 24. Within the middle range of scores, the sixth to eighth most frequently rated needs, the need for Food was consistently reported. In addition, more often than not, the need for Assistance with Family Problems fell within this range, whilst the need for Help in Contacting Professions fell within this range at Weeks 1 and 4 but became a primary need at Weeks 12 and 24, which moved the need for Medical Care from the top five needs into this range. The need least frequently reported across the four time frames was Home Assistance. The need for Assistance with Substance Abuse and the need for a Disability Grant were more often than not also in the bottom three needs listed.

With reference to the four needs most frequently reported across the four time frames; a need for Counselling was consistently reported at Weeks 1, 4, 12 and 24, but with a

decrease in reported need across time between Weeks 1, 4 and 12 which appears to be directly related to the rape (see *Section 7.6.2. Mental Health and Counselling* below for a more detailed discussion in this regard).

The level of need for Education stayed fairly constant across the Week 1, Week 4 and Week 12 interview with a drop at Week 24, whilst the need for Employment remained fairly steady across time with a slight decrease at Week 24. The KMP survey (Centre for Social Science Research, 2003) cited the two biggest reasons given for not being employed were being too old and that it costs too much to find work. The General Household Survey, (Statistics South Africa, 2007b) found that among persons aged 7-24 that were not attending an educational institution, lack of money for fees remained the most common reason for not attending. Furthermore, the most common reason cited by coloured adults for leaving school was that they needed to look for a job or the family could not afford to send them to school anymore, and the most common reason for leaving school for African adults was that the family could no longer afford to send them to school. Across all 4 interviews in this study the majority of the women cited lack of money as the key obstacle in securing their primary needs (Week 1, 50 (83.33%), Week 4, 33 (78.57%), Week 12, 31 (83.78%) and Week 24, 31 (83.78%).

The figures relating to the need for Safe Housing in Table 10 evidence a decrease over time in the need for Safe Housing, with a slight increase at Week 24, but not to the same level of need reported at Weeks 1 and 4. It is hypothesised that the decrease over time is linked to a decreasing sense of vulnerability with recovery post-rape, but the need for safe housing remains a primary need because of the general lack of safety in the areas in which the women live.

What is perhaps noteworthy, though not surprising given the demographics of the women in the study reported in the earlier part of this chapter, is that two of the most pressing needs reported across time are income related; the need for Education to increase the chances of employment and the need for Employment itself to secure an adequate and regular source of income. The need for Safe Housing may be attributable to both a heightened sense of vulnerability in the aftermath of rape and more generally to living in areas with very high crime statistics. Cape Town has the worst crime rate in South Africa (Leggett, 2003), with one of the highest murder rates

in the world (United Nations, 2006) and the highest reported rape rates in South Africa (South African Police Service, 2010), with the majority of these crimes concentrated in the Cape Flats area (Sterling, 2003). Given the demographics of the Cape Flats it is not surprising that almost half of African (48%) and coloured (44%) residents in Cape Town report feeling unsafe in the daytime in their residential areas and fear is most evident at night, when only 11.9% of Africans and 9% of coloureds report feeling safe in their residential areas (Camerer, Louw, Shaw, Artz, & Scharf, 1998). Safe Housing is income-related, since either securing one's home or moving to a safer area (which translates into moving to an area where housing is more expensive) would require financial resources on the part of the women. It is therefore likely that the three needs are inter-related.

With reference to the top fifth need, there was a decrease across time in the need for Medical care. In addition, there was a shift in the relative need for Help Contacting Professionals between Weeks 1 and 4 and Weeks 12 and 24. It is hypothesised that this is directly related to the rape and is linked to the growing frustration expressed by the majority of the women with regard to the lack of progress in their complaints of rape within the criminal justice system (see *Chapter 6: Section 6.3.7 Contact with the police*).

7.6 Physical and mental health

7.6.1 Physical health

The literature on the impact of rape on physical health and consequent visits to health care practitioners, suggests that rape trauma often results in increased physical complaints with a concomitant increase in visits to health care practitioners (Campbell, et al., 2008; Golding, 1994; Kimerling & Calhoun, 1994; Koss, et al., 2002b; Koss, Koss, & Woodruff, 1991) The research protocol investigated this through particular questions posed in the Health Questionnaire and an adapted version of the Somatisation Scale from the MINI+ (for detailed descriptions of these instruments see the *Chapter 5: Sections 5.4.3.2.10 and 5.4.3.2.7*) administered at the Weeks 1, 4, 12 and 24 interviews.

Overall, findings from the two measures evidenced an inconsistency across all four interviews in terms of number of somatic complaints reported by women and number

of reported visits to health care practitioners between the Health Questionnaire and the Adapted version of the Somatisation Scale. This inconsistency was most marked at Week 1 and it is suggested that the inconsistency may be attributable to some degree to the difference in the wording of the questions on the Somatisation Scale and the Health Questionnaire. However, the marked difference at the Week 1 interview is possibly also a result of the focus on medical treatment which survivors receive in the immediate aftermath of rape at the TCC and the complex cocktail of drugs received and concomitant side effects of the medication. All of this is likely to create a high level of physical discomfort which, in conjunction with intense psychological distress in the immediate aftermath of rape, might have negatively impacted on the accurate recall of these details.

The inconsistencies notwithstanding, the number of women complaining of physical symptoms as recorded on the Adapted Somatisation Scale remained relatively high across all four time frames. At Week 1 all 60 women complained of at least one physical symptom, at Week 4, all 42 women complained of physical symptoms, at Week 12, 33 of the 37 (89.19%) women complained of physical symptoms and at Week 24, 28 of the 37 (75.76%) women complained of physical symptoms.

Symptoms reported included headaches, backache, stomach pain, nausea and exhaustion, flu-like symptoms, pain due specifically to injuries sustained during the rape, symptoms associated with being HIV positive and stress-related complaints.

It should be noted that given the cocktail of drugs prescribed for rape survivors at the TCC in the immediate aftermath of rape – a combination of PEP, treatment for the prevention of STIs and pregnancy – and given that all the women received at least one aspect of this treatment it is impossible to know which of the physical complaints might have been caused by the side-effects of the medication as opposed to another underlying health difficulty (bearing in mind that 21 (35%) of the 60 women were HIV positive) or somatisation.

Overall, whilst the number of women complaining of physical symptoms was relatively high across all four time frames, the number of women seeking medical care (over and above that received from the TCC) as reported on both the Health Questionnaire and the Adapted Somatisation Scale is relatively low; ranging between 6 (10%) and 17 (28.33%) women at Week 1, 7 (16.67%) and 2 (4.76%) women at

Week 4, 5 (13.51%) and 4 (10.81%) women at Week 12, and 5 (13.51%) and 7 (18.92%) women at Week 24 as reported on the Health Questionnaire and Adapted Somatisation Scale respectively. This may be in part attributable to the fact that, given that the women in this study fall within a low income bracket, women are unable to access private health care and that the public health system, whilst it does offer free services, is overburdened and a visit to a public health care facility usually involves extremely long waits and queues which require patients to arrive very early in the morning with no guarantee of when they might be seen that day. Nonetheless, given the number of HIV positive women in this study it is noteworthy that so few appear to be reporting visits to Clinics for ARV treatment and ongoing monitoring.

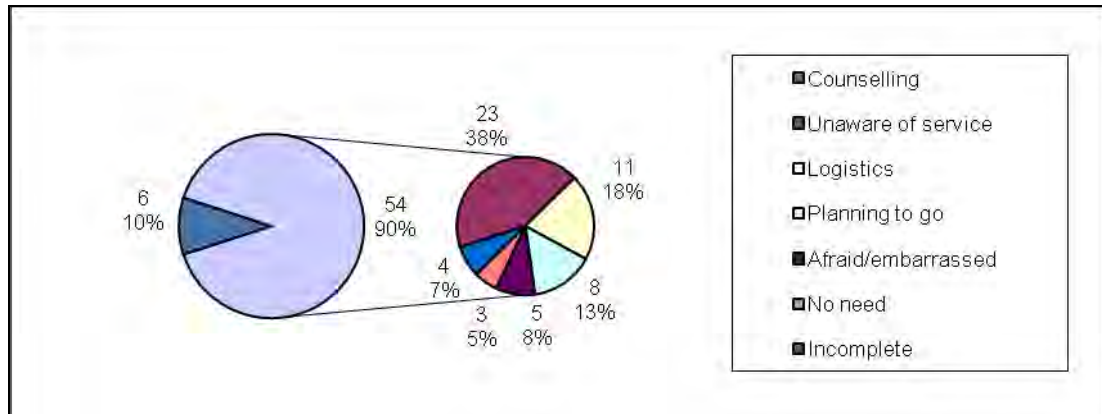
In addition, it should be noted that the study protocol did not ask women about visits they may have made to sangomas (traditional healers). Nattrass (2006b), drawing on the findings of the Khayelitsha panel study (2004) which examined who visited sangomas and for what illnesses, notes that sangoma clients tend to be older, disproportionately female, poorer, less educated, as well as less trusting of others. She refers to another study by Le Beau (1996, cited in Nattrass, 2006b), which showed that women believed that out of a list of possible illnesses, mental illness was the one believed to be least suitable for Western treatment. It is, therefore, possible that women were seeking assistance from sangomas, but this information was not elicited in this study.

7.6.2 Mental health and counselling

At the Week 1 interview 9 (15%) women reported having attended counselling sessions prior to the rape. The figures below graphically present the data drawn from the Health Questionnaire administered at Weeks 1, 4, 12 and 24 pertaining to the question of whether women had received counselling post-rape. Where women reported that they had not received counselling the reasons given for this are also presented in the figures below.

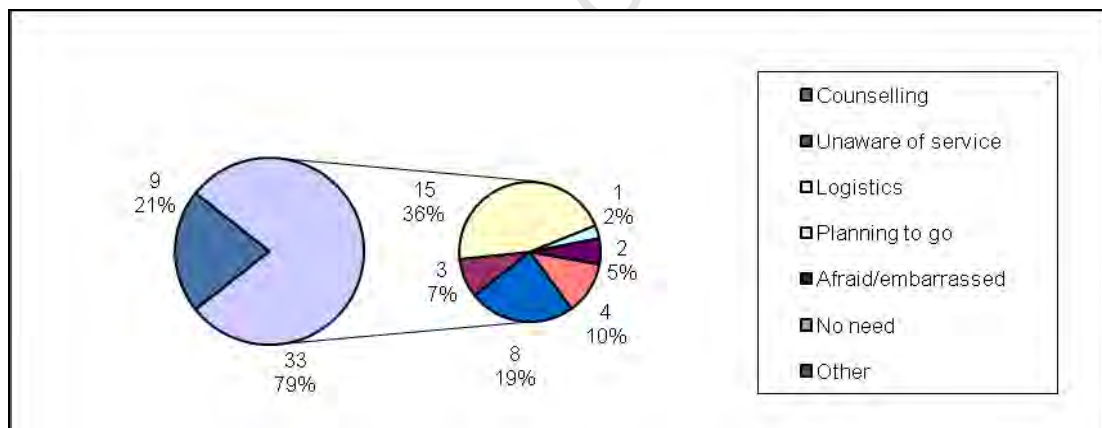
Figure 21

a. Counselling or not at Week 1 ($n=60$)



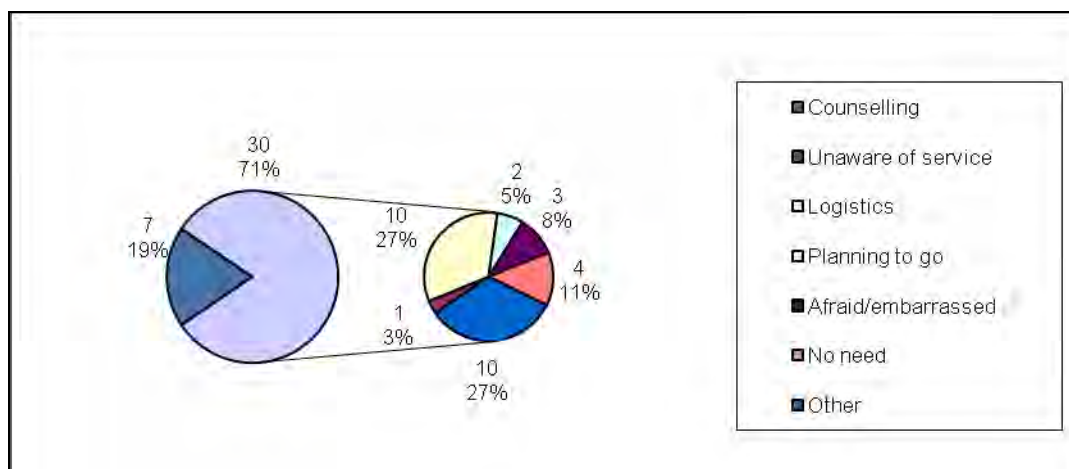
Of the six women who had gone for counselling one woman reported that she had not found it helpful.

b. Counselling or not at Week 4 ($n=42$)



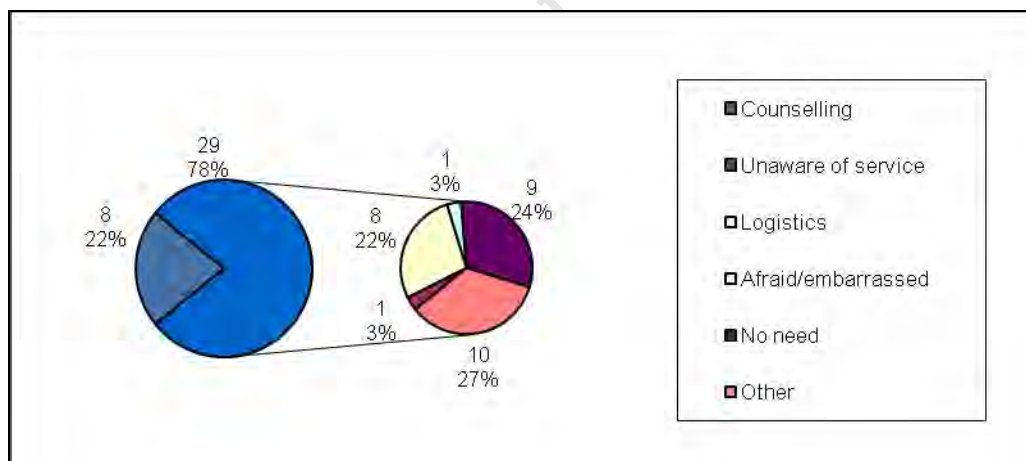
Under 'Other', women offered a range of reasons: not knowing the meaning of counselling, having forgotten to go, feeling supported by research interview

c. Counselling or not at Week 12 ($n=37$)



Under 'Other', women offered a range of reasons for not going to counselling: Not knowing why they had not gone, having forgotten to go, and having lost contact with the counsellor.

d. Counselling or not at Week 24 ($n=37$)



One woman did not find the counselling helpful. Under 'Other', women reported feeling too depressed to go, not feeling ready to go, fatigued by numerous clinic visits at multiple facilities, finding the research interview supportive, and relying on family for support.

These figures should be considered in light of the fact that according to the TCC protocol, counselling support forms part of the services routinely provided for survivors seen at the TCC, both at the first appointment and at subsequent follow-up

appointments. In addition, the Weeks 1, 4, 12 and 24 interviews were conducted at the SBC and, at the time of the study, Rape Crisis counselling services were available at the Centre and women who indicated a need for counselling were referred by the researchers directly to Rape Crisis for counselling. Nonetheless, across all four interviews on average only a fifth of the women reported having received counselling (Week 1: 10.00%, Week 4: 21.43%, Week 12: 18.92%, Week 24: 21.62%). This despite the fact that on the General Needs Assessment Questionnaire (see Table 10) a number of women reported needing counselling; at Week 1 counselling was the need most frequently reported by the women, at Week 4 it was the third greatest need as reported by women, superseded only by the need for employment and education and at Weeks 12 and 24 the need drops to the fifth most pressing need for women.

With reference to Figures 21a to 20d; at Week 1 it is apparent that the greatest barrier to receiving counselling was a lack of awareness about the availability of the service, followed by logistical constraints. The lack of awareness of counselling services despite it being a core component of the TCC protocol may be attributable, in part, to survivors receiving multiple services at the TCC whilst in a highly distressed and disorientated state in the immediate aftermath of rape. At the subsequent interviews being unaware of counselling services is no longer a key issue. Logistical constraints, however, appear to continue to pose serious difficulties for survivors wishing to access counselling, although this decreases across time with a concomitant increase in women stating that they did not access counselling because they did not feel the need for it. It is also noteworthy that under the category “Other”, in addition to the range of reasons noted under each figure, a number of women expressed ambivalence about whether counselling was actually wanted despite an apparent expressed need for it. In summary, it seems that whilst supportive counselling for rape survivors in the immediate aftermath of rape and subsequently, may speak to an expressed need on the part of survivors in this study, the expressed ‘need for counselling’ may also be an indirect expression of the degree and/or nature of distress experienced by the women post rape. The actual provision of accessible, appropriate and user-friendly counselling services, in the aftermath of rape is therefore a complex one, which requires further consideration.

7.7 Assessing psychiatric impact post-rape

As discussed in the *Chapter 5: Section 5.4.3.2.7*, in order to assess psychiatric impact post-rape, an adapted version of the MINI was administered at Weeks 1, 4, 12 and 24. At Week 1 women were asked if, in the immediate aftermath of the rape, they had experienced any symptoms associated with Major Depressive Episode - MDE - (followed by an assessment of suicidality), Panic Disorder, Agoraphobia without Panic Disorder, Panic Disorder with Agoraphobia, Social Phobia, Specific Phobia and OCD. The timeframe precludes any diagnosis, but the questions were asked in order to assess general depression and anxiety-like symptoms in the immediate aftermath of rape. In addition, at Week 1 the ASDS was administered which does allow for a diagnosis to be made within this timeframe. At Week 4 women were assessed for both past history and current diagnoses of Mood Disorders, Anxiety Disorders, Substance Abuse or Dependence and Psychotic Disorders. At Weeks 12 and 24 women were assessed for current diagnoses of Mood Disorders, Anxiety Disorders, Substance Abuse or Dependence and Psychotic Disorders. An additional PTSD measure – the PDS - was also administered at Weeks 4, 12 and 24.

The results from the administration of the MINI at Weeks 1, 4, 12 and 24 are presented first, followed by the results from the ASDS which includes a discussion of these results in relation to results from the MINI with regard to Mood Disorders and Anxiety Disorders more generally and PTSD specifically. Thereafter the results of the PDS are presented. This section concludes with a rationale for the use of the results of the PDS as the best measure of PTSD symptomatology, which is also argued to be the best quantitative measure of the impact of rape amongst the participants taking part in this study.

7.7.1 Results from the MINI

7.7.1.1 Mood Disorders

Table 11

Mood Disorder results elicited from the MINI at Weeks 1, 4, 12 and 24

	Week 1 (n=60)	Past History Week 4 (n=42)	Week 4 (n=42)	Week 12 (n=37)	Week 24 (n=37)
Major Depressive Episode	44	11	21	6	5
Substance-Induced Mood Disorder	N/A	1	1	1	2
Hypomania	N/A	0	0	0	1

Of the 44 (73.33%) women who reported symptoms associated with depression at Week 1, 16 (26.67%) presented with co-morbidity; complaining of both anxiety and depression-like symptoms. A total of 12 (28.57%) women reported a past history of Mood Disorders. Eleven (26.19%) women reported a prior history of MDE, which falls just above the higher range of estimated prevalence for lifetime risk of MDE in community samples of 10% to 25% as cited by the DSM IV TM (American Psychiatric Association, 1994). Ten of the 11 women with a prior history of MDE attended all the interviews and four met the criteria for MDE at Week 1 and Week 4, and three met the criteria for MDE across all the interviews. Overall, with reference to MDE, it should be noted that, taking attrition of women across the interviews into account, ten of the women showed a drop off in MDE symptoms across time, whilst ten women complained of MDE symptoms intermittently over time and only three reported ongoing MDE from Week 4 to Week 24. The participant diagnosed with a past history Substance-induced Mood Disorder also met the criteria for the disorder at all four of the interviews and was using Methamphetamine (Tik), as was the second participant who met the criteria for the disorder at the Week 24 interview. The woman who met the criteria for Hypomania at Week 24 reported being in a highly agitated state because the alleged rapist, her husband, had been released on bail and had contacted her appealing to her to drop the charges saying he had to have a heart operation.

7.7.1.2 Anxiety Disorders

Table 12

Anxiety Disorder results elicited from the MINI at Weeks 1, 4, 12 and 24

	Week 1 (n=60)	Past History Week 4 (n=42)	Week 4 (n=42)	Week 12 (n=37)	Week 24 (n=37)
Panic Disorder	15	1	4	2	1
Panic Disorder with Agoraphobia	17	3	3	2	3
Agoraphobia (without Panic Disorder)	1	4	10	3	2
Social Phobia	8	2	2	0	1
Specific Phobia	4	1	0	0	0
OCD	5	2	6	1	2
Obsessions	6	0	3	2	1
Compulsions	5	0	5	3	3
PTSD	N/A	4	18	2	5

In total, at Week 1, 38 (63.33%) women met the criteria for at least one anxiety disorder (if co-morbidity within the Anxiety Disorders category is taken into account at Week 1 a total of 61 anxiety related diagnoses were made at Week 1).

Unfortunately, due to an error when administering the MINI OCD questions at the Week 1 interview (subsequently corrected for the Weeks 4, 12 and 24 interviews), a number of the women's responses had to be scored as incomplete. Thus the figures presented for Week 1 may be under-representative. It is, however, noteworthy that across all the interviews, where details of the nature of the OCD, obsessions or compulsions were recorded, almost all the thoughts or behaviours were related directly to the rape, with a predominance of obsessive thoughts related to feelings of being dirty, contaminated or smelling and the compulsions reflected this preoccupation in so far as women reported constant bathing or showering a number of times a day.

At the Week 4 interview a total of 10 (23.81%) women reported a prior history of at least one Anxiety Disorder. With reference to the estimated prevalence rates for

lifetime risk of specific Anxiety Disorders in community samples as reported in the DSM IV TM (American Psychiatric Association, 1994) in this study, the percentage of women who met the criteria for a past history of Panic Disorder, Social Phobia and PTSD fell within the estimated prevalence rates, the percentage of women who met the criteria for a past history of Specific Phobia fell below the estimated prevalence rates and the percentage of women who met the criteria for Panic Disorder with Agoraphobia and OCD fell above the estimated community prevalence rates.

In relation to diagnoses of specific Anxiety Disorders at the Weeks 4, 12 and/or 24 interviews, it is noteworthy that there was evidence of intermittent diagnoses for some of the women across the four interviews; for example a woman would not meet criteria for a particular disorder at Week 1, but might meet the criteria at Week 4, and/or 12 and/or 24 and vice versa. In addition, with regards to Panic disorder, Panic Disorder with Agoraphobia and Agoraphobia without Panic Disorder, five women met the criteria for one of these disorders at one or two interviews and met the criteria for an alternative diagnosis within this group at another interview.

7.7.1.3 Suicidality

Table 13

Suicidality results elicited from the MINI at Weeks 1, 4, 12 and 24

	Week 1 (n=60)	Week 4 (n=42)	Week 12 (n=37)	Week 24 (n=37)
Suicidality (Total)	33	16	6	9
Suicidality (Low-risk)	13	4	3	6
Suicidality(Moderate-risk)	8	6	0	0
Suicidality (High-risk)	12	7	3	3

It is noteworthy that at Week 1 only 16 (26.67%) of the women reporting suicidal ideation complained of depressive symptoms (14 – 23.33% - of whom also complained of symptoms related to anxiety) and 11 (18.33%) complained of symptoms related only to anxiety (excluding ASD). However, when taking ASD into account, with the exception of two women, all the women reporting suicidal ideation at Week 1 met the criteria for ASD, which seems to suggest the possibility of a link between a diagnosis of ASD and suicidal ideation in the immediate aftermath of rape.

At Week 4 there was a substantial drop in the number of women reporting suicidal ideation (16 – 38.10%), but the number of those women rated as high-risk increased. Of the 16 women reporting suicidal ideation, eight met the criteria for both MDE and an anxiety-based disorder (excluding PTSD), four met the criteria for MDE only, one for PTSD on the MINI and three did not meet the criteria for either anxiety or depression or PTSD (on the MINI or the PDS). There was a marked drop in the number of women reporting suicidal ideation at Weeks 12 and 24, with a concomitant drop in risk. At Week 12, three women met the criteria for both MDE and an anxiety-based disorder and three met the criteria for MDE only. At Week 24, four women met the criteria for both MDE and an anxiety-based disorder, one met the criteria for an Anxiety Disorder only and four women met the criteria for PTSD on the PDS. Thus, whilst there appears to be a link between a diagnosis of ASD and suicidal ideation, the subsequent interviews suggest that a diagnosis of either a Mood Disorder or an Anxiety Disorder is associated with a vulnerability to suicidal ideation post-rape which decreases in terms of risk over time.

7.7.1.4 Substance Abuse and Dependence

Table 14

Substance Abuse and Dependence results elicited from the MINI at Weeks 1, 4, 12 and 24

	Week 1 (n=60)	Past History Week 4 (n=42)	Week 4 (n=42)	Week 12 (n=37)	Week 24 (n=37)
Alcohol Dependence/Abuse	N/A	2	6	4	4
Drug Dependence/Abuse	N/A	4	4	4	4

With regard to the MINI, at Week 4, six of the 42 women were diagnosed with a history of alcohol and/or drug abuse or dependence and were also diagnosed as currently abusing or dependent on alcohol and/or drugs along with four other women. However, across the interviews there was noticeable inconsistency with regard to which women met the criteria for current abuse or dependence both in relation to those women with a history of abuse or dependence and in relation to the additional women who met the criteria across Weeks 4, 12, and 24. These inconsistencies across

time may simply point to a variability of individual women in the usage of alcohol and/or drugs across time. However, the results from the SSI administered at Weeks 1, 4, 12 and 24 suggest an alternative interpretation. Whilst reported use of alcohol and or drugs across time on the SSI ranged from between 24% to 37% of the women, in comparison to the number of diagnoses made on the MINI in relation to current alcohol and/or drug abuse or dependence, markedly fewer women reported feeling they had a problem with alcohol and/or drug use on the SSI and at times those reporting having a difficulty did not correspond with those diagnosed with alcohol and/or drug abuse or dependence on the MINI.

Given the aforementioned data, it seems that the reported rates of alcohol and/or drug abuse/dependence are inaccurate and that it is not possible to draw any conclusions from this aspect of the data, except to say that responses to questions pertaining to alcohol and/or drug usage elicited contradictory and inaccurate information. In general, research literature on the non-disclosure of alcohol and drug recognises the fact that under-reporting of substance use is a problem. Research suggests that one-to-one and self-report questionnaires are more likely to elicit reliable and valid measurement of substance use than telephonic interview. However, the problem of social desirability bias remains salient and research has suggested significant correlations between age (either under 18 or over 65), lower socio-economic status, lower levels of education and, less unequivocally, being a member of an ethnic minority or oppressed group on the basis of race and under-reporting (Aquilino, 1994; Aquilino & Lo Sciuto, 1990; Rockett, Putnam, Jia, & Smith, 2006)

In their review of this literature Del Boca & Darkes (2003) suggest that response behaviour is influenced by the interaction of social context factors, respondent characteristics and task attributes. This is particularly noteworthy given that, although the literature does not suggest a gender differential in response bias, it is suggested that in this study, women anticipated a judgemental and accusatory attitude from the interviewers in this regard, particularly in light of the fact that women are frequently blamed for rape if there is evidence of alcohol or drug usage on their part at the time of the rape or a history of alcohol or drug usage in their lives (Sims, Noel, & Maisto, 2007).

7.7.1.5 Psychotic Disorders

Three women (7.14%) reported a prior history of psychotic symptoms and continued to report some psychotic features over the course of the interviews. This rate of psychotic illness is higher than might be expected on the basis of community-based prevalence rates of between .5% and 1% for psychotic illnesses cited in the DSM IV TM (American Psychiatric Association, 1994).

7.7.2 Results from the ASDS

At Week 1 ($n=60$) well over half of the women taking part in this research met the criteria for ASD (43 – 71.67%). Of these 43 women, one woman also reported depression-like symptoms, 16 (36.36%) reported symptoms associated with at least one other anxiety-based disorder and 15 (34.10%) reported symptoms of at least one other anxiety-based disorder and depression. In total 32 (74.42%) of the 43 women who met the criteria for ASD also reported symptoms of at least one other disorder.

The description of the kinds of symptoms experienced by the women at the Week 1 interview, as measured by selected parts of the MINI, provides a detailed picture of the degree of distress experienced by the women in the immediate aftermath of rape. However, as noted in the preceding section, there is a high degree of co-morbidity and the questions on the ASDS could be argued to encompass a number of symptoms which are similar to anxiety-related and depressive symptoms. In addition, with the exception of ASD, none of the symptoms reported by women at Week 1 can be used to diagnose an Anxiety Disorder or mood disorder. It is therefore suggested that ASD best represents the distress experienced by women in the immediate aftermath of rape and it is clear from this data that the majority of women were deeply distressed at this time.

Given the high number of women diagnosed with ASD at Week 1, which is argued to be predictive of PTSD (though evidence is limited in this regard, see *Chapter 3: Section 3.31.2.1 Anxiety Disorders*) coupled with the high level of PTSD reported in rape survivors post-rape in the literature (see *Chapter 3: Section 3.3.1.1 PTSD*), it was expected that the PTSD rates on the MINI would be relatively high at Week 4 with a decrease in numbers over time. This pattern was evident to some extent; at the Week 4 interview 18 (42.86%) women met the criteria for PTSD followed by a sharp

decrease in numbers at Weeks 12 (2 – 5.41%) and Week 24 (5 – 13.51 %). However, on the MINI at Weeks 4, 12 and 24, the number of women who met the criteria for at least one diagnosis under either Mood Disorders or Anxiety Disorders (excluding PTSD) is markedly higher than the number of women who met the criteria for PTSD. At Week 4, 31 (73.81%) women met the criteria for at least one disorder, at Week 12, 11 (29.73%) women met the criteria for at least one disorder, and at Week 24 10 (27.03%) were diagnosed with at least one disorder. However, as noted in the previous section, there was a noticeable degree of inconsistency with regard to who met the criteria for a particular disorder across time and inter-changeability in terms of which women met the criteria for a particular diagnosis or diagnoses across six months - evidenced by once-off or intermittent affirmative responses to various symptoms at the Weeks 1, 4, 12 and 24 interviews. With reference to MDE it could be argued that such variability is attributable to several episodes of MDE across the six month interview time-frame. With regard to disorders of anxiety, it could be argued that such variability is attributable to the fact that Anxiety Disorders are characterised by a more fluctuating course across time. However, it is clear from the data that some women tended to meet different diagnostic criteria for different Anxiety Disorders and for MDE across time intermittently.

There are several possible explanations for variability. Firstly it is possible that, despite intensive training of the research assistants on the administration of the MINI, and subsequent regular checks of scoring, the lack of clinical expertise on the part of the researchers negatively impacted on administration and scoring of the MINI. In this regard it is, however, noteworthy that in the interviews conducted by the researcher and author of this research, an experienced clinician, the contradictions and inconsistencies across time were noticeable and were difficult to understand or explain as purely administrative or scoring-related. Secondly, despite the careful translation of the MINI, the questions might have been confusing and difficult for women to understand, which may have had a negative impact on the reliability of the responses given. This difficulty may be particularly salient in relation to the MINI, which poses a series of very specific questions and relies on unequivocal responses from the interviewee for an accurate assessment of whether the criterion for a diagnosis is met or not. Again however, inconsistencies and contradictions in

responses were also evident when the MINI was administered by the researcher in English.

There is an alternative explanation for the intermittent or interchangeable responses given by women across time. It is hypothesised that the specific diagnoses under both Mood and Anxiety Disorders did not adequately capture the nature of the distress being experienced by the women and that the variability in symptomatology across time is indicative of this. As highlighted in *Chapter 4: Section 4.3.5 Is PTSD distinct from other disorders?*, the PTSD diagnosis has been criticized for being overly inclusive in terms of symptomatology because it incorporates diagnostic criteria which are also associated with Mood Disorders, particularly MDE, and other Anxiety Disorders, such as Phobias and Panic Disorders. However, it has also been argued that it is precisely the unique combination of symptoms which may initially appear to be disconnected, when understood to be a reaction to exposure to an extremely traumatic event, combine to create a disorder which is best understood as PTSD.

This reasoning would predict that on the MINI the same number of women, if not more, would meet the diagnostic criteria for PTSD as for Mood Disorders and Anxiety Disorders. However, as noted at the start of this section the number of women who met the diagnostic criteria for PTSD on the MINI at Weeks 4, 12 and 24 is markedly lower than the number of women who met the criteria for a Mood Disorder or Anxiety Disorder (excluding PTSD) at Week 4, 12 and 24. In addition, these figures stand in sharp contrast to those elicited by the PDS as evidenced by the figures reported in the following section.

7.7.3 Results from the PDS

As noted in the Method chapter the PDS was included in the research protocol because it provides a means of quantifying symptom severity and because it allows for identification of more than one traumatic event and assessment of each event in terms of PTSD symptomatology. The table below presents the results elicited from the PDS in relation to the assessment and diagnosis of PTSD.

Table 15**Assessment for and diagnosis of number of women with PTSD using the PDS**

	Week 4 (n=42)	Week 12 (n=37)	Week 24 (n=37)
Re-experiencing	42	34	37
Arousal	38	31	31
Avoidance	32	27	24
Impairment	38	30	32
Diagnosis	30	20	21

It is clear from Table 15 above that markedly more women were diagnosed with PTSD on the PDS than on the MINI at Week 4 (30 - 71.43%, as opposed to 18 - 42.86%), at Week 12 (20 - 54.05%, as opposed to 2 - 5.41%) and at Week 24 (21 - 56.76%, as opposed to 5 - 13.51%). In addition, a detailed breakdown of results on the PDS reveals that whilst some women did not meet all the criteria for a diagnosis of PTSD as set out in the PDS, the number of women reporting symptoms from each of the three clusters - Re-experiencing, Arousal and Intrusion - and reporting Impairment to Daily Functioning are even higher. It is suggested that the differences between the MINI and the PDS in terms of language, phrasing and structure of the questionnaire seem to account for this discrepancy – for a detailed account see Appendix Q.

With regards to the assessment of the impact of any other traumatic events reported by participants, a number of women reported having experienced several traumatic events in their lives both prior to and subsequent to the rape, but only four participants reported a traumatic event other than the recent rape which was causing them ongoing marked distress. Three of the four women met the requirements for a diagnosis of PTSD in relation to that traumatic event at the Week 4 interview, but not at subsequent interviews and all four women rated the rape as causing them the most distress at the time of the interviews.

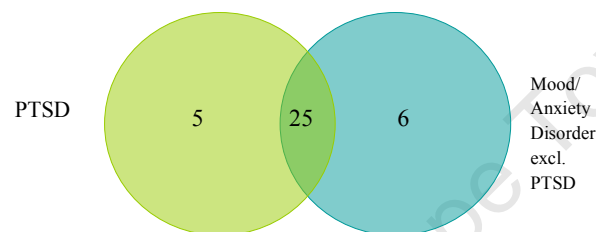
7.7.4 Conclusion: Rationale for using PDS scores as the outcome variable

On the basis of the preceding discussion it is suggested that at Week 1 the scores on the ASDS are the best quantitative indicator of psychological distress in the immediate aftermath of rape, and the scores elicited by the PDS are the more accurate reflection of the degree of PTSD symptomatology amongst the women at 4, 12 and 24 weeks post-rape, as compared to the assessment of PTSD provided by the MINI.

Bearing in mind the discussion in *Section 7.7.2 Results from ASDS*, relating to the variability of Mood and Anxiety Disorders diagnoses (excluding PTSD) on the MINI across time and the argument that this variability is largely attributable to the co-morbidity of symptoms associated with Mood and Anxiety Disorders, which might in fact be best understood as PTSD related symptoms. An analysis of women diagnosed with Anxiety and Mood Disorders (excluding PTSD) as assessed on the MINI in relation to women diagnosed with PTSD as assessed using the PDS, was undertaken and the results thereof are presented graphically below.

Figure 22

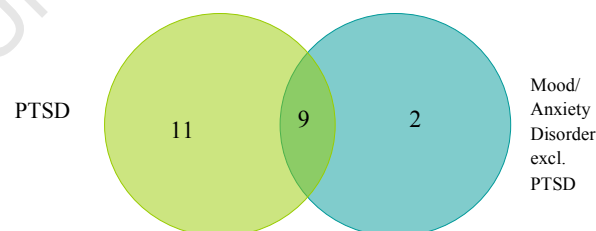
Week 4 Diagnostic frequencies – PTSD, Mood/Anxiety Disorders, co-morbidity



Thus, at Week 4, 25 women shared a diagnosis of PTSD and at least one other Mood or Anxiety Disorder. Five women met the criteria for PTSD only and six women met the criteria for one or more Mood and/or Anxiety Disorder.

Figure 23

Week 12 Diagnostic frequencies – PTSD, Mood/Anxiety Disorders, co-morbidity



At Week 12, 9 women shared a diagnosis of PTSD and at least one other Mood or Anxiety Disorder. Eleven women met the criteria for PTSD only and two women met the criteria for one or more Mood and/or Anxiety Disorder only.

Figure 24

Week 24 Diagnostic frequencies – PTSD, Mood/Anxiety Disorders, co-morbidity



At Week 24, four women shared a diagnosis of PTSD and at least one other Mood or Anxiety Disorder. Seventeen participants met the criteria for PTSD only and four participants met the criteria for one or more Mood and/or Anxiety Disorders only.

The analysis suggests that by focusing on women diagnosed with PTSD as assessed using the PDS only a small number of women presenting with other disorders would be excluded from any analysis (Week 4 - 6, Week 12 – 2 and Week 24 - 4). It was therefore decided that a diagnosis of PTSD on the basis of the scores elicited through the administration of the PDS would be the best outcome measure to use in terms of quantitatively assessing the psychological impact of rape trauma over time.

7.8 Chapter summary

This chapter sought to provide a detailed report of the impact of the rape across time as reported by the women who participated in this research. With regard to social support the findings suggest that in the immediate aftermath of rape most of the women turned to family and friends for assistance, although most survivors arrived unaccompanied at the TCC anticipating medical treatment and with a primary medical concern relating to HIV/AIDS. After receiving services at the TCC almost all the women were transported by the police to their own home or the home of a family member, which was perceived by most survivors as a safe place to be – an important factor given that a primary concern for over half of the survivors was that the perpetrator would return. The majority of the women reported having spoken to family members or friends about their traumatic experience. Over time in the main, positive support was consistently offered by family and then friends; a third of the women reporting negative changes or unsupportive responses from family and friends in relation to the rape.

With reference to self-esteem approximately half of the survivors reported lowered self-esteem in the immediate aftermath of the rape with a steady improvement in self-esteem over time. The results suggest a complex relationship between self blame and guilt in relation to the rape: Approximately half of the survivors blamed themselves for the rape, but only a minority felt that they could have prevented the rape and these perceptions waxed and waned amongst individuals across time. An increase in negative perceptions of the world was evident amongst the survivors, with a marked drop in perceptions of safety, particularly outside the home, one week post-rape, however, actual exposure to violence post-rape was limited with little variation amongst the survivors.

The four most commonly cited psycho-social needs across all the interviews were: The need for counselling, safe housing, education and employment. Whilst the need for counselling and safe housing evidenced some decrease across time, the need for education and employment remained relatively constant across time. Although the need for counselling was relatively high, the number of women who made use of the counselling services was relatively small. At the Week 1 interview this seemed to be primarily due to a lack of information and logistical constraints, at the subsequent Weeks 4, 12 and 24 interviews, logistical constraints and an apparent ambivalence towards going for counselling were most evident. Similarly, whilst the number of survivors participating in this study with physical complaints was relatively high, relatively few survivors accessed medical care across time.

With reference to the psychiatric sequelae of rape, results from the MINI evidence a high degree of distress in the first week post-rape in relation to both Mood and Anxiety Disorders. An argument was made for using the ASD as assessed at the Week 1 interview and a diagnosis of PTSD as elicited via the PDS as the most efficient way of quantitatively evaluating the psychiatric sequelae of rape. On that basis, over two-thirds of the survivors (71.67%) taking part in the study met the criteria for a diagnosis of ASD at Week 1, and at the Week 4, 12 and 24 interviews over half of the women participating in the research met the criteria for a diagnosis of PTSD – 30 (71.43%), 20 (54.05%) and 21 (56.76%) respectively. Thus in the six months post-rape over half of the survivors taking part in this study continued to evidence a high degree of psychological distress, though it is noteworthy that only three women reported taking any medication for emotional problems since the rape

and none of the women taking part in the study were hospitalised for psychiatric reasons in the six months post-rape.

The high degree of psychological distress evident in over half of the participants taking part in this study is in keeping with the literature which has highlighted the highly pathogenic consequences of rape (see Chapter 3). Guided by this literature, the subsequent analysis chapter seeks to explore whether specific pre-assault, assault and post-assault variables reported in both this chapter and the preceding chapter play a significant part in predicting the likelihood of a diagnosis of PTSD in the six months post-rape.

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Chapter 8

Results III

8.1 Introduction

8.1.1 Rationale

In order to investigate which, if any, variables measured at the Week 1, 4, 12 and 24 interviews assist in predicting a vulnerability to developing PTSD, a series of regression analyses was conducted on the relevant data. The PDS provides three scores for assessing for PTSD symptomatology, these are a Symptom Severity Score (SSS) ranging from 0 to 51, a Symptom Severity Rating (SSR) across 7 categories ranging from No Rating to Severe, and a Diagnosis rating ranging from 0 to 2 (where 0 = No, 1 = Incomplete and 2 = Yes) - for a detailed description of the instrument and outcome measures see *Chapter 5: Section 5.4.3.2.8 PDS*. The SSS and the SSR both measure symptom severity, it was thus decided that only one of the measures should be used in the analyses. Since the SSS provides a wider range of scores and therefore, arguably, a more precise analysis of symptom severity than the SSR, it was decided to use only the scores from the SSS in the analyses. The Diagnosis category was treated as a continuous variable interpreted as follows: The higher the score the greater the likelihood of being diagnosed with PTSD. Thus the SSS and Diagnosis from the PDS measured at Weeks 4, 12 and 24 were the two measures of PTSD identified as the two outcome variables for the regression analyses.

In deciding which aspects of the data collected in this study (described in detail in the previous two chapters) would be most likely to predict either symptom severity or a diagnosis of PTSD, the researcher was guided by the relevant literature in the field (as reviewed in Chapter 3). In keeping with the structure of the aforementioned literature review, data identified as relevant in predicting PTSD was categorised under the broad headings of Pre-assault Variables, Assault Variables and Post-assault Variables. Table 16 below provides a summary of the predictor variables selected and provides an indication of whether the data was collected once-off, as with Demographic data, or was collected repeatedly at each interview, as with Social Support. It should be noted that none of the variables were identified as more or less important as another in

predicting either a diagnosis of PTSD or PTSD symptom severity (the outcome variables - Diagnosis and SSS respectively).

Table 16

Categorisation of relevant predictor variables for analysis

Pre-assault Variables	Assault Variables	Post-assault: Survivor variables	Post-assault: Contextual variables
<u>Demographics (once):</u> <ul style="list-style-type: none"> • Prior History of Mental Illness • Prior History of Rape • Level of Education • Age • Relationship Status • Housing • Race • Employment Status • Income 	<u>Details of the Rape (once):</u> <ul style="list-style-type: none"> • Perpetrator Details • Assault and Rape Details • Contact with the Police • HIV Status 	<u>Diagnosis of ASD (once):</u>	<u>Mental & Physical Health (repeated):</u> <ul style="list-style-type: none"> • Receipt of Counselling • Physical Health Post-rape
<u>Physical Health Prior to Rape (once)</u>		<u>Social Support (repeated):</u> <ul style="list-style-type: none"> • Negative Relational Changes & Unsupportive Responses • Degree of Social Support 	<u>Psycho-social Needs (repeated):</u> <ul style="list-style-type: none"> • Needs Housing • Needs Education • Needs Employment • Needs Counselling
<u>Perceived Degree of Safety Prior to the Rape (once):</u> <ul style="list-style-type: none"> • Family • Home • Outside Home 		<u>Self-esteem, Self-blame and Guilt (repeated):</u> <ul style="list-style-type: none"> • Lowered Self-esteem • Guilt and Worthlessness • Self-blame 	<u>Perceived Degree of Safety Post-rape (repeated):</u> <ul style="list-style-type: none"> • Family • Home • Outside Home

8.1.2 Principal components factor analysis

In an attempt to reduce the number of variables in three of the categories listed in Table 16 - Details of the Rape, Social Support, and Self-esteem, Self-blame and Guilt - and in order to simultaneously attend to the likelihood of collinearity amongst variables within those three categories, principal components factor analysis with Varimax rotation was performed. Factors were identified using the rule of eigenvalues greater than one and confirmed by an examination of the respective scree plots. In all cases there was congruence between eigenvalues greater than one and the factors identifiable according to the scree plot. Since Week 1 had the greatest number of participants all factor analyses were performed on data from Week 1. This was in order to ensure that the ratio of number of cases to number of variables was adequate for the analyses.

For Details of the Rape two factors were identified. The loadings for Factor 1 (eigenvalue = 1.707 after rotation) were -.691, .853, and .704 for Relationship with Perpetrator, Number of Perpetrators, and Weapon Used, respectively. Factor 2 (eigenvalue = 1.502 after rotation) included Injury Sustained, Extent of Violence, and Type of Rape, with loadings of .771, .806, and .450 respectively. Based on the patterns of loadings Factor 1 was designated as Perpetrator Details and Factor 2 as Assault and Rape Details.

For Social Support two factors were identified. The loadings for Factor 1 (eigenvalue = 1.569 after rotation) were .859 and .854 for Negative Change in Relationship and Unsupportive Responses, respectively. Factor 2 (eigenvalue = 1.465 after rotation) included responses to the question "Have you spoken to anyone since the rape?" and the MSOPSS Total at Week 1, with loadings of .883 and .825, respectively. Based on the patterns of loadings Factor 1 was designated as Negative Relational Changes and Responses and Factor 2 as Degree of Social Support

For Self-esteem, Self-blame and Guilt, three factors were identified. The loadings for Factor 1 (eigenvalue = 1.976 after rotation) were .849, .842, and .732 for Negative Feelings About the Self, the PTCI Total score, and Rape Took Something Away, respectively. Factor 2 (eigenvalue = 1.268 after rotation) included responses to the question "Do you feel you are worth less?" and "Do you think the rape happened because of something you said or did?" with loadings of .788 and .767, respectively. Factor 3 (eigenvalue = 1.200 after rotation) included responses to the question "Do you blame yourself for the rape?" and "Do you think

you could have done something to prevent the rape?” with loadings of .751 and .716, respectively. Based on the patterns of loadings Factor 1 was designated as Lowered Self-esteem, Factor 2 as Guilt and Worthlessness, and Factor 3 as Self-blame. The aforementioned factors were used to guide the creation of new variables for use in the regression analyses at each of the weeks.

Before presenting the findings of the regression analyses - reported in both this chapter and the subsequent chapter - it is important to acknowledge that the number of significance tests conducted on the data might well be seen to be disproportionate to the sample size, which is likely to have inflated the risk of a Type I error. Nonetheless, given that this is the only corpus of data of this kind in South Africa, extensive attention to detail is believed to have been warranted, though the results must be interpreted with some caution.

8.1.3 Chapter structure

The results for each of the categories depicted in Table 16 are reported below. The first set of analyses reported under each category sought to answer the question of whether predictor variables measured at Week 1 in any way predicted the outcome variables - degree of severity of PTSD symptomatology, using the SSS score, and the likelihood of being diagnosed with PTSD, as measured by the Diagnosis score - at Weeks 4, 12 and 24. That is whether Demographic variables, Details of the Rape, variables relating to Health, Social Support, Self-esteem, Self-blame and Guilt, General Psycho-social Needs and Perceived Degree of Safety as assessed at Week 1 predicted SSS or a Diagnosis of PTSD at Weeks 4, 12 and 24. To this end separate regressions were conducted at Weeks 1 to 4, 1 to 12 and 1 to 24.

The second set of analyses reported under the relevant categories sought to answer the question of whether predictor variables which were measured again at Week 4, 12 and 24 - variables relating to Health, degree of Social Support, degree of Self-blame, Self-esteem and Guilt, General Psycho-social Needs and Perceived Degree of Safety – predicted the degree of severity of PTSD symptomatology (SSS) and/or likelihood of being diagnosed with PTSD (Diagnosis) at Weeks 4, 12 and 24. To this end separate regressions were conducted at Weeks 4, 12 and 24.

In order to allow for an efficient presentation of results, unless otherwise noted under each specific set of variables, it should be assumed that inspection of the standardised residuals, and Mahalanobis and Cook's distances indicated no outliers or cases having undue influence

on the analysis. Inspection of the scatter plots suggested no instances of non-linearity for any of the analyses. Listwise deletion was used because it has a greater tendency to produce unbiased parameter estimates and more accurate standard error estimates relative to pairwise deletion, which can sometimes produce correlations beyond the 0.00 to 1.00 range, and other statistical impossibilities (Grace-Martin, 2009). In addition, given that the choice of predictor variables was guided by the literature, and due to the number and size of the intercorrelation matrices, these have not been reported. It should, however, be noted that all intercorrelation matrices were inspected to check for possible multicollinearity prior to running the regressions, and where the problem of multicollinearity did arise this is discussed and addressed under the relevant sections.

8.2 Pre-assault variables

8.2.1 Demographics

As noted in Chapter 3, results of research into the role of demographic variables such as age, race and socio-economic status on impact of and recovery from rape are ambiguous. Some researchers have found demographic variables have had little impact on a survivor's responses to rape (Resick, 1993), whilst others suggest that lower socio-economic status impacted negatively on a rape survivor's recovery (Gavranidou & Rosner, 2003; Wasco, 2003). With regard to the influence of prior psychiatric history, the research suggests that survivors with a history of psychiatric illness are more vulnerable to developing diagnosable psychiatric disorders in the ensuing months (Lenox & Ganon, 1983). A link between prior victimisation, subsequent victimisation and the development of PTSD later in life has been partially supported by research findings (Schumm, Hobfoll, & Jones Keogh, 2004). The aforementioned research draws on populations located primarily in the USA, whose demographics contrast significantly with those in developing countries, including South Africa. There is a lack of data on the role of demographic variables on the psychological impact of rape amongst survivors in South Africa. Thus, guided by the international literature, demographic data identified as possibly predictive of PTSD was included in this analysis.

On the basis of the aforementioned research, for the category Demographics, a 3 step hierarchical regression was commenced, proposing to enter Prior History of Mental Illness as a predictor variable at step 1, then Prior History of Rape as a predictor variable at step 2, and

then the remaining variables (identified as related in one way or another to socioeconomic status) as predictor variables entered as a block at step three (refer to Table 16, for a detailed list of the variables).

8.2.1.1 *With SSS as the outcome variable*

For the Demographic variables measured at Week 1 and identified as possible predictors of SSS at Week 4, Prior History of Mental Illness entered at step 1 produced a statistically significant overall model ($R^2 = .24$, $F_{1,39} = 12.11$, $p < .001$), and the slope was positive ($b = 11.41$, $t = 3.48$, $p < .001$); indicating that a Prior History of Mental Illness predicts an increased SSS. The overall model at step 2 remained statistically significant ($R^2 = .24$, $F_{2,38} = 12.11$, $p < .001$), although Prior History of Rape was not a statistically significant predictor ($\Delta R^2 < .01$, $F_{1,38} < 0.01$, $p = .989$). This predictor variable was therefore dropped from the analysis, and the remaining predictor Demographic variables were thus added at step 2. Prior History of Mental Illness remained statistically significant at step 2 ($b = 8.36$, $t = 2.11$, $p = .044$), although the overall model was not statistically significant ($R^2 = .45$, $F_{13,27} = 1.71$, $p = .117$), there was no statistically significant change in R -squared ($\Delta R^2 = .21$, $\Delta F = 0.88$, $p = .578$), and no other individual predictors were statistically significant.

The same pattern of results was evident in relation to Demographic variables predicting SSS at Week 12. The overall model at step 1 was statistically significant ($R^2 = .22$, $F_{1,32} = 8.81$, $p = .006$) with a positive slope ($b = 9.92$, $t = 2.97$, $p = .006$). The overall model at step 2 remained statistically significant ($R^2 = .22$, $F_{2,31} = 4.27$, $p = .023$), although Prior History of Rape was again not a statistically significant predictor ($\Delta R^2 < .01$, $\Delta F_{1,31} < 0.01$, $p = .991$). This variable was therefore dropped from the analysis, and the remaining Demographics variables were again added at step 2. Prior History of Mental Illness again remained statistically significant at step 2 ($b = 9.27$, $t = 2.31$, $p = .032$), although the overall model was not statistically significant ($R^2 = .53$, $F_{13,20} = 1.75$, $p = .126$), there was no statistically significant change in R -squared ($\Delta R^2 = .317$, $\Delta F = 1.13$, $p = .391$), and no other individual predictors were statistically significant.

A very similar pattern emerged when predicting SSS in relation to Demographic variables at Week 24. The overall model at step 1 was statistically significant ($R^2 = .36$, $F_{1,33} = 18.68$, $p < .001$) with a positive slope ($b = 12.31$, $t = 4.13$, $p < .001$). The overall model at step 2 remained statistically significant ($R^2 = .39$, $F_{2,32} = 10.21$, $p < .001$), although Prior History of Rape was again not a statistically significant predictor ($\Delta R^2 = .03$, $\Delta F_{1,32} = 1.48$, $p = .233$).

This variable was therefore dropped from the analysis, and the remaining Demographic variables were added at step 2 as with the prior two analyses. Prior History of Mental Illness again remained statistically significant at step 2 ($b = 13.52$, $t = 3.96$, $p < .001$), although unlike before, the overall model was also statistically significant ($R^2 = .64$, $F_{13, 21} = 2.92$, $p = .014$). However, there was no statistically significant change in R -squared ($\Delta R^2 = .28$, $\Delta F_{12, 21} = 1.39$, $p = .247$). Also unlike the prior two analyses, the variable Relationship Status: Living with Partner versus Single was a statistically significant individual predictor. As the slope was positive ($b = 18.71$, $t = 2.64$, $p = .015$), this indicates that of the women participating in this study, women living with a partner, as opposed to being single, and with a history of psychiatric illness were more likely to have higher SSS at Week 24.

8.2.1.2 With Diagnosis as the outcome variable

In relation to Demographic predictor variables measured at Week 1 predicting Diagnosis at Week 4, as with the SSS, step 1 produced a statistically significant overall model ($R^2 = .16$, $F_{1, 39} = 7.43$, $p = .010$), and the slope was positive ($b = 0.67$, $t = 2.73$, $p = .010$), indicating that women in the study with a prior history of mental illness increased the likelihood of being diagnosed with PTSD. The overall model at step 2 remained statistically significant ($R^2 = .17$, $F_{2, 38} = 3.74$, $p = .033$), although Prior History of Rape was not a statistically significant predictor ($\Delta R^2 < .01$, $\Delta F_{1, 38} = 0.20$, $p = .655$). This variable was therefore dropped from the analysis, and the remaining Demographic variables were thus added at step 2. In contrast to the results obtained in relation to the results obtained with SSS as the outcome variable, Prior History of Mental Illness did not remain statistically significant at step 2, and the overall model was not statistically significant ($R^2 = .68$, $F_{13, 27} = 1.76$, $p = .105$). There was no statistically significant change in R -squared ($\Delta R^2 = .30$, $\Delta F = 1.23$, $p = .308$), and no other individual predictors were statistically significant.

At Week 12, of the predictor variables measured at Week 1, the overall model for step 1 was not statistically significant ($R^2 = .06$, $F_{1, 32} = 2.02$, $p = .165$), thus the Prior History of Mental Illness predictor was discarded from the analysis and History of Previous Rapes was entered at step 1 with the remaining Demographic variables entered at step 2. As the former variable did not produce a statistically significant overall model ($R^2 = .03$, $F_{1, 33} = 0.02$, $p = .888$) it was discarded and the remaining Demographic variables were then entered simultaneously as a single step. The overall model was not statistically significant ($R^2 = .48$, $F_{12, 22} = 1.67$, $p = .145$), although the variable Relationship Status: Married versus Single was a statistically

significant individual predictor. The slope was positive ($b = 2.59$, $t = 1.06$, $p = .038$) indicating that of the women participating in this study those who were married had an increased likelihood of being diagnosed with PTSD.

None of the predictor variables measured at Week 1 predicted Diagnosis at Week 24. The overall model for step 1 was not statistically significant ($R^2 = .18$, $F_{1,33} = 1.06$, $p = .311$), thus the Prior History of Mental Illness predictor was discarded from the analysis and History of Previous Rapes was entered at step 1 with the remaining Demographic variables entered at step 2. As the former variable again did not produce a statistically significant overall model ($R^2 = .03$, $F_{1,34} = 0.02$, $p = .887$) it was discarded and the remaining Demographic variables were then entered simultaneously as a single step. The overall model was not statistically significant ($R^2 = .60$, $F_{12,23} = 1.07$, $p = .429$), and unlike the findings at Week 12, there were no statistically significant individual predictors.

In summary, Prior History of Mental Illness is a relatively consistent individual predictor of increased PTSD symptomatology and, to a lesser degree, a diagnosis of PTSD. This finding supports the trend identified in the international research. However, in contrast to some of the international literature, in this analysis Prior History of Rape was not a significant individual predictor of SSS or Diagnosis at any of the timeframes. Finally, at two particular timeframes relationship status – more specifically being married as opposed to being single, in combination with a psychiatric history (at Week 24) or living with a partner as opposed to being single (at Week 12) - seemed to predict increased SSS or a higher Diagnosis score respectively. This finding hints at a possible relationship between the negative impact of sexual violence on a relationship and increased vulnerability to PTSD symptomatology and/or Diagnosis, but this would need further investigation. It should also be noted that the majority of women in this research were single.

The remainder of the Demographic variables entered into the analysis did not predict either SSS or Diagnosis. With regard to the socio-economic status variables it is perhaps noteworthy that the variability with regards to demographics amongst the group of women in this study was relatively limited. This restriction of range may have impacted on the possibility of identifying socio-economic status as a predictor of SSS or Diagnosis. Arguably, a similar difficulty is apparent in relation to international literature, in that women taking part in research are often drawn from relatively homogenous groups with little variability (albeit groups from relatively higher socio-economic status than the women who took part in this

study). This seems to point to a need for research which actively seeks to include women from a wide range of socio-economic contexts within the same study in order to assess impact of socio-economic status with more precision.

8.2.2 Physical health prior to the rape

As noted previously a history of psychiatric illness appears to increase an adult rape survivor's vulnerability to PTSD. The question of whether a history of good health protects a survivor or alternatively a history of poor health renders a survivor more vulnerable to PTSD was deemed relevant to this research. Thus for this analysis, the predictor variable was physical health prior to the rape, rated on a scale from 1 (Excellent) to 5 (Poor/Bad).

The predictor variable was entered into a simultaneous multiple regression, with the SSS as the outcome variable. Physical Health Prior to the Rape as reported at Week 1 was not predictive at a statistically significant level of SSS rating at Week 4, 12 or 24. Similarly when the predictor variable was entered into a simultaneous linear regression, with Diagnosis as the outcome variable, Physical Health Prior to Rape as reported at Week 1 did not predict a greater likelihood of Diagnosis at Week 4, 12 or 24.

8.2.3 Perceived degree of safety prior to the rape

Early research suggests that an assumption of control and safety with regard to one's life and circumstances prior to rape may prove a hindrance to recovery, since the basic premises upon which the survivor had built her life has been proven to be erroneous (Janoff-Bulman, 1985). Subsequent research has shown this to be a more complex and multi-layered phenomenon than originally proposed (Ullman, 1997). Nonetheless, some more recent research suggests that a woman who is aware of her limited control and the dangerousness of her environment may be better prepared to adjust to the reality of having been raped, since this fits with the survivor's world view and does not demand a reappraisal of the survivor's part (Wasco, 2003). In contrast, it has been argued that prior and ongoing exposure to trauma may render a survivor more psychologically vulnerable and may exacerbate the impact of traumatic events (Herman, 1992b).

With this in mind and with the argument that safety within the family is primary, followed by safety at home and finally safety outside home, a 3 step hierarchical regression with the

predictor variable Perceived Degree of Safety Prior to the Rape, was commenced, proposing to enter Family at step 1, Home at step 2, and then Outside Home at step 3.

8.2.3.1 *With SSS as the outcome variable*

With reference to Perceived Degree of Safety Prior to the Rape as measured at Week 1 predicting SSS at Week 4, step 1 did not produce a statistically significant overall model ($R^2 = .06$, $F_{1,39} = 0.14$, $p = .710$). Family was thus dropped from the analysis, with Home now entered at step 1 and Outside Home at step 2. The overall model at step 1 was again not statistically significant ($R^2 = .16$, $F_{1,40} = 1.00$, $p = .323$), so Outside Home was entered at a single step. This predictor also did not produce a statistically significant overall model ($R^2 = .16$, $F_{1,40} = 1.04$, $p = .313$).

The same pattern of results was evident in relation to Perceived Degree of Safety Prior to the Rape as measured at Week 1 in relation to predicting SSS at Week 12. Step 1 did not produce a statistically significant overall model ($R^2 = .05$, $F_{1,33} = 0.09$, $p = .767$). Home entered at step 1 and Outside Home at step 2 again did not produce a statistically significant overall model at step 1 ($R^2 = .02$, $F_{1,34} < 0.01$, $p = .931$), and Outside Home entered as a single step again did not produce a statistically significant overall model ($R^2 = .10$, $F_{1,34} = 0.35$, $p = .558$).

In contradistinction to the previous two sets of results, Perceived Degree of Safety Prior to the Rape as measured at Week 1 did appear to have bearing on SSS at Week 24, in so far as Family was a statistically significant predictor at step 1, with the overall model being statistically significant ($R^2 = .14$, $F_{1,34} = 5.56$, $p = .024$). The slope was negative ($b = -4.81$, $t = -2.36$, $p = .024$) indicating that the safer a respondent felt in her family, the lower the SSS. With Home entered at step 2 the overall model remained statistically significant ($R^2 = .24$, $F_{2,33} = 5.29$, $p = .010$), and this variable was a statistically significant individual predictor ($b = 4.68$, $t = 2.11$, $p = .042$). The positive slope indicates that the safer a respondent felt in her home, the higher the SSS; a surprising finding which is difficult to explain. Family remained a statistically significant individual predictor ($b = -6.89$, $t = -3.16$, $p = .003$). With the inclusion of Outside Home at step 3, the overall model again remained statistically significant ($R^2 = .24$, $F_{3,32} = 3.45$, $p = .028$), although this variable was not a statistically significant individual predictor. Both Family ($b = -6.92$, $t = -3.13$, $p = .004$) and Home ($b = 4.66$, $t = 2.07$, $p = .046$) remained as statistically significant individual predictors.

8.2.3.2 With Diagnosis as the outcome variable

With regards to Diagnosis Perceived Degree of Safety Prior to the Rape as measured at Week 1 predicting Diagnosis at Week 4, step 1 did not produce a statistically significant overall model ($R^2 = .15$, $F_{1,39} = 0.85$, $p = .362$). Family was thus dropped from the analysis, with Home now entered at step 1 and Outside Home at step 2. The overall model at step 1 was again not statistically significant ($R^2 = .22$, $F_{1,40} = 2.00$, $p = .165$), so Outside Home was entered at a single step. This predictor also did not produce a statistically significant overall model ($R^2 = .14$, $F_{1,40} = 0.81$, $p = .375$).

In analysing whether Perceived Degree of Safety Prior to the Rape predicted Diagnosis at Week 12, the same pattern of results was evident. Step 1 did not produce a statistically significant overall model ($R^2 = .05$, $F_{1,33} = 0.07$, $p = .788$). Family was thus again dropped from the analysis, with Home now entered at step 1 and Outside Home at step 2. The overall model at step 1 was again not statistically significant ($R^2 = .14$, $F_{1,34} = 0.64$, $p = .428$). With Outside Home therefore entered as a single step, it again did not produce a statistically significant overall model ($R^2 = .10$, $F_{1,34} = 0.31$, $p = .580$).

With regards to Perceived Degree of Safety Prior to the Rape as measured at Week 1 in relation to Diagnosis at Week 24, Step 1 at Week 24 produced an overall model that was on the 5% level of statistical significance ($R^2 = .11$, $F_{1,34} = 4.14$, $p = .050$), and Family had a negative slope ($b = -0.32$, $t = -2.04$, $p = .050$) as was the case when this variable predicted the SSS at Week 24. The variable Family was thus retained as a predictor, and at Step 2 the inclusion of Home resulted in an overall model that was now not statistically significant ($R^2 = .16$, $F_{2,33} = 3.09$, $p = .059$). There was no statistically significant change in the amount of variance explained from step 1 to 2 ($\Delta R^2 = .05$, $\Delta F_{1,33} = 1.18$, $p = .847$), and Home was not a statistically significant individual predictor. However, Family was now noticeably below the 5% level of statistical significance as an individual predictor ($b = -0.43$, $t = -2.47$, $p = .019$).

The variable Home was thus dropped from the analysis and Family was again entered at step 1 with Outside Home now entered at step 2. With the inclusion of Outside Home at step 2 Family was no longer statistically significant as an individual predictor. Likewise, Outside Home was not statistically significant. The overall model after step 2 was also not statistically significant ($R^2 = .11$, $F_{2,33} = 2.04$, $p = .146$), and there was no statistically significant change in the amount of variance explained from step 1 to 2 ($\Delta R^2 < .01$, $\Delta F_{1,33} = 0.81$, $p = .814$). It

appears that the reason Family becomes statistically significant with the inclusion of Home in the model is that the latter variable is acting as a suppressor variable; as it increases the predictive validity of Family when it is included. This is confirmed by the fact that removing Home from the analysis decreases the predictive validity of Family.

In summary, overall Perceived Degree of Safety Prior to the Rape within the Family, at Home and Outside Home, did not predict either an increase or decrease in SSS or likelihood of Diagnosis except for Perceived Degree of Safety within the Family and at Home at Week 24. At this timeframe it seems that with an increased sense of safety within the family there was a concomitant decrease in SSS. It is difficult to postulate a reason for why this is a significant predictor at Week 24 only, but the direction of the slope is at least what common sense would suggest. This is not the case with Perceived Degree of Safety at Home and SSS at Week 24, where an increased sense of safety at home predicts an increased SSS.

8.3 Assault variables

Regarding assault variables, research findings related to acquaintanceship status between the rapist and victim are contradictory. Whilst some research findings suggest that rape by a stranger is more distressing than rape by someone known to the victim, the opposite has also been found, and other studies suggest that there is no difference between the two groups (Resick, 1993; Wasco, 2003). With regard to the relationship between level of violence perpetrated during the assault and subsequent trauma, research has also yielded contradictory findings (Resick, 1993). As noted in *Chapter 6: Section 6.3.2 Acquaintanceship status, race and age of perpetrator(s)*, the majority of women (60%) taking part in this research were raped by someone they knew. In addition, the majority (71.67%) also reported a high degree of violence over and above the rape itself and 58.33% reported the use of a weapon (*Chapter 6: Section 6.3.3 Type of rape(s) perpetrated, weapons used and degree of additional violence*). Given these statistics it was felt that the details of the rape may shed some light on subsequent vulnerability to SSS and/or Diagnosis.

In addition, there is a large body of research which suggests that the experience of laying a charge, making a statement and then going through the legal process is a second ordeal, often described as 'secondary victimisation' for rape survivors. Whilst some research shows no differences in psychological sequelae between those who wished to prosecute and those who did not (Resick, 1993), other research reports a link between difficulties in adjustment over time and the involvement of police, hospitals and agencies (Wyatt & Notgrass, 1990). Given

the links between the TCC and the South African Police Service and the National Prosecuting Authority, it was considered important to track the women's experience of contact with the police over time and its possible relationship to PTSD SSS and/or Diagnosis.

Finally, given the very high prevalence rates for HIV/AIDS in South Africa and in this group of women (25%) it was thought that this would be very likely to add to the women's levels of psychological distress which might then impact on SSS and/or Diagnosis.

In light of the above, for this analysis, the predictor variables were Details of the Rape, Factor 1: Perpetrator Details and Factor 2: Assault and Rape Details, Contact with the Police, and HIV Status Post-rape. The factor scores for Details of the Rape were constituted as previously described (see *Section 8.1.2 Principal components factor analysis*). Both Contact with the Police and HIV Status Post-rape were scored dichotomously, 0 = No and 1 = Yes.

8.3.1 With SSS as the outcome variable

The predictor variables were entered into a simultaneous multiple regression, with the SSS as the outcome variable. Using the predictor variables measured at Week 1 to predict SSS at Week 4, of the four predictors only Details of the Rape, Factor 2: Assault and Rape Details predicted the SSS at a statistically significant level ($p = .038$). The slope for the variable was negative ($b = -1.57$). However, the overall model was not statistically significant ($R^2 = .12$, $F_{(4, 37)} = 1.30$, $p = .228$). In order to ensure that the significance of the predictor Details of the Rape, Factor 2: Assault and Rape Details was not due to suppression effects or some other property of the four variable model, the variable was entered into a single variable regression. The overall model was now statistically significant ($R^2 = .11$, $F_{(1, 40)} = 5.01$, $p = .031$) and the slope for the variable remained negative ($b = -1.17$) indicating that in general the more violent the rape the lower the SSS at Week 4. This is an arguably surprising finding which reoccurs throughout the analyses which follow and which is discussed in detail at the end of this section.

Using the predictor variables measured at Week 1 to predict SSS at Week 12, none of the four predictors were significant, although Details of the Rape, Factor 2: Assault and Rape Details retained a negative slope ($b = -1.20$) and the overall model was not statistically significant ($R^2 = .11$, $F_{(4, 30)} = .94$, $p = .455$). Using the predictor variables at Week 1 to predict SSS at Week 24 only Details of the Rape, Factor 2: Assault and Rape Details

predicted the SSS at a statistically significant level ($p = .045$) with a negative slope ($b = -1.52$). Overall the model was statistically significant ($R^2 = .26$, $F_{(4, 32)} = 2.74$, $p = .045$).

8.3.2 With Diagnosis as the outcome variable

When the predictor variables were entered into a simultaneous regression, with Diagnosis as the outcome variable none of the four predictors measured at Week 1 were statistically significant in predicting the outcome variables at either Week 4 or Week 12. However, of the predictor variables from Week 1, Details of the Rape, Factor 2: Assault and Rape Details predicted Diagnosis at Week 24 at a statistically significant level ($p = .016$) and the slope for the variable was negative ($b = -.13$). However, the overall model was not statistically significant ($R^2 = .22$, $F_{(4, 32)} = 2.22$, $p = .089$). As the overall model was not statistically significant Details of the Rape Factor 2 was entered as a single predictor. The overall model was now statistically significant ($R^2 = .13$, $F_{(1, 35)} = 5.18$, $p = .029$) and the slope for the variable remained negative ($b = -.112$) indicating that a higher score on this factor predicted a greater likelihood of a diagnosis of PTSD Week 24.

Thus, overall both the SSS and the Diagnosis simultaneous regressions indicate that Details of the Rape, Factor 2: Assault and Rape Details has some bearing on the likelihood of either SSS or Diagnosis, however, in an unexpected direction. The negative slope indicates that if the victim sustained injuries, experienced some form of physical violence over and above the rape itself, and was raped both vaginally and/or orally and/or anally and/or with an object, the victim was likely to have a lower SSS score at Weeks 4 and 24, and had a greater likelihood of a PTSD diagnosis at Week 24. It is hypothesised that the three variables which make up Factor 2: Assault and Rape Details fit best within a stereotypical definition of rape which allows for a clear identification of the survivor as an 'innocent victim' of sexual violence (Anderson & Doherty, 2008). This in turn may reduce the degree of internalisation of negative cognitions relating to the self - such negative cognitions have been seen to fuel the symptoms associated with a diagnosis of PTSD (Foa & Rothbaum, 1998).

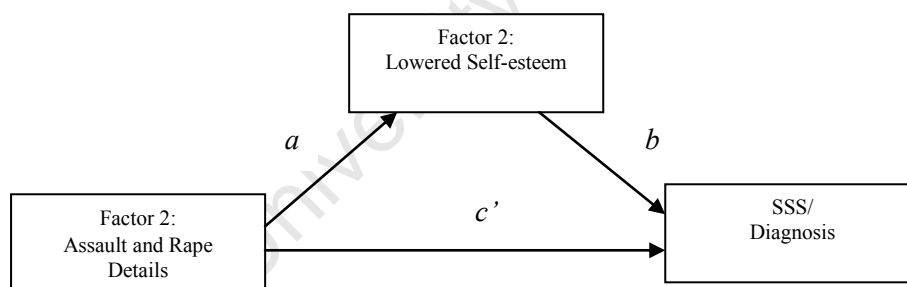
Such a hypothesis would predict a relationship between the Details of the Rape, Factor 2: Assault and Rape Details and the assessment of Self-blame, Self-esteem and Guilt in this data set. Correlations between Details of the Rape, Factor 2: Assault and Rape Details and the Self-blame, Self-esteem and Guilt Factor 1: Lowered Self-esteem, Factor 2: Guilt and Worthlessness and Factor 3: Self-blame, evidenced statistically significant moderate negative

correlations between Details of the Rape, Factor 2: Assault and Rape Details and Self-blame and Guilt Factor1: Lowered Self-esteem at Week 4 ($r = -.38, p = .025$), 12 ($r = -.49, p = .019$) and 24 ($r = -.55, p < .001$). These negative correlations do seem to support the aforementioned hypothesis.

To explore this further, a mediation analysis was conducted, with Details of the Rape, Factor 2: Assault and Rape Details as the predictor variable, Self-blame and Guilt Factor 1: Lowered Self-esteem as the mediator, and SSS and PDS Diagnosis at weeks 4, 12, and 24 as the outcome variables (see Figure 25 below). The analysis was run for all time periods, as indirect effects can be evident even when the predictor variable does not predict the outcome variable at a statistically significant level (Preacher & Hayes, 2004). The mediation effect was tested using a bootstrap approach to obtaining confidence intervals to test the statistical significance of the indirect effect, as this approach is particularly useful in small sample sizes (Preacher & Hayes, 2004).

Figure 25

Illustration of the proposed mediating effect of Self- esteem, Self-blame and Guilt, Factor 2: Lowered Self-esteem on the relationship between Details of the Rape, Factor 2: Assault and Rape Details and SSS and the Diagnosis.



The number of bootstrap resamples was set at 5 000 as this is recommended for sample sizes around 30, which is close to the lowest sample size in this research ($n = 37$ at Week 24). A statistically significant indirect effect is evident if the confidence intervals do not cross 0, in other words, if they are both positive or negative (Preacher & Hayes, 2004). Statistically significant indirect effects were obtained for SSS at weeks 4 and 24 ($CI_{95} = -1.49; -0.16$, and $CI_{95} = -2.09; -0.29$, respectively), although not at week 12. No statistically significant indirect effects were obtained at any of the weeks with Diagnosis as the outcome variable.

Thus, with reference to the SSS at Weeks 4 and 24, the hypothesis proposed above seems to be supported; that is that a rape which involves multiple forms of rape and has high levels of violence results in a lower SSS as mediated by self-esteem. That such a mediating relationship is not apparent at Week 12 may be attributable to the observation made in the literature, which has suggested that 12 weeks post-rape is a watershed mark in terms of recovery, when survivors either evidence a marked improvement or continue to present with marked distress (Foa & Rothbaum, 1998). That no such relationship is apparent for any of the timeframes in relation to the outcome variable Diagnosis, may be attributable to its restricted range as a continuous variable (i.e. No, Incomplete or Yes) as compared to the greater range afforded by the SSS as a continuous variable, (which offers a range of scores from 1 to 51).

8.4 Post-assault variables: Survivor responses

8.4.1 Diagnosis of ASD

As noted in *Chapter 5: Section 5.4.3.2.6 ASDS*, it has been suggested that diagnosis of ASD may be viewed as an acute post-traumatic stress reaction which is a precursor to the development of PTSD (Bryant, et al., 2000; Nixon & Bryant, 2003). It was therefore deemed important to explore whether a diagnosis of ASD, as assessed using the ASD at Week 1, predicted an increased PTSD SSS or Diagnosis.

8.4.1.1 With SSS as the outcome variable

The predictor variable was entered into a simultaneous multiple regression, with the SSS as the outcome variable. A Diagnosis of ASD at Week 1 predicted SSS at Week 4 at a statistically significant level ($p < .001$) with a positive slope ($b = 17.29$). The overall model was statistically significant ($R^2 = .49$, $F_{(1, 40)} = 38.35$, $p < .001$). Similarly a Diagnosis of ASD at Week 1 predicted a higher SSS at Week 12 at a statistically significant level ($p < .001$) with a positive slope ($b = 11.38$). The overall model was statistically significant ($R^2 = .26$, $F_{(1, 34)} = 12.06$, $p < .001$). Again a Diagnosis of ASD at Week 1 predicted a higher SSS at Week 24 at a statistically significant level ($p = .014$) with a positive slope ($b = 9.385$). The overall model was statistically significant ($R^2 = .14$, $F_{(1, 35)} = 6.76$, $p = .014$). Overall these results indicate that a diagnosis of ASD at Week 1 predicted a higher SSS score at Week 4, 12 and 24.

8.4.1.2 With Diagnosis as the outcome variable

When the predictor variable was entered into a simultaneous linear regression, with Diagnosis as the outcome variable a Diagnosis of ASD at Week 1 predicted an increased likelihood of a PTSD diagnosis at a statistically significant level at Week 4 ($p < .001$) with a positive slope ($b = .96$) and the model was statistically significant ($R^2 = .29$, $F_{(1, 40)} = 17.51$, $p < .001$). A Diagnosis of ASD at Week 1 was not a significant predictor of Diagnosis at Week 12, but was again a significant predictor of a diagnosis of PTSD at Week 24 ($p = .024$) with a positive slope ($b = .66$) and the model was statistically significant ($R^2 = .14$, $F_{(1, 35)} = 5.16$, $p = .024$).

Overall, a Diagnosis of ASD at Week 1 significantly predicted an increase in SSS at Weeks, 4, 12 and 24 and a higher Diagnosis score at Weeks 4 and 24. The relevance of the 12 week post-rape time period as noted above (*Section 8.3 Assault Variables*), in addition to the observation made at the start of this chapter that Diagnosis as an outcome variable appears to be somewhat less sensitive than the SSS, may, to some degree, account for a Diagnosis of ASD not being significant at Week 12, but becoming significant again at Week 24.

8.4.2 Social support

The role of the presence or absence of social support post-rape in either assisting or hindering recovery respectively, has drawn the attention of researchers. There is some evidence to suggest that supportive family relations do mediate the negative impact of rape, although other research findings have not confirmed this (Ullman, 1999). However, unsupportive responses from the survivor's social network do seem to be associated with more symptoms than those who receive neutral or supportive responses (Ahrens, 2006). It was, therefore, deemed important to explore the possibility of a link between Social Support and SSS or Diagnosis of PTSD.

For this analysis, the predictor variables were Social Support, Factor 1: Negative Relational Changes and Responses and Factor 2: Degree of Social Support. The factor scores for Social Support were constituted as previously described (see *Section 8.1.2*).

8.4.2.1 With SSS as the outcome variable

The predictor variables were entered into a simultaneous multiple regression, with the SSS as the outcome variable. Of the predictor variables measured at Week 1, Factor 1: Negative Relational Changes and Responses, predicted the SSS at Week 4 at a marginally statistically significant level ($p = .054$) with a positive slope ($b = 4.77$), indicating that a higher score on this factor resulted in a higher symptom severity score at Week 4. Overall the model was significant ($R^2 = .19$, $F_{(2, 39)} = 4.70$, $p = .015$). Neither of the predictor variables measured at Week 1 predicted the SSS at Week 12. Of the two predictor variables measured at Week 1 Factor 1: Negative Relational Changes and Responses again predicted the SSS at Week 24 at a statistically significant level ($p = .034$) with a positive slope ($b = 4.92$). Overall the model was statistically significant ($R^2 = .20$, $F_{(2, 34)} = .09$, $p = .024$).

The predictor variables measured at Week 4 and Week 12 did not predict the SSS for either of those weeks. However, at Week 24 Factor 1: Negative Relational Changes and Responses predicted the SSS at Week 24 at a statistically significant level ($p = .033$) with a positive slope ($b = 6.99$). Overall the model was significant ($R^2 = .34$, $F_{(2, 34)} = 8.63$, $p = .001$). However, a marked drop in the part and partial correlations, relative to the zero order correlations, suggested a difficulty with multicollinearity. Inspection of the correlation between the two predictor variables indicated that they were fairly highly correlated ($r = -.66$, $p < .001$). To investigate the possibility that the two factors were correlated, the above-mentioned factor analysis was re-run using oblique rotation (direct oblimin rotation method). The results revealed the factors to be uncorrelated (component $r = -.10$). It is hypothesised that the high correlation between Social Support, Factor 1: Negative Relational Changes and Responses and Factor 2: Degree of Social Support at Week 24 only, might best be understood as a function of the chronicity of PTSD symptom severity at Week 24, and that Negative Relational Changes and Responses and a low Degree of Social Support are more entrenched at Week 24 and contribute to the chronicity of PTSD symptomatology.

Two separate linear regressions were then run. Social Support, Factor 1: Negative Relational Changes and Responses was statistically significant ($p = .001$) with a positive slope ($b = 9.46$). Overall the model was significant ($R^2 = .309$, $F_{(1, 35)} = 15.68$, $p = .001$). Thus increasing reports of negative relational changes and responses predicted an increase in PTSD symptom severity at Week 24. Social Support, Factor 2: Degree of Social Support was also statistically significant ($p = .002$) with a negative slope ($b = -3.94$). Overall the model was

significant ($R^2 = .241$, $F_{(1, 35)} = 11.12$, $p = .002$). Thus an increasing degree of social support predicted a lower PTSD symptom severity score at Week 24.

8.4.2.2 With Diagnosis as the outcome variable

When the predictor variables were entered into a simultaneous linear regression, with Diagnosis as the outcome variable, neither of the predictors measured at Week 1 predicted Diagnosis at Week 4, Week 12 or Week 24. Similarly neither of the predictor variables measured at Week 4, 12 and 24 predicted Diagnosis at Week 4, 12 and 24 respectively. As a result of the possible problem of multicollinearity identified with the two predictor variables at Week 24 in relation to the SSS, two separate linear regressions were run for Social Support, Factor 1: Negative relational changes and responses and Factor 2: Degree of Social Support in order to ensure that a similar problem did not exist with Diagnosis at Week 24. Neither factor was found to be statistically significant.

In summary, reports of increased lack of support and negative changes in relationships at Week 1 appear to predict an increase in the SSS at Week 4 and 24. In addition Social Support, Factor 1: Negative Relational Changes and Unsupportive Responses and Factor 2: Degree of Social Support as reported at Week 24 both predicted an increase in SSS at Week 24. Again, the absence of any predictive relationship between the Social Support factors and SSS at Week 12 is noteworthy. No predictive relationship appears to exist between either of the Social Support factors and Diagnosis.

8.4.3 Self-esteem, self-blame and guilt

There is a growing body of literature which suggests that the way in which survivors make meaning of the trauma they have experienced and the process of meaning-making itself is perhaps more salient than the level of support received per se (M. Harvey, et al., 2000). In particular, it has been argued that cognitive appraisals and attributions relating to self-esteem, self-blame and guilt can influence vulnerability to PTSD (Halligan, Michael, Clark, & Ehlers, 2003; Koss, et al., 2002b; Ullman, Filipas, et al., 2007). In light of this research it was viewed as necessary to consider the role of negative cognitions in relation to PTSD amongst this group of women.

For this analysis, the predictor variables were Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self Esteem, Factor 2: Guilt and Worthlessness and Factor 3: Self Blame. The factor

scores for Self-esteem, Self-blame and Guilt were constituted as previously described (see *Section 8.1.2*)

8.4.3.1 With SSS as the outcome variable

The three predictor variables were entered into a simultaneous multiple regression, with the SSS as the dependent variable. Of the 3 factors measured at Week 1, Factor 1: Lowered Self-esteem and Factor 3: Self-blame predicted SSS at Week 4 - Factor 1: Lowered Self-esteem ($p = .002$) with a positive slope ($b = .17$) and Factor 3: Self-blame ($p = .012$) with a negative slope, ($b = -2.93$). Overall the model was statistically significant ($R^2 = .34$, $F_{(3, 38)} = 6.52$, $p = .001$ or $p < .001$). Of the three predictor variables measured at Week 1 only Factor 1: Lowered Self-esteem was found to predict SSS at Week 12 to a significant degree ($p = .012$) with a positive slope ($b = .14$). Overall the model was statistically significant ($R^2 = .23$, $F_{(3, 32)} = 3.11$, $p = .040$). Two of the Week 1 predictor variables predicted SSS at Week 24: Factor 1: Lowered Self-esteem predicted the SSS at Week 24 at a statistically significant level ($p = .007$) with a positive slope ($b = .15$), as did Factor 2: Guilt and Worthlessness ($p = .032$) with a positive slope ($b = 2.44$). Overall, the model was statistically significant ($R^2 = .27$, $F_{(3, 33)} = 4.08$, $p = .014$).

Thus overall, high scores at Week 1 on Factor 1: Lowered Self-esteem consistently predicted higher SSS scores at Week 4, 12 and 24. High scores at Week 1 on Factor 3: Self-blame predicted lower scores on the SSS at Week 4 only. Increased scores on Factor 2: Guilt and Worthlessness at Week 1 was only found to predict an increase in SSS at Week 24.

Of the three predictors measured at Week 4 Factor 1: Lowered Self-esteem was statistically significant ($p < .001$) with a positive slope ($b = .20$) and Factor 3: Self-blame was statistically significant ($p = .006$) with a negative slope ($b = -3.623$). Overall the model was statistically significant ($R^2 = .38$, $F_{(3, 38)} = 7.73$, $p < .001$). At Week 12, Factor 1: Lowered Self-esteem approached statistical significance ($p = .060$) with a positive slope ($b = .12$). Overall the model was not statistically significant ($R^2 = .127$, $F_{(3, 32)} = 1.552$, $p = .220$). At Week 24, Factor 1: Lowered Self-esteem was statistically significant ($p = .006$) with a positive slope ($b = .169$). Overall the model was statistically significant ($R^2 = .27$, $F_{(3, 33)} = 4.09$, $p = .014$).

In summary, with regard to the predictor variables measured at Weeks 4, 12 and 24 in relation to SSS at each of the timeframes respectively, high scores on Factor 1: Lowered Self-esteem predicted higher SSS scores at a statistically significant level at Week 4 and 24 and

was just short of statistical significance at Week 12. Again at Week 4 high scores on Factor 3: Self-blame predicted lower scores on the SSS.

8.4.3.2 With Diagnosis as the outcome variable

When the predictor variables measured at Week 1 were entered into a simultaneous linear regression, with Diagnosis at Week 4 as the outcome variable Factor 1: Lowered Self-esteem was statistically significant ($p = .014$) with a positive slope ($b = .01$). However, overall the model was not statistically significant ($R^2 = .17$, $F_{(3, 38)} = 2.62$, $p = .065$). Since the overall model was not statistically significant Factor 1: Lowered Self-esteem was entered as a single predictor. The overall model was now statistically significant ($R^2 = .16$, $F_{(1, 40)} = 7.37$, $p = .010$) and the slope for the variable remained positive ($b = .01$).), indicating that increased low self-esteem at Week 1 predicted a greater likelihood of a diagnosis of PTSD at Week 4. None of the predictors measured at Week 1 predicted Diagnosis at Week 12 or Week 24.

Of the predictors measured at Week 4 only Factor 1: Lowered Self-esteem predicted a Diagnosis at a statistically significant level, ($p = .002$) with a positive slope ($b = .012$), indicating that increasing levels of lowered self-esteem at Week 4 predicted a greater likelihood of a PTSD diagnosis at Week 4. Overall the model was statistically significant ($R^2 = .243$, $F_{(3, 38)} = 4.062$, $p = .013$). At Week 12, Factor 2: Guilt and Worthlessness was statistically significant ($p = .012$) with a negative slope ($b = -.362$). However, because the model was not statistically significant ($R^2 = .200$, $F_{(3, 32)} = 2.664$, $p = .065$), Factor 2: Guilt and Worthlessness was entered as a single predictor. The overall model was now statistically significant ($R^2 = .17$, $F_{(1, 34)} = 7.13$, $p = .012$) and the slope for the variable remained negative ($b = -.343$), indicating that a *lower* score on Factor 2: Guilt and Worthlessness predicts a *greater* likelihood of a diagnosis of PTSD. This is an anomalous finding, which is not in keeping with what could arguably be expected, and which stands in contrast to the significant finding for the same variable as measured at Week 1 in predicting SSS at Week 12 as reported above. At Week 24 none of the predictors was significant.

Thus with regard to Diagnosis increased scores at Week 1 on Factor 1: Lowered Self-esteem predicted an increased likelihood of a diagnosis of PTSD at Week 4. In addition, increased scores on Factor 1: Lowered Self-esteem at Week 4 predicted an increased likelihood of a diagnosis of PTSD at Week 4 and decreased scores at Week 12 on Factor 2: Guilt and Worthlessness predicted an increased likelihood of a diagnosis of PTSD at Week 12.

Overall, Factor 1: Lowered Self-esteem was the most noteworthy predictor of high SSS and to a lesser degree of Diagnosis. Factor 2: Guilt and Worthlessness and Factor 3: Self-blame only occasionally predicted SSS or Diagnosis at a significant level with no clear pattern apparent. It is, however, noteworthy that across all but one of the analyses, in both the simultaneous multiple regressions and the linear regressions, even when Factor 3: Self-blame was not a statistically significant predictor, the slope for this factor was always negative, suggesting that increased scores on Self-blame predicted lower SSS and/or a decreased likelihood of a diagnosis of PTSD. This finding may appear to contradict what might be expected, both in terms of what common sense might suggest and what the literature would predict. It could be hypothesised that whilst self-blame may be viewed as a negative cognition, a belief that one's actions caused, at least to some degree, the rape to happen, may paradoxically allow for a sense of control over the traumatic event thus resulting in a sense of agency which has been seen to be associated with reduced vulnerability to PTSD symptomatology (Frazier, 2000; Wyatt & Notgrass, 1990), although some research continues to point to the deleterious impact of self-blame on post-rape recovery (Koss & Figueredo, 2004a).

8.5 Post-assault: Contextual variables

8.5.1 Receipt of counselling and physical health post-rape

In the main, supportive counselling in the immediate aftermath of rape and subsequently, has at least to some degree been seen to offer protection from or amelioration of post-rape trauma symptoms, although research has shown that this may not always be easily accomplished (Campbell, et al., 1999; Campbell, Wasco, Ahrens, Sefl, & Barnes, 2001; Ullman & Filipas, 2001a). As noted previously (see *Chapter 5: Section 5.9 Ethical considerations*) the TCC offers counselling as a core aspect of its one-stop service provision, and women taking part in this study who were seen to be in need of further counselling, were routinely referred to Rape Crisis at the SBC. However, only a small number of women in this study reported making use of the counselling services available (see *Chapter 7: Section 7.6.2 Mental health and Counselling*), despite the Need for Counselling being amongst the top five psycho-social needs across all four interview timeframes (see *Chapter 7: Section 7.5 Psycho-social Needs Assessment*). Thus, it was deemed important to assess whether having received counselling or not predicted an increase or decrease in symptomatology and/or the likelihood of a PTSD diagnosis.

As noted in *Chapter 7: Section 7.6.1 Physical Health*, rape trauma often results in increased physical complaints with a concomitant increase in visits to health care practitioners (Campbell, et al., 2008; Golding, 1994; Kimerling & Calhoun, 1994; Koss, et al., 2002b; Koss, et al., 1991). The debate about the link between somatic complaints and psychological distress is a complex one (Swartz, 1998) nonetheless it was reasoned that an increase in physical complaints in the aftermath of rape may point to a degree of distress, which might also render the survivor more vulnerable to PTSD, and for this reason the women's rating of their physical health across the four time frames was therefore included in this analysis.

Since the outcome variables are related to psychological factors, it was reasoned that Receipt of Counselling should be prioritised, followed by Physical Health Post-rape, thus a 2 step hierarchical regression was commenced proposing to enter Receipt of Counselling at step 1 and Physical Health Post-rape at step 2.

8.5.1.1 With SSS as the outcome variable

For these variables, a 2 step hierarchical regression was run with Receipt of Counselling since rape as measured at Week 1 entered at step 1 and Health Post-rape as measured at Week 1 entered at step 2. Step 1 did not produce a statistically significant model, that is Receipt of Counselling did not predict SSS at Weeks 4 ($R^2 < .01$, $F_{1,39} = 0.07$, $p = .798$), Week 12 ($R^2 = .02$, $F_{1,33} = 0.81$, $p = .376$), or Week 24 ($R^2 = .03$, $F_{1,34} = 1.15$, $p = .292$), and so Physical Health Post-rape at Week 1 was entered as a single step. This also did not produce a statistically significant overall model for each of the three analyses at Week 4 ($R^2 < .01$, $F_{1,40} = 0.99$, $p = .755$), Week 12 ($R^2 = .03$, $F_{1,34} = 1.02$, $p = .319$) or Week 24 ($R^2 < .01$, $F_{1,35} = 0.06$, $p = .801$).

As previously, a two-step hierarchical regression was run with Receipt of Counselling as measured at Week 4, 12, and 24 entered at step 1 and Physical Health Post-rape as measured at week 4, 12, and 24 entered at step 2, respectively for three independent analyses. For each of the independent analyses step 1 did not produce a statistically significant model at Week 4 ($R^2 < .01$, $F_{1,40} = 0.03$, $p = .854$), Week 12 ($R^2 < .01$, $F_{1,34} < 0.01$, $p = .967$) and Week 24 ($R^2 = .03$, $F_{1,35} = 1.15$, $p = .290$). Thus Physical Health Post-rape was entered as a single step for each of weeks 4, 12, and 24. This produced a statistically significant overall model at Week 4 only ($R^2 = .10$, $F_{1,40} = 4.62$, $p = .038$). The slope of this predictor was negative ($b = -5.12$, $t = -2.15$, $p = .038$), indicating that the better the health of the respondent, the lower her SSS.

Physical Health Post-rape did not produce statistically significant overall models at Week 12 ($R^2 < .01$, $F_{1,34} = 0.11$, $p = .739$) and Week 24 ($R^2 = .06$, $F_{1,35} = 2.06$, $p = .160$).

8.5.1.2 With Diagnosis as the outcome variable

As with the SSS, a 2 step hierarchical regression was run with Receipt of Counselling as measured at Week 1 entered at step 1 and Physical Health Post-rape as measured at Week 1 at step 2, in each case predicting the likelihood of a diagnosis of PTSD at Weeks 4, 12, and 24. At Week 4 and 12 the overall model at step 1 was not statistically significant ($R^2 < .01$, $F_{1,39} < 0.01$, $p = .976$; and $R^2 < .01$, $F_{1,33} < 0.01$, $p = .987$, respectively), so for these analyses Physical Health Post-rape as measured at Week 1 was entered as a single step. This did not produce a statistically significant overall model at Week 4 ($R^2 < .01$, $F_{1,40} = 0.13$, $p = .721$), although it did produce a statistically significant overall model at Week 12 ($R^2 = .12$, $F_{1,34} = 4.55$, $p = .040$). The slope of this predictor was negative ($b = -0.394$, $t = -2.13$, $p = .040$) indicating that greater health at Week 1 was associated with a decreased likelihood of a diagnosis of PTSD at Week 12.

At Week 24, Receipt of Counselling as measured at Week 1 was a statistically significant predictor ($R^2 = .15$, $F_{1,34} = 5.98$, $p = .020$) with a negative slope ($b = -0.97$, $t = -2.446$, $p = .020$), indicating that if the respondent received counselling at Week 1 they were less likely to have a diagnosis of PTSD at Week 24. This predictor remained statistically significant at step 2 ($b = -1.09$, $t = -2.82$, $p = .008$) with the inclusion of Physical Health Post-rape at Week 1, although the latter variable was not a statistically significant predictor. The overall model remained statistically significant after step 2 ($R^2 = .23$, $F_{2,33} = 4.89$, $p = .014$).

For week 4, 12 and 24, a two-step hierarchical regression was run with Receipt of Counselling at the respective weeks entered at step 1 and Physical Health Post-rape at the respective weeks entered at step 2. For each of the analyses step 1 did not produce a statistically significant model at Week 4 ($R^2 = .01$, $F_{1,40} = 0.45$, $p = .505$), Week 12 ($R^2 = .06$, $F_{1,34} = 2.20$, $p = .147$) or Week 24 ($R^2 = .06$, $F_{1,35} = 2.41$, $p = .130$). Therefore, Physical Health Post-rape at the respective weeks was entered as a single step. This also did not produce a statistically significant overall model for each of the three analyses at Week 4 ($R^2 = .08$, $F_{1,40} = 3.31$, $p = .076$), 12 ($R^2 < .01$, $F_{1,34} = 0.09$, $p = .767$) and 24 ($R^2 = .08$, $F_{1,35} = 2.94$, $p = .095$).

In summary, Receipt of Counselling did not predict SSS at any of the timeframes, but reports of having received counselling as measured at Week 1 did predict a decreased likelihood of a PTSD diagnosis at Week 24. With regard to the predictor variable Physical Health Post-rape, greater health as measured at Week 4 predicted a lower SSS at Week 4 and as measured at Week 12 predicted a decreased likelihood of a diagnosis of PTSD at Week 12. Thus, whilst both predictor variables did produce statistically significant results at several timeframes, no consistent or predictable pattern was evidenced in the results.

8.5.2 *Psycho-social needs*

As highlighted in Chapter 1, using international research findings as a point of departure, this research sought, in part, to explore whether the psychological impact of rape in a group of women living in a context palpably different to those within which the majority of the research has thus far been conducted, present with similar symptoms of trauma or more specifically profiles of PTSD-related symptomatology and/or a diagnosis of PTSD. To this end, as noted in the previous chapter, *Chapter 7: Section 7.5 Psycho-social needs assessment*, the General Needs Assessment Questionnaire sought to gain some indication of the multiple needs of the women in this study as they relate to both the trauma of the rape itself and to living in low socio-economic contexts. For this analysis, the predictor variables were the Need for Housing, Need for Education, Need for Employment and Need for Counselling, since these were the four needs most frequently cited across Weeks 1, 4, 12 and 24 as reported in the previous chapter, *Section 7.5 Psycho-social needs assessment*.

8.5.2.1 *With SSS as the outcome variable*

None of the four predictor variables measured at Week 1 predicted SSS at Week 4 or Week 24, however the Need for Counselling as reported at Week 1 did significantly predict SSS at Week 12 ($p = .032$) with a positive slope ($b = 9.90$). These results suggest that a Need for Counselling at Week 1 predicted an increased SSS score at Week 12. Overall, however, the model was not statistically significant ($R^2 = .17$, $SEE = 9.83$, $F_{(4, 30)} = 1.49$, $p = .230$), and when the Need for Counselling as reported at Week 1 was entered as a single predictor the overall model remained statistically not significant ($R^2 = .11$, $F_{(1, 33)} = 3.95$, $p = .055$) with a positive slope ($b = 8.14$). This finding suggests that either one or more of the other variables entered into the simultaneous regression was creating a suppressor effect, or that the other variables entered into the simultaneous regression resulted in an overall reduction of error

variance. Either way it seems clear that the Need for Counselling as reported at Week 1 is not a stable or reliable predictor of an increased SSS score at Week 12.

At Week 4 and Week 12 none of the predictor variables were found to be significant. At Week 24 the Need for Counselling was statistically significant ($p = .016$) with a positive slope ($b = 8.417$). Overall the model was statistically significant ($R^2 = .264$, $SEE = 9.558$, $F_{(4, 32)} = 2.865$, $p = .039$). This suggests that a Need for Counselling at Week 24 predicted an increased SSS score at Week 24.

8.5.2.2 With Diagnosis as the outcome variable

When the predictor variables were entered into a simultaneous linear regression, with Diagnosis as the outcome variable none of the predictor variables measured at Week 1 predicted an increased likelihood of a PTSD diagnosis at a statistically significant level at Week 4. However, the Need for Counselling as measured at Week 1 did predict an increased likelihood of a diagnosis of PTSD at a statistically significant level at Week 12 ($p = .005$) with a positive slope ($b = 1.08$), but the overall model was not significant ($R^2 = .23$, $SEE = .80$, $F_{(4, 30)} = 2.30$, $p = .082$). Thus, the Need for Counselling was entered as a single predictor. The overall model was now statistically significant ($R^2 = .19$, $F_{(1, 33)} = 7.69$, $p = .009$) and the slope for the variable was positive ($b = .93$). Similarly, only the Need for Counselling as reported at Week 1, predicted an increased likelihood of a diagnosis of PTSD at a statistically significant level at Week 24 ($p = .002$) with a positive slope ($b = 1.03$). Overall the model was statistically significant ($R^2 = .30$, $SEE = .711$, $F_{(4, 31)} = 3.27$, $p = .024$).

When the predictor variables were entered into a simultaneous linear regression with Diagnosis as the outcome variable, none of the predictor variables were significant at Weeks 4, 12 and 24.

Overall, the only need which seemed to have any bearing on either SSS or Diagnosis was a Need for Counselling, however, no clear pattern across time for either of the outcome variables was apparent. With regards to SSS, Need for Counselling as measured at Week 1 predicted increased SSS at Week 12, and Need for Counselling as measured at Week 24 predicted increased SSS at Week 24. With regards to Diagnosis, Need for Counselling as measured at Week 1 predicted an increased likelihood of a PTSD diagnosis at Week 12 and 24 only.

8.5.3 Perceived degree of safety post-rape

Under Pre-assault Variables, it was suggested that a woman's perceived degree of safety prior to the rape might predict SSS or Diagnosis of PTSD. Research has argued about the direction that such previous exposure to violence may exert on psychological impact of a traumatic event like adult rape. Given that all of the women in this research live in previously disadvantaged areas with ongoing high levels of unemployment, poor service delivery and very high crime statistics (*Chapter 7: Section 7.5 Psycho-social needs assessment*) daily living contexts contain multiple possibilities for ongoing traumatising on a number of levels within the family, at home and outside the home (Artz & Kunisaki, 2003).

In order to explore the impact of such ongoing vulnerability in relation to PTSD related symptomatology and/or the likelihood of a diagnosis of PTSD, as with Perceived Degree of Safety Prior to the Rape, hierarchical regressions were conducted with Perceived Degree of Safety Post-rape. As in the aforementioned analysis, a 3 step hierarchical regression was commenced, proposing to enter Family at step 1, Home at step 2, and then Outside Home at step 3. These analyses were conducted using data from Week 1 to 4, 12, and 24, as well as at Week 4, 12, and 24 independently.

8.5.3.1 With SSS as the outcome variable

For each of the three analyses at step 1 the predictor variable measured at Week 1 did not produce statistically significant overall models in relation to SSS at Week 4 ($R^2 < .01$, $F_{1,39} = 0.02$, $p = .900$), Week 12 ($R^2 = .06$, $F_{1,33} = 0.62$, $p = .439$), and Week 24 ($R^2 = .08$, $F_{1,34} = 2.86$, $p = .100$). Thus for each analysis the variable Family was dropped and Home as measured at Week 1 was now entered at step 1 with Outside Home as measured at Week 1 entered at step 2. This again did not produce a statistically significant overall model at step 1 in each of the three analyses at Week 4 ($R^2 = .06$, $F_{1,40} = 2.35$, $p = .133$). Week 12 ($R^2 = .06$, $F_{1,34} = 2.09$, $p = .157$), or Week 24 ($R^2 = .02$, $F_{1,35} = 0.73$, $p = .398$). Thus, Home was dropped from the analysis and Outside Home was entered as a single step. Likewise, this did not produce a statistically significant overall model in any of the three analyses at Week 4 ($R^2 = .03$, $F_{1,40} = 1.28$, $p = .264$), Week 12 ($R^2 = .05$, $F_{1,34} = 1.90$, $p = .177$) and Week 24 ($R^2 < .01$, $F_{1,35} = 0.01$, $p = .932$).

The same pattern of results as above was observed for each of the three analyses – step 1 did not produce statistically significant models at Week 4 ($R^2 < .01$, $F_{1,39} = 0.29$, $p = .596$), Week

12 ($R^2 = .03$, $F_{1,33} = 0.99$, $p = .325$), and Week 24 ($R^2 = .01$, $F_{1,35} = 0.39$, $p = .553$). Thus for each analysis the variable Family was dropped and Home was now entered at step 1 with Outside Home entered at step 2. This again did not produce a statistically significant overall model at step 1 at Week 4 ($R^2 < .01$, $F_{1,39} = 0.31$, $p = .583$), Week 12 ($R^2 < .01$, $F_{1,33} = 0.14$, $p = .716$), and Week 24 ($R^2 < .01$, $F_{1,35} < 0.01$, $p = .982$) and so Home was dropped from the analysis and Outside was entered as a single step. Likewise, this did not produce a statistically significant overall model at Week 4 ($R^2 = .07$, $F_{1,39} = 2.94$, $p = .094$), Week 12 ($R^2 < .01$, $F_{1,34} = 0.04$, $p = .846$) or Week 24 ($R^2 = .09$, $F_{1,35} = 3.386$, $p = .074$).

8.5.3.2 With Diagnosis as the outcome variable

The same pattern of results as with the SSS was observed for each of the three analyses of predictor variables measured at Week 1 in relation to Diagnosis at Week 4, 12, and 24. Again, step 1 did not produce a statistically significant overall model at Week 4 ($R^2 = .02$, $F_{1,39} = 0.55$, $p = .463$), Week 12 ($R^2 = .06$, $F_{1,33} = 2.05$, $p = .162$) or Week 24 ($R^2 = .02$, $F_{1,34} = 0.53$, $p = .473$), so for each analysis the variable Family was dropped and Home was now entered at step 1 with Outside Home entered at step 2. This again did not produce a statistically significant overall model at step 1 in each of the three analyses: Week 4 ($R^2 < .01$, $F_{1,40} = 0.51$, $p = .482$), Week 12 ($R^2 = .02$, $F_{1,34} = 0.64$, $p = .429$) and Week 24 ($R^2 = .05$, $F_{1,35} = 1.70$, $p = .201$) so Home was dropped from the analysis and Outside Home was entered as a single step. Likewise, this did not produce a statistically significant overall model at Week 4 ($R^2 = .01$, $F_{1,40} = 0.45$, $p = .505$), Week 12 ($R^2 = .02$, $F_{1,34} = 0.63$, $p = .433$) or Week 24 ($R^2 = .01$, $F_{1,35} = 0.37$, $p = .547$).

The same pattern of results as with the SSS and as with the Diagnosis criteria results immediately above was observed for each of the three analyses at Week 4, 12, and 24 for the Diagnosis criteria. Once again, step 1 did not produce a statistically significant overall model at Week 4 ($R^2 < .01$, $F_{1,39} = 0.16$, $p = .688$), Week 12 ($R^2 = .02$, $F_{1,33} = 0.57$, $p = .454$) and Week 24 ($R^2 = .03$, $F_{1,35} = 1.13$, $p = .295$), so for each analysis the variable Family was dropped and Home was now entered at step 1 with Outside Home entered at step 2. This again did not produce a statistically significant overall model at step 1 in each of the three analyses: Week 4 ($R^2 = .01$, $F_{1,39} = 0.55$, $p = .463$), Week 12 ($R^2 < .01$, $F_{1,33} = 0.01$, $p = .918$) and Week 24 ($R^2 = .03$, $F_{1,35} = 1.10$, $p = .301$) so Home was dropped from the analysis and Outside Home was entered as a single step. Likewise, this did not produce a statistically

significant overall model at Week 4 ($R^2 = .06$, $F_{1,39} = 2.51$, $p = .121$), Week 12 ($R^2 = .02$, $F_{1,34} = 0.56$, $p = .460$) and Week 24 ($R^2 < .01$, $F_{1,35} = 0.27$, $p = .604$).

In summary, Perceived Degree of Safety Post-rape within the Family, at Home or Outside Home did not predict either SSS or Diagnosis at any of the time frames.

8.6 Summary of variables found to be significant predictors of SSS and Diagnosis

Table 17 and Table 18 below provide a summary of the variables found to be significant predictors of SSS and Diagnosis respectively at each of the timeframes. The grey blocks indicate that the predictor variable was only measured at Week 1 and therefore no analyses of the relevant predictor variables were conducted at Weeks 4, 12 and 24 independently.

Table 17

Significant predictors of SSS

<u>Predictor Variable</u>	Week 1 to Week 4	Week 1 to Week 12	Week 1 to Week 24	Week 4	Week 12	Week 24
Demographic	Mental Illness	Mental Illness	Mental Illness Relationship status: Living with partner vs. single			
Perceived Degree of Safety Prior to Rape			Family Home			
Details of Rape	Factor 2		Factor 2			
ASD	ASD	ASD	ASD			
Social Support	Factor 1		Factor 1			Factor 1 Factor 2
Self-esteem, Self-blame & Guilt	Factor 1 Factor 3	Factor 1	Factor 1 Factor 2	Factor 1 Factor 3		Factor 1
Receipt of Counselling & Health Post-rape				Health		
General Needs						Counselling

Table 18**Significant predictors of Diagnosis**

Predictor Variable	Week 1 to Week 4	Week 1 to Week 12	Week 1 to Week 24	Week 4	Week 12	Week 24
Demographic	Mental Illness	Relationship status: Married vs. single				
Perceived Degree of Safety Prior to Rape			Family			
Details of Rape			Factor 1			
ASD	ASD		ASD			
Social Support						
Self-esteem, Self-blame & Guilt	Factor 1			Factor 1	Factor 2	
Receipt of Counselling & Health Post-rape		Health	Counselling			
General Needs		Counselling	Counselling			

In summary, with reference to SSS, a Prior History of Mental Illness, a diagnosis of ASD at Week 1, and Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem as measured at Week 1, appear to be the most consistent predictors of a higher SSS at Weeks 4, 12 and 24. Social Support Factor 1: Negative Relational Changes and Responses, Self-esteem, Self-blame and Guilt Factor 2: Guilt and Worthlessness and Factor 3: Self-blame, and Details of Rape Factor 2: Assault and Rape Details, appear to seem to play a role in higher SSS across time but in a less predictable way. Relationship Status, Perceived Degree of Safety: Family and Home, Health post-rape and a Need for Counselling played only a limited role in predicting SSS at any of the timeframes.

These findings are largely in keeping with the literature which suggests that a diagnosis of ASD may be a precursor to the development of PTSD (Bryant, et al., 2000; Nixon & Bryant, 2003), that survivors with a history of psychiatric illness are more vulnerable to PTSD post-rape (Lenox & Ganon, 1983), that negative cognitive appraisals relating to self-esteem, self-blame and guilt can influence vulnerability to PTSD (Ullman, Filipas, et al., 2007) and that in relation to social support unsupportive responses are associated with greater symptomatology post-rape (Ahrens, 2006).

There are fewer significant predictors of Diagnosis across time and none which consistently predict an increased likelihood of a diagnosis of PTSD at each of the timeframes. A diagnosis of ASD appears to predict a greater likelihood of being diagnosed with PTSD though not consistently so, whilst Prior History of Mental Illness, Self-esteem, Self-blame and Guilt Factor Factor 1: Lowered Self-esteem and Factor 2: Guilt and Worthlessness, Receipt of

Counselling Post-rape, Physical Health Post-rape and under General Needs the Need for Counselling seem to play a more limited and less predictable role in the likelihood of a diagnosis of PTSD at Weeks 4, 12 and 24.

8.7 Chapter summary

The analyses reported in this chapter sought to investigate which, if any, variables measured at the Week 1, 4, 12 and 24 interviews assist in predicting a vulnerability to developing PTSD at these timeframes. To this end a series of regression analyses was conducted on specific data which was identified as likely to play a role in the development of PTSD post-rape. The predictor variables were grouped under Pre-assault, Assault and Post-assault Variables, with the outcome variables for the regression analyses being SSS and Diagnosis as assessed using the PDS measured at Weeks 4, 12 and 24.

Overall the separate regressions conducted at Week 1 to Weeks 4, 12 and 24 respectively, and Weeks 4, 12 and 24 independently, suggest that the SSS provided a more detailed and nuanced set of results than Diagnosis did. This is arguably as a result of the greater range afforded by the SSS, which offers a range of scores from 1 to 51, whilst Diagnosis, although treated as a continuous outcome variable, offered a restricted range, i.e. No, Incomplete or Yes. A restricted range of scores is problematic for correlation and regression analyses (Howell, 1997). In addition, given the large number of significance tests conducted in the analysis of this data, it is important to note that results should be interpreted with caution due to a likely inflated Type I error. Nonetheless, as noted above, the dominant trends suggested by the results of the analyses are in keeping with the literature and as such appear to hold some veracity.

In conducting this series of regression analyses a number of Pre-assault, Assault, and Post-assault variables have been identified as likely predictors of a vulnerability to developing PTSD at Weeks 4, 12 and 24. The results do not, however, provide a longitudinal perspective in relation to the predictor variables, nor do the results of the analyses offer any illumination in relation to describing the course of PTSD symptomatology itself across the six month period post-rape. The subsequent and final analysis chapter is focused on exploring this aspect of the data.

Chapter 9

Results IV

9.1 Introduction

The results of the regression analyses presented in the previous chapter sought to identify Pre-assault, Assault and Post-assault variables measured at Weeks 1, 4, 12 and 24 which predict a vulnerability to developing PTSD as measured at Weeks 4, 12 and 24. Using the results presented in the aforementioned chapter as a starting point, this chapter seeks to develop a broader longitudinal perspective both in relation to the variables found to be significant in relation to predicting PTSD symptomatology and in describing the trajectory of PTSD itself across a six month period post-rape.

To this end in the first series of analyses presented below, variables found to be statistically significant predictors of SSS and/or Diagnosis were entered into a series of final regression models for each of the timeframes; the section concludes with a summary in table form of the variables found to be significant predictors of SSS and Diagnosis respectively at each of the interview timeframes. The second series of analyses focuses on those survivors who attended all interviews ($n=34$) and seeks to develop a longitudinal model which describes change in PTSD symptomatology over time, and investigates which Pre-assault, Assault and Post-assault variables play a role in predicting that change over time. The chapter concludes with a consideration of the implications of the results of the analyses.

9.2 Final regression models for SSS and Diagnosis at all timeframes

Pre-assault, Assault and Post-assault variables found to be statistically significant predictors of SSS and/or Diagnosis at Weeks 4, 12 and 24 were entered into a series of final regression models for each of the timeframes. Thus, with reference to the outcome variable SSS, all variables measured at Week 1 and found to be significant predictors of SSS at Week 4 were entered simultaneously in order to produce a final regression model for that timeframe. The same process was repeated for variables measured at Week 1 and found to be statistically significant predictors of SSS at Week 12 and similarly at Week 24. Following the same principle, predictor variables measured at Week 4 and found to be statistically significant predictors of SSS at Week 4, were entered into a simultaneous regression in order to produce a final model for that timeframe, and similarly for Weeks 12 and 24. The exact same

procedure was followed with reference to the outcome variable Diagnosis. It is recognised that by undertaking these additional regressions, there is a risk of capitalising on chance in relation to significant findings. In light of this it should be noted that, in addition to attempting to develop a model of variables found to be significant in predicting PTSD in the six months post-rape, the final regression models are also a way of checking whether the significant variables simultaneously predict the outcome variables; that is whether the significant predictor variables at the various timeframes have a significant unique variance in common with SSS and/or Diagnosis. The results of these analyses are reported below.

9.2.1 With SSS as the outcome variable

9.2.1.1 Variables measured at Week 1 to predict SSS at Week 4

Predictor variables measured at Week 1 and found to be statistically significant predictors of SSS at Week 4 were Demographics: Prior History of Mental Illness, Details of the Rape, Factor 2: Assault and Rape Details, a diagnosis of ASD, Social support, Factor 1: Negative Relational Changes and Unsupportive Responses, Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem and Factor 3: Guilt and Worthlessness. These predictor variables were entered simultaneously to produce a final regression model.

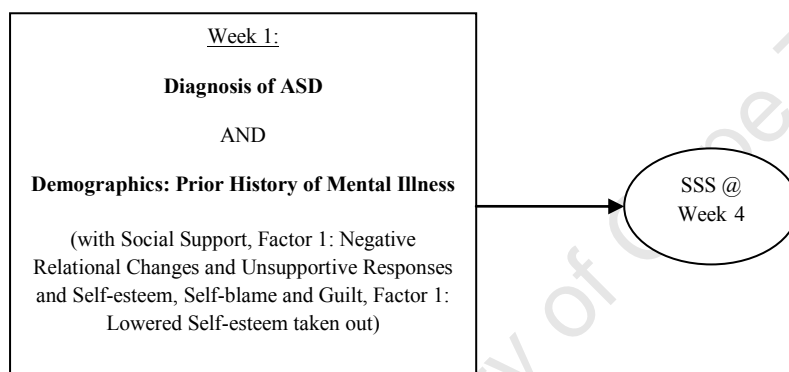
The overall model was statistically significant ($R^2 = .63$, $F_{6, 35} = 9.98$, $p < .001$), although the only statistically significant individual predictor of an increased SSS score at Week 4 was a Diagnosis of ASD ($b = 12.53$, $t = 4.29$, $p < .001$) at Week 1. Inspection of the correlation matrix revealed moderate correlations between Demographics: Prior History of Mental Illness and Social Support, Factor 1: Negative Relational Changes and Unsupportive Responses ($r = .37$), and between the former variable and Self-esteem, Self-blame Guilt, Factor 1: Lowered Self-esteem ($r = .43$), indicative of possible multi-collinearity. The moderate tolerance value (.67) for the variable Demographics: Prior History of Mental Illness was also suggestive of multi-collinearity, so the analysis was re-run, first with Social Support, Factor 1: Negative Relational Changes and Unsupportive Responses and Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem excluded, and then with those two variables included and Prior History of Mental Illness excluded.

In the former analysis the overall model was statistically significant ($R^2 = .59$, $F_{4, 37} = 13.07$, $p < .001$), a Diagnosis of ASD remained statistically significant ($b = 14.19$, $t = 4.93$, $p < .001$), and Demographics: Prior History of Mental Illness now became statistically significant ($b =$

5.66, $t = 2.08$, $p = .044$) with an improved tolerance value (.85). The model suggests that an ASD diagnosis and a history of mental illness both measured at Week 1 predict an increased SSS score at Week 4. In the latter analysis, the overall model was statistically significant ($R^2 = .62$, $F_{5,36} = 11.83$, $p < .001$); a Diagnosis of ASD remained statistically significant ($b = 12.55$, $t = 4.31$, $p < .001$) and Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem approached statistical significance ($b = 0.08$, $t = 1.99$, $p = .053$), indicating that with Demographics: Prior History of Mental Illness excluded, a diagnosis of ASD as measured at Week 1 predicts an increased SSS at Week 4 and that whilst increasing lowered self-esteem predicted an increased SSS at Week 4 this fell short of being statistically significant.

Figure 26

Overall SS model Week 1 to Week 4



9.2.1.2 Variables measured at Week 1 to predict SSS at Week 12

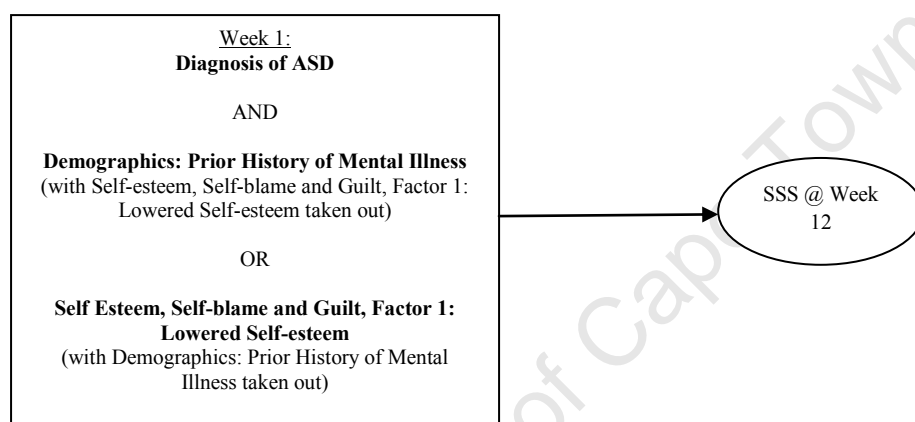
For the analysis period of variables measured at Week 1 to predict SSS at Week 12, the predictors Demographics: Prior History of Mental Illness, a Diagnosis of ASD, and Self-esteem, Self-blame and Guilt, Factor 1: Negative Relational Changes and Unsupportive Responses were entered simultaneously in a final model for Week 12. The overall model was statistically significant ($R^2 = .420$, $F_{3,31} = 7.50$, $p < .001$), and a Diagnosis of ASD ($b = 7.99$, $t = 2.46$, $p = .020$) was the only significant predictor. Due to the previous multi-collinearity problem at Week 1 to Week 4 between Demographics: Prior History of Mental Illness and Self-esteem, Self-blame and Guilt, Factor 1: Negative Relational Changes and Unsupportive Responses, the analysis was re-run first with the latter variable excluded, and then with that variable included and Demographics: Prior History of Mental Illness excluded.

In the first case, the overall model was statistically significant ($R^2 = .38$, $F_{2,32} = 9.83$, $p < .001$) and Demographics: Prior History of Mental Illness became a statistically significant

predictor ($b = 7.83, t = 2.54, p = .016$), with an increased tolerance from .79 in the first model to .93. A Diagnosis of ASD remained a statistically significant predictor ($b = 9.10, t = 2.83, p = .008$). With Demographics: Prior History of Mental Illness excluded, Self-esteem, Self-blame and Guilt, Factor 1: Negative Relational Changes and Unsupportive Responses was a statistically significant predictor ($b = .11, t = 2.17, p = .037$), with an increased tolerance value from .76 in the original model to .91. Diagnosis of ASD ($b = 9.28, t = 2.85, p = .008$) remained a statistically significant predictor.

Figure 27

Overall SSS model Week 1 to Week 12



9.2.1.3 Variables measured at Week 1 to predict SSS at Week 24

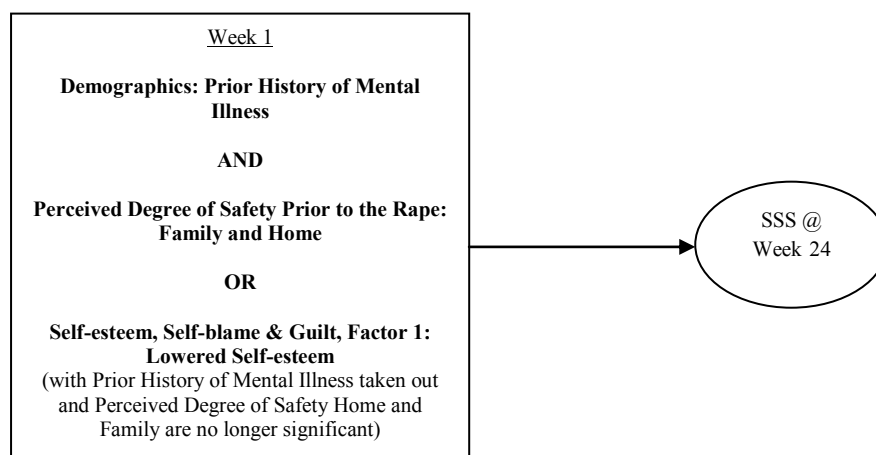
For the analysis period of variables measured at Week 1 to predict SSS at Week 24, Demographics: Prior History of Mental Illness, Relationship Status: Living with Partner versus Single, Perceived Degree of Safety Prior to the Rape: Family and Home, Factor 2: Assault and Rape Details, Diagnosis of ASD, Social Support, Factor 1: Negative Relational Changes and Unsupportive Responses, Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem and Factor 2: Guilt and Worthlessness, were entered simultaneously in a final model for Week 24. The overall model was statistically significant ($R^2 = .67, F_{9, 25} = 5.74, p < .001$), and Demographics: Prior History of Mental Illness ($b = 10.05, t = 3.18, p = .004$), Perceived Degree of Safety Prior to the Rape: Family ($b = -4.22, t = -2.12, p = .044$), and Perceived Degree of Safety Prior to the Rape: Home ($b = 4.17, t = 2.06, p = .050$), were all statistically significant individual predictors. The results of the overall model indicate that of the variables measured at Week 1 to predict SSS at Week 24, a Prior History of Mental Illness predicts an increased SSS at Week 24, the safer a respondent felt in her family, the

lower the SSS at Week 24 and the safer a respondent felt in her home, the higher the SSS at Week 24 – as noted in *Section 8.2.3 Perceived degree of safety prior to the rape*, this latter result is a surprising finding which is difficult to explain.

Again, due to the moderate correlation between Demographics: Prior History of Mental Illness and Self-blame and Guilt, Factor 1: Lowered Self-esteem, as well as, in this case, a moderate correlation between the former variable and Social Support, Factor 2: Degree of Social Support, the analysis was re-run with Demographics: Prior History of Mental Illness excluded. Details of the Rape, Factor 2: Assault and Rape Details was also excluded as this variable had moderate correlations with Perceived Degree of Safety Prior to the Rape: Family and Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem. The overall model was again statistically significant ($R^2 = .51$, $F_{7, 28} = 4.24$, $p = .003$), and Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem was a statistically significant individual predictor ($b = 0.11$, $t = 2.31$, $p = .028$). Perceived Degree of Safety Prior to the Rape: Family and Home were no longer statistically significant individual predictors, indicating that Demographics: Prior History of Mental Illness was acting as a suppressor variable on these two variables, as they are also not statistically significant in a model with Prior History of Mental Illness excluded, but Details of the Rape, Factor 2: Assault and Rape Details included. Thus the results of this overall model indicate that with the exclusion of Demographics: Prior History of Mental Illness, high scores on Self-esteem, Self-blame and Guilt: Factor 1: Lowered-self Esteem at Week 1 predicted higher SSS scores at Week 24.

Figure 28

Overall SSS model for Week 1 to Week 24

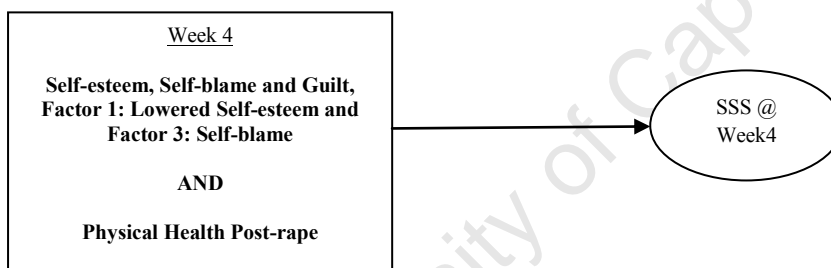


9.2.1.4 With SSS as the outcome variable at Week 4

Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem and Factor 3: Self-blame, and Physical Health Post-rape were entered simultaneously as predictors in a final model. The overall model was statistically significant ($R^2 = .45$, $F_{3, 38} = 10.19$, $p < .001$), and all three predictors were statistically significant. Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem had a positive slope ($b = 0.19$, $t = 4.13$, $p < .001$), indicating that as a respondent had lower self-esteem they were more likely to have a higher SSS score. Self-esteem, Self-blame and Guilt, Factor 3: Self-blame had a negative slope ($b = -3.54$, $t = -3.20$, $p = .003$), indicating that a higher degree of self-blame resulted in a lower SSS. Health Post-rape also had a negative slope ($b = -4.17$, $t = -2.15$, $p = .038$), indicating that the better the respondents' health, the lower the SSS.

Figure 29

Overall SSS model for Week 4



9.2.1.5 With SSS as the outcome variable at Week 12

No variables measured at Week 12 were statistically significant predictors of SSS at Week 12.

9.2.1.6 With SSS as the outcome variable at Week 24

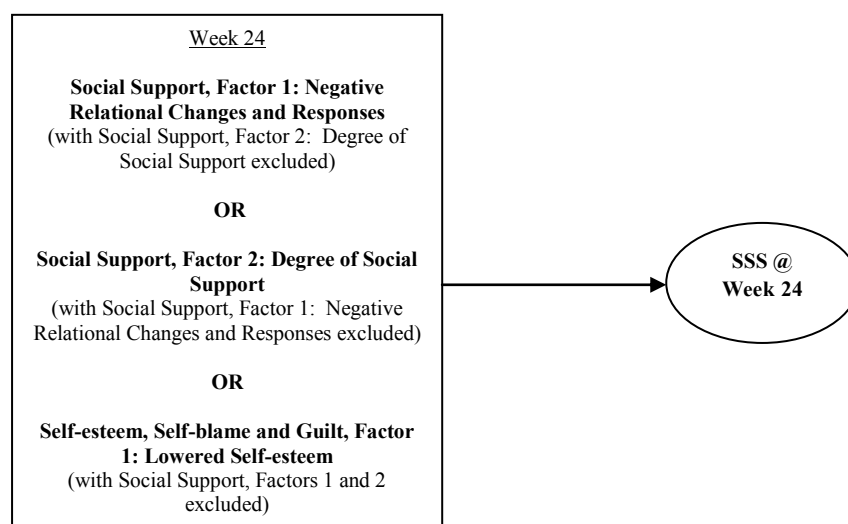
Social Support, Factor 1: Negative Relational Changes and Unsupportive Responses and Factor 2: Degree of Social Support, Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem and Psycho-social Needs: Needs Counselling were the statistically significant predictors that were to be entered simultaneously into a final model at this week. However, due to the previously observed multi-collinearity problem between the two Social Support factors (*See Section 8.4.2.1 Social Support: With SSS as the outcome variable*) the model was first run with Social Support, Factor 2: Degree of Social Support excluded, then with Social Support, Factor 1: Negative Relational Changes and Unsupportive Responses excluded and

Factor 2: Degree of Social Support included. In the former case, the overall model was statistically significant ($R^2 = .43$, $F_{3, 33} = 8.30$, $p < .001$), and Social Support, Factor 1: Negative Relational Changes and Unsupportive Responses was the only statistically significant individual predictor ($b = 6.72$, $t = 2.72$, $p = .010$), indicating that increasing reports of negative relational changes and responses predicted an increase in SSS at Week 24. With Social Support, Factor 2: Degree of Social Support included and Social Support, Factor 1: Negative Relational Changes and Unsupportive Responses excluded, the overall model was statistically significant ($R^2 = .39$, $F_{3, 33} = 6.95$, $p < .001$) and Social Support, Factor 2: Degree of Social Support was the only statistically significant individual predictor ($b = -2.58$, $t = -2.14$, $p = .040$) indicating that an increasing degree of social support predicted a lower SSS at Week 24.

Due to the moderate correlations between the two Social Support factors and Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem ($r = .40$ and $r = -.42$ between Social Support, Factor 1: Negative Relational Changes and Unsupportive Responses and Factor 2: Degree of Social Support, respectively), the analysis was re-run with the two Social Support factors excluded. This served to increase the tolerance value for Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem to .82 from .70 with the Social Support factors included. The overall model in this case was statistically significant ($R^2 = .30$, $F_{2, 34} = 7.36$, $p = .002$) and Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem was a statistically significant individual predictor ($b = 0.14$, $t = 2.53$, $p = .016$), indicating that higher scores at Week 24 on Factor 1 predicted lower SSS scores at Week 24. Psycho-social Needs: Needs Counselling was not a statistically significant predictor in any of the analyses.

Figure 30

Overall SSS model for Week 24



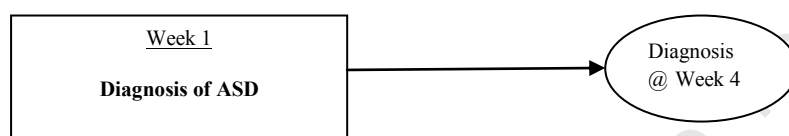
9.2.2 With Diagnosis as the outcome variable

9.2.2.1 Variables measured at Week 1 to predict Diagnosis at Week 4

Demographics: Prior History of Mental Illness, Diagnosis of ASD and Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem were entered simultaneously. The overall model was statistically significant ($R^2 = .38$, $F_{3,38} = 7.79$, $p < .001$), and Diagnosis of ASD was the only statistically significant individual predictor ($b = 0.78$, $t = 3.23$, $p = .003$) of an increased likelihood of a diagnosis of PTSD.

Figure 31

Overall Diagnosis model Week 1 to Week 4

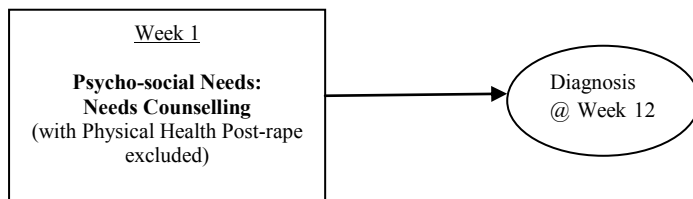


9.2.2.2 Variables measured at Week 1 to predict Diagnosis at Week 12

Demographics: Relationship Status: Married versus Single, Physical Health Post-rape, and Psycho-social Needs: Needs counselling were entered simultaneously. The overall model was statistically significant ($R^2 = .26$, $F_{3,31} = 3.54$, $p = .026$), although none of the predictors were statistically significant. There was a moderate correlation between Physical Health Post-rape and Psycho-social Needs: Needs Counselling ($r = -.51$). The correlation was suggestive of multi-collinearity, so the analysis was re-run first with Physical Health Post-rape excluded, and then Psycho-social Needs: Needs Counselling excluded and Physical Health Post-rape included. In the former analysis the overall model was statistically significant ($R^2 = .21$, $F_{2,32} = 4.26$, $p = .023$), and Psycho-social Needs: Needs Counselling as measured at Week 1 was a statistically significant predictor ($b = 0.89$, $t = 2.63$, $p = .013$) of an increased likelihood of a PTSD diagnosis at Week 12. The tolerance value also increased substantially from .74 in the first analysis to .99. With Psycho-social Needs: Needs Counselling excluded and Physical Health Post-rape included, the tolerance value of the latter variable increased from .73 to .98, although it was not a statistically significant predictor.

Figure 32

Overall Diagnosis model Week 1 to Week 12

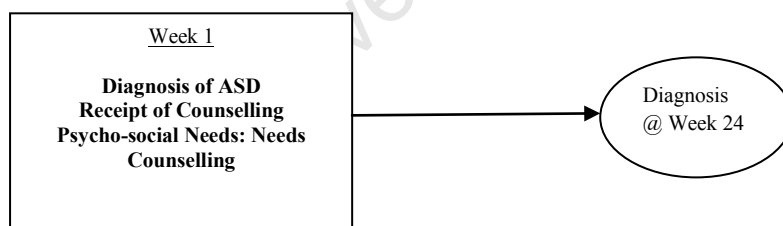


9.2.2.3 Variables measured at Week 1 to predict Diagnosis at Week 24

Perceived Degree of Safety Prior to the Rape: Family, Details of the Rape, Factor 1: Assault and Rape Details, Diagnosis of ASD, Receipt of Counselling, and Psycho-social Needs: Needs counselling were entered simultaneously. The overall model was statistically significant ($R^2 = .56$, $F_{2, 32} = 4.26$, $p = .023$), and Diagnosis of ASD ($b = 0.80$, $t = 3.41$, $p = .002$), Receipt of Counselling ($b = -0.77$, $t = -2.32$, $p = .028$), and Psycho-social Needs: Needs Counselling ($b = 0.92$, $t = 3.49$, $p = .002$) were statistically significant individual predictors. The result indicates that a diagnosis of ASD at Week 1, having received counselling at Week 1 and reporting the need for counselling at Week 1 predict an increased likelihood of a diagnosis of PTSD at Week 24.

Figure 33

Overall Diagnosis model Week 1 to Week 24

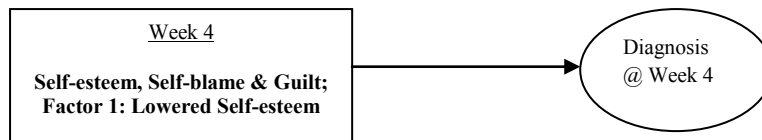


9.2.2.4 Variables measured at Week 4 to predict Diagnosis at Week 4

Self-esteem, Self-blame and Guilt, Factor 1: Lowered Self-esteem was entered as a single predictor. The overall model was statistically significant ($R^2 = .20$, $F_{1, 40} = 9.67$, $p = .003$), and the slope for this variable was positive ($b = 0.01$, $t = 3.11$), suggesting that increased low self-esteem at Week 4 predicted a greater likelihood of a diagnosis of PTSD at Week 4.

Figure 34

Overall Diagnosis model Week 4

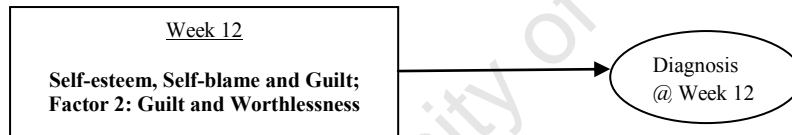


9.2.2.5 Variables measured at Week 12 to predict Diagnosis at Week 12

Self-esteem, Self-blame and Guilt, Factor 2: Guilt and Worthlessness was entered as a single predictor. The overall model was statistically significant ($R^2 = .17$, $F_{1,34} = 7.13$, $p = .012$), and the slope for this variable was negative ($b = -0.34$, $t = -2.67$). The result indicates that increased low self-esteem at Week 12 predicted a greater likelihood of a diagnosis of PTSD at Week 12.

Figure 35

Overall Diagnosis model Week 12



9.2.2.6 Variables measured at Week 24 to predict Diagnosis at Week 24

No variables measured at Week 24 were statistically significant predictors of Diagnosis at Week 24.

9.2.3 Summary of final regression models

Table 19 and Table 20 below provide a summary of the variables found to be significant predictors of SSS and Diagnosis respectively at each of the timeframes. The grey blocks indicate that the predictor variable was only measured at Week 1 and therefore no analyses of the relevant predictor variables were conducted at Weeks 4, 12 and 24 independently.

Table 19**Final regressions: Significant predictors of SSS**

<u>Predictor Variable</u>	Week 1 to Week 4	Week 1 to Week 12	Week 1 to Week 24	Week 4	Week 12	Week 24
Demographic	Mental Illness	Mental Illness	Mental Illness			
Perceived Degree of Safety Prior to Rape			Family Home			
Details of Rape						
ASD	ASD	ASD				
Social Support	Factor 1		Factor 1			Factor 1 Factor 2
Self-esteem, Self-blame & Guilt		Factor 1	Factor 1	Factor 1 Factor 3		Factor 1

Table 20**Final regressions: Significant predictors of Diagnosis**

<u>Predictor Variable</u>	Week 1 to Week 4	Week 1 to Week 12	Week 1 to Week 24	Week 4	Week 12	Week 24
Details of Rape						
ASD	ASD		ASD			
Self-esteem, Self-blame & Guilt				Factor 1	Factor 2	
Receipt of Counselling & Health Post-rape			Counselling			
General Needs		Counselling	Counselling			

In summary, with reference to SSS a Prior History of Mental Illness appears to be the most consistent predictor of a higher SSS at Weeks 4, 12 and 24, and a diagnosis of ASD at Week 1 is also a relatively stable predictor of an elevated SSS at Week 4 and 12. Both Social Support Factor 1: Negative Relational Changes and Responses and Self Esteem, Self Blame and Guilt Factor 1: Lowered Self Esteem appear, to some degree, to play a role in higher SSS, though not consistently at Weeks 4, 12, and 24. Perceived Degree of Safety with the family and at home, Social Support Factor 2: Degree of Social Support, and Self-esteem, Self-blame and Guilt Factor 3: Self-blame, seem to play a limited and unpredictable role in SSS across time.

As noted, in relation to the findings of the regression analyses conducted in the previous chapter, these findings are largely in keeping with the literature which suggests that a diagnosis of ASD may be a precursor to the development of PTSD (Bryant, et al., 2000; Nixon & Bryant, 2003), that survivors with a history of psychiatric illness are more vulnerable to PTSD post-rape (Lenox & Ganon, 1983), that negative cognitive appraisals relating to self-esteem, self-blame and guilt can influence vulnerability to PTSD (Ullman, Filipas, et al., 2007) and that in relation to social support, unsupportive responses are associated with greater symptomatology post-rape (Ahrens, 2006). As with the results of the analyses reported in the previous chapter in relation to predictors of an increased likelihood of a diagnosis of PTSD, there are fewer significant predictors of Diagnosis across time and little commonality with the significant predictors of SSS. A diagnosis of ASD appears to predict a greater likelihood of being diagnosed with PTSD though not consistently so, whilst Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem: and Factor 2: Guilt and Worthlessness, Receipt of Counselling Post-rape and General Needs Assessment: Counselling seem to play a limited and unpredictable role in the likelihood of a diagnosis of PTSD at Weeks 4, 12 and 24.

It is, however, noteworthy, that the analyses conducted at each of the timeframes for both SSS and Diagnosis evidenced complicated relationships between the variables as graphically illustrated in all but three of the figures presented in that section. The complexity of the inter-relationships between variables was also hinted at in the previous chapter, *Chapter 8, Figure 25*, when the mediating effect of lowered self-esteem on the relationship between assault and rape details and SSS/Diagnosis was explored. The implications of this complex set of inter-relationships between variables is discussed more fully at the end of this chapter.

9.3 Longitudinal analysis of the data

Using hierarchical regressions the analyses presented in the previous section sought to provide a longitudinal perspective in relation to the variables found to be significant in relation to predicting PTSD symptomatology at 4, 12 and 24 weeks post-rape. With reference to Peleg and Shalev's (2006) review article of longitudinal studies of PTSD (not specific to trauma related to sexual violence), the aim of the previous section is in keeping with the dominant trends the authors identified in the first two of the three chronological periods of longitudinal research in the field. Early studies (1988 to 1997) sought to describe predictors and risk factors in the development of PTSD and studies undertaken between 1998 and 2002

sought, amongst other things, to track the transformation of acute responses (ASD) to PTSD, co-morbidity of psychiatric diagnoses with PTSD and the role of cognitive appraisal, in the development of PTSD. In the main these questions have been explored quantitatively through the use of repeated measures of variance (Repeated measures ANOVA) or multiple regression statistics (Peleg & Shalev, 2006). In more recent studies (2003-2005), Peleg and Shalev (2006) identified a shift from using the diagnosis of PTSD as the endpoint (outcome variable) to describing and understanding the changes in PTSD symptomatology across time as the outcome variable. To this end, more sophisticated quantitative data analytic techniques such as structural equation modelling (SEM), individual pathway analysis and multilevel regression analyses, have been used (Peleg & Shalev, 2006).

As noted in *Chapter 3: Section 3.5 Longitudinal studies*, Campbell, Brown Sprague, Cottrill and Sullivan's (2010) exhaustive review of the field identified only 53 longitudinal studies in the field of sexual violence published in peer reviewed journals. As with this study, in the main these longitudinal studies have focused on understanding the mental health sequelae of rape. Building on this research, subsequent studies have focused on the evaluation of therapeutic interventions with survivors of sexual violence. In addition, longitudinal studies have sought to explore the occurrence of sexual re-victimisation and strategies to prevent such victimisation. In keeping with Peleg and Shalev's (2006) review article, Campbell et al (2010) note that the quantitative analytic techniques most frequently employed in the aforementioned studies are ANOVA, Analysis of Co-variance (ANCOVA), Multivariate Analysis of Variance (MANOVA) or Multivariate Analysis of Co-variance (MANCOVA) with some studies using hierarchical regression, logistic regression and log linear analysis and SEM.

In the previous section of this chapter hierarchical regressions were employed in order to provide a longitudinal perspective on the variables found to be significant in relation to predicting PTSD symptomatology at 4, 12 and 24 weeks post-rape. As such the data was analysed separately at each assessment point; an approach which Gilboa-Schechtman and Foa (2001) note is often used in longitudinal data analysis, but which they argue, fails to consider intra-individual patterns of change. In essence they suggest that as a result of this approach, longitudinal data, which is in fact panel data, is thus treated as cross-sectional data (Gilboa-Schechtman & Foa, 2001).

In light of this critique and with the aforementioned reviews in mind, it was decided to further explore the data by undertaking an analysis of *change* in SSS across time in relation to participants who attended all four interviews ($n=34$). Change in SSS rather than change in Diagnosis was chosen as the outcome variable because, as noted in the previous chapter, SSS appeared to provide a more nuanced assessment of PTSD symptomatology at Weeks 4, 12 and 24.

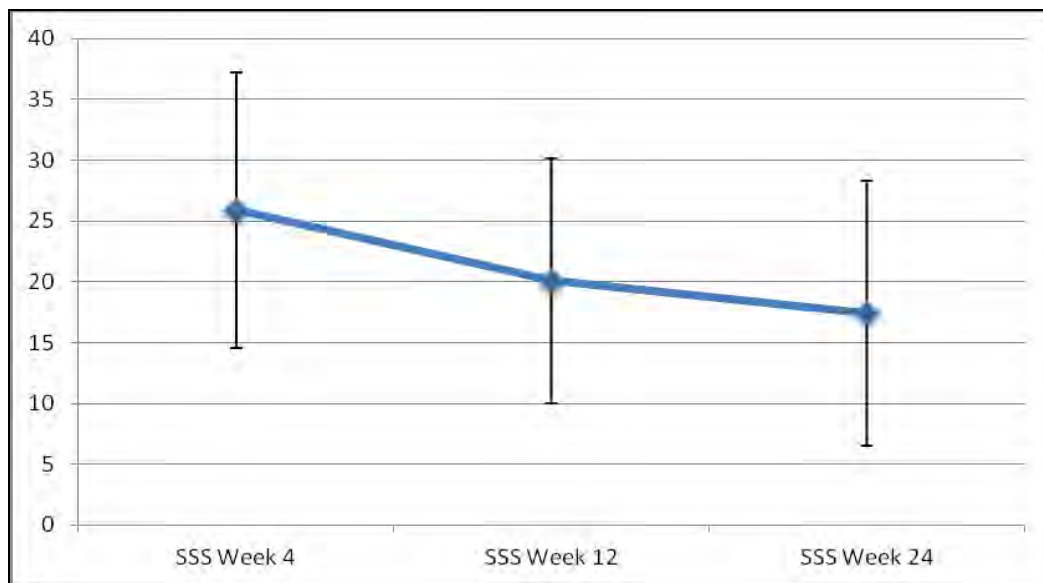
As an initial step, in order to investigate whether SSS did differ significantly across Weeks 4, 12 and 24 a one-way repeated measures ANOVA was run with the data gathered from the 34 participants who attended the Week 1, 4, 12 and 24 interviews. The results of the ANOVA are presented below.

Mauchley's test of sphericity was not statistically significant ($W(2) = 0.89, p = .158$.) The repeated-measures ANOVA was statistically significant ($F(2, 66) = 14.93, p < .001$), indicating that SSS differed across the three weeks. To further investigate differences between the weeks, *post-hoc* tests with a Bonferroni correction for inflated Type I error were run. These indicated statistically significant differences between SSS at Week 4 ($M = 25.88$) and 12 ($M = 20.12; p = .006$) and Week 4 and 24 ($M = 17.41; p < .001$), but not between Week 12 and 24 ($p = .134$). The percentage of variance explained by the predictor variable is 42.8%.

These results indicate a statistically significant decrease in SSS from Week 4 to 12 and Week 4 to 24, supportive of the literature which suggests that survivors of rape move from an acute, highly symptomatic phase in the first month to a decrease in symptoms in the subsequent three-month period and beyond. That there was no statistically significant difference in SSS between Weeks 12 and Weeks 24 appears to support the literature, which suggests that Week 12 is a watershed point in recovery post-rape (see *Chapter 3: Section 3.2 Overview of the pattern of impact and recovery and symptomatology amongst rape survivors and Section 3.4.3.1.1 Initial reaction and coping strategies*). The figure below provides a graphic representation of the results using standard error bars.

Figure 36

Mean symptom severity scores for Week 4 to Week 24 ($n=34$)



Thus following a significant drop in SSS from Week 4 to Week 12, SSS remains relatively stable from Week 12 to Week 24, indicating that those with high SSS at Week 12 continue to experience high SSS at Week 24, and likewise, those with low SSS at the former week continue to experience low SSS at the latter week. The analyses conducted thus far showed that there are changes in SSS scores across time, but what causes the decrease across time required further investigation.

Hierarchical regression analyses were performed in order to investigate if any of the four variables that were statistically significant predictors of SSS at Weeks 4, 12, and 24 could predict the *change* in SSS over time. The order in which the four predictor variables were entered into the hierarchical regressions was informed by the strength of the relationship between the predictor and PTSD as suggested in the literature (see *Chapter 3: Section 3.8 Chapter summary*), as well as the findings of this study as reported in the previous chapter. In general these findings are largely in keeping with the literature, though it is noteworthy that in this study ASD appeared to be a stronger predictor of PTSD than in the few studies on ASD as a predictor of PTSD in rape survivors. Thus a diagnosis of ASD was entered first, followed by Demographics: Prior History of Mental Illness, thereafter Social Support Factor 1: Negative Relational Changes and Responses, and finally Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem.

In order to take into account the variance (i.e., change) in SSS over time, a new variable – Change in SSS - was created which was a product of the standard deviations of the SSS from Week 4 to 24 and the difference in SSS from Week 4 to 24. This somewhat unusual calculation was conceptualised in order to provide a way of tracking both the degree and the direction of change in the SSS score for each individual over time. To this end, it was proposed that the standard deviation would provide the best description of the degree of variation in SSS, while the difference between the SSS score at Week 4 and Week 24 would indicate the direction of change; thus, multiplying these scores together, offers a way of describing change in SSS over time.

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Table 21

Descriptive statistics showing SSS for Weeks 4-24, Change Scores, Standard Deviations of SSSs and SD*Change

Participant	SSS			Change Week 4-24	SD Week 4-24	SD*Change
	Week 4	Week 12	Week 24			
1	33	26	33	0	3.30	0.00
2	28	32	19	-9	5.44	-48.93
3	34	37	23	-11	6.02	-66.20
4	36	17	9	-27	11.32	-305.74
5	11	6	4	-7	2.94	-20.61
6	34	27	34	0	3.30	0.00
7	29	32	38	9	3.74	33.67
8	26	13	15	-11	5.72	-62.87
9	2	12	2	0	4.71	0.00
10	12	6	0	-12	4.90	-58.79
11	36	20	30	-6	6.60	-39.60
12	7	3	4	-3	1.70	-5.10
13	39	22	13	-26	10.78	-280.30
14	28	32	20	-8	4.99	-39.91
15	22	17	30	8	5.35	42.83
16	7	7	4	-3	1.41	-4.24
17	38	15	23	-15	9.53	-143.00
18	26	29	17	-9	5.10	-45.89
19	21	12	11	-10	4.50	-44.97
20	24	21	27	3	2.45	7.35
21	5	2	0	-5	2.05	-10.27
22	25	19	14	-11	4.50	-49.47
23	22	27	18	-4	3.68	-14.73
24	27	36	26	-1	4.50	-4.50
25	40	11	10	-30	13.91	-417.37
26	39	32	41	2	3.86	7.72
27	31	27	15	-16	6.80	-108.78
28	18	8	11	-7	4.19	-29.33
29	34	30	25	-9	3.68	-33.14
30	33	30	21	-12	5.10	-61.19
31	45	12	10	-35	16.05	-561.70
32	16	18	11	-5	2.94	-14.72
33	15	18	13	-2	2.05	-4.11
34	37	28	21	-16	6.55	-104.78
Mean	25.88	20.12	17.41	-8.47	-	-
SD	11.11	9.92	10.69	9.80	-	-

As evidenced in the final column of Table 21, the scores on this new variable were very negatively skewed, and the results of the hierarchical regression indicated negatively skewed residuals, as well as residuals clustered to one side, and curvilinear relationships in the residuals. To correct for these difficulties, a reverse transformation was first done, followed by a square root transformation in order to pull the scores closer to the mean. These transformations largely, although not entirely, corrected skewness and appeared to normalise residuals by reducing the residuals clustering to one side of the scatterplot and reducing the curvilinear relationships evident in some of the scatterplots of the residuals.

Two hierarchical regression analyses were run. The first entered Diagnosis of ASD at Step 1, Demographics: Prior History of Mental Illness at Step 2, Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem Week 1 at Step 3, and Social Support Factor 1: Negative Relational Changes and Responses Week 1 at Step 4. The second analyses retained the same order of variable entry, but now with Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem Week 4 at Step 3, and Social Support Factor 1: Negative Relational Changes and Responses Week 4 at Step 4. The Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem variables at Weeks 1 and 4 could not be entered as a block in a single analysis due to multi-collinearity between these two variables. The same problem was encountered for Social Support Factor 1: Negative Relational Changes and Responses Weeks 1 and 4, and likewise these variables could not be entered as a block in a single analysis.

At Step 1, Diagnosis of ASD resulted in an overall model which approached significance, ($R^2 = .11$, $F_{1,32} = 3.97$, $p = .055$). With the inclusion of Demographics: Prior History of Mental Illness at Step 2, Diagnosis of ASD became a statistically significant individual predictor, ($b = .13$, $t = 2.35$, $p = .025$), although the former variable was not a significant individual predictor. The overall model at Step 2 tended towards significance, ($R^2 = .17$, $F_{2,31} = 3.14$, $p = .057$). However, it appears that Diagnosis of ASD is pulled towards significance as Demographics: Prior History of Mental Illness has a suppressing effect on the former variable, as evidenced by an increase in the values of the correlation co-efficients for Diagnosis of ASD from the zero-order correlation (.33) to the partial (.39) and part (.39) correlations. Removing Diagnosis of ASD from the analysis did not result in Demographics: Prior History of Mental Illness becoming a significant predictor, providing more evidence that Demographics: Prior History of Mental Illness and not Diagnosis of ASD was the suppressor variable.

Excluding Demographics: Prior History of Mental Illness at Step 2 and including ASD at this step also resulted in ASD becoming significant as an individual predictor ($b = .13$, $t = 2.16$, $p = .039$), although Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem variable was not significant. The overall model was also not significant ($R^2 = .13$, $F_{2,31} = 2.35$, $p = .113$). It appears that Self-esteem, Self-blame and Guilt Factor 1: Lowered Self Esteem also had a suppressing effect on Diagnosis of ASD, as the inclusion of the former variable also resulted in an increase in the correlation coefficients for Diagnosis of ASD from the zero-order (.33) to the partial (.36) and part (.36) correlations. The correlations for Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem also change direction from the zero-order (.04) to the partial (-.15) and part (-.15) correlations. Removing Diagnosis of ASD from the analysis did not result in Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem becoming a significant predictor, providing more evidence that Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem and not Diagnosis of ASD is the suppressor variable.

Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem was thus removed from the analysis, and it was re-run with Diagnosis of ASD entered at Step 1 and Social Support Factor 1: Negative Relational Changes and Responses entered at Step 2. When the latter variable was entered, it was found that it was not a significant individual predictor, and Diagnosis of ASD remained just above the 5% level of statistical significance as a predictor ($b = .11$, $t = 2.07$, $p = .052$). The overall model after Step 2 was not significant ($R^2 = .12$, $F_{2,31} = 2.03$, $p = .148$).

With the analyses for Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem and Social Support Factor 1: Negative Relational Changes and Responses at Week 4, the same pattern of results was observed as above. As the outcome variable is the same as used in the first analysis, the statistics for the initial Steps 1 and 2 are exactly the same as those reported above. With Demographics: Prior History of Mental Illness removed at Step 2 and Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem Week 4 now entered at this step, this variable was not a significant predictor and, as with this variable at Week 1, it acted as a suppressor variable on Diagnosis of ASD which was significant ($b = .16$, $t = 2.53$, $p = .016$). The overall model approached significance ($R^2 = .17$, $F_{2,31} = 3.23$, $p = .053$). With Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem Week 4 removed and Social Support Factor 1: Negative Relational Changes and Responses Week 4 now entered at Step 2, the latter variable was not a significant predictor, and Diagnosis of ASD remained not

significant ($b = .10$, $t = 1.84$, $p = .076$). The overall model with both variables was also not significant ($R^2 = .11$, $F_{2, 31} = 2.00$, $p = .152$).

In summary, the only variable which appears to have any predictive power in explaining the variance in the change in SSS over time is Diagnosis of ASD, as it consistently approaches significance in both hierarchical regression analyses and the other variables are all not significant individual predictors. Thus, the best model for predicting the variance in SSS over time is the model with Diagnosis of ASD alone reported in Step 1 above (i.e., $R^2 = .11$, $F_{1, 32} = 3.97$, $p = .055$). The slope of Diagnosis of ASD was positive ($b = .11$), indicating that as the ASDS scores increase, so too does the likelihood of a higher SSS over time and vice versa.

With reference to Table 21, the change scores do indicate that most participants evidenced an overall decrease in SSS over time, and the results of the aforementioned hierarchical regressions suggest that there is a relationship between change in SSS over time and the severity of ASDS score at Week 1. It should, however, be noted that what the change score doesn't take into account is the different patterns of variation in relation to the SSS score across time. Thus whilst the majority of participants who attended all four interviews evidence an overall decrease in SSS from Week 4 to Week 24 ($n = 29$, 85.29%), a closer examination of the change in SSS scores across time evidenced variation in the pattern. For example some participants evidenced a steady decrease in SSS across Week 4, 12 and 24 ($n = 14$, 41.18%), whilst some participants evidence an overall decrease in SSS from Week 4 to Week 24, but with a peak in SSS at Week 12 ($n = 10$, 29.41%) and a smaller group of participants ($n = 5$, 14.71%) evidenced an overall drop in SSS over time but with a slight increase in SSS from Week 12 to Week 24. A minority of participants (4, 11.76%) evidenced an increase in SSS across Weeks 4, 12 and 24, whilst one participant evidenced a drop in SSS from Week 4 to Week 12 but returned to the same SSS at Week 24. The change score is unable to capture these finer distinctions in relation to overall direction of change in SSS over time, and thus whilst the results of the hierarchical regressions suggest that Diagnosis of ASD comes closest to predicting change in SSS over time, the results of the analysis are not able to suggest which Pre-assault, Assault and Post-assault variables might assist in predicting in more detail the trajectory of PTSD symptomatology over time.

As noted in relation to the first set of analyses, it is highly likely that there is a complex set of mediating and/or moderating relationships amongst a number of variables which would need to be taken into account in seeking to more fully analyse and explain the nature of the

relationships between variables and their impact on the specific course of PTSD symptomatology over time. As observed by both Campbell et al (2010) and Peleg and Shalev (2006), such longitudinal research, which is focussed on analysing change and inter-individual differences, would benefit from more sophisticated and nuanced methods for analysis such as multilevel approaches, SEM or individual growth curve modelling. Unfortunately such analyses require relatively large sample sizes; Maas and Hox (2004, 2005) suggest sample sizes of not less than 50 for multilevel regressions, Loon (2008) suggests that a sample size of 200 would provide sufficient statistical power for analysis of data using SEM, and Duncan and Duncan (2004) note that since LGM is carried out using SEM methodology it too requires relatively large sample sizes – this current study meets none of these criteria and it was therefore not possible to perform such analysis on this data set.

9.4 Chapter summary

The first set of analyses presented in this chapter sought to provide a broader longitudinal perspective in relation to the variables found to be significant in relation to predicting PTSD symptomatology across time. The results indicate that in relation to SSS, Diagnosis of ASD, Demographics: Prior History of Mental Illness, Self-esteem, Self-blame and Guilt Factor 1: Lowered Self-esteem, and Social Support Factor 1: Negative Relational Changes and Responses do predict SSS at any one time. There were fewer significant predictors of Diagnosis across time although Diagnosis of ASD appeared to predict a greater likelihood of being diagnosed with PTSD, while several other variables played a more limited and unpredictable role in the likelihood of PTSD at Weeks 4, 12 and 24.

The second set of longitudinal analyses sought to identify variables which predict change in SSS across time in relation to participants who attended all four interviews. The results suggest that a diagnosis of ASD is the predictor which comes closest to being a statistically significant predictor of change in SSS across time, although the results are not able to provide a more detailed account of the trajectory of PTSD symptomatology across time.

In both sets of analysis it was noted that there was evidence of a complex set of relationships amongst the predictor variables which are likely to inform both the course of PTSD symptomatology over time and the trajectory of change in PTSD symptomatology over time. Exploration of these mediating and/or moderating relationships would require more

sophisticated statistical analysis of the data, which is unfortunately not possible in this study because of sample size constraints.

Chapter 10

Discussion

10.1 Introduction

This final chapter provides a summary of the key findings of this study, followed by a discussion of the implications of these findings. The synopsis of the findings is divided into three sections which speak to the four levels of analysis conducted on the data collected for this research. The first set of findings which are reported relate to the psychiatric and psychological impact of rape across time. The second set of findings refers to the pre-assault, assault and post-assault variables which were identified as predictors of a vulnerability to the development of PTSD at 4, 12 and 24 weeks, post-rape. The third level of analysis sought to develop a longitudinal perspective in relation to the variables found to be significant in predicting PTSD symptomatology across time and is divided into two parts. The first reports on the predictors of PTSD at each specific timeframe and the second provides a synopsis of the variables which predict change in PTSD symptom severity, across time, in participants who attended all four interviews.

The second part of the chapter offers a discussion of the implications of the findings in relation to five particular domains – the implications of the findings in relation to this study's initial research questions, theoretical implications, research implications, and applied implications and a consideration of the limitations of the study. The chapter is brought to a close with a brief review of the chapter and concluding comments.

10.2 Impact of rape across time

With regard to psychiatric impact, there was evidence of a high degree of distress in the immediate aftermath of rape in relation to a range of both Mood and Anxiety Disorders, as well as evidence of ongoing difficulties related to both categories across the subsequent interviews. It was suggested that the diagnostic category of ASD as assessed at Week 1 and a diagnosis of PTSD, as elicited via the PDS, offered the most efficient way of quantitatively tracking the psychiatric impact of the rape on the women taking part in this study. On that basis, over two-thirds of the survivors (71.67%) taking part in the study met the criteria for a diagnosis of ASD at the Week 1. At Week 4, 12, and 24 interviews, over half of the women participating in the research met the criteria for a diagnosis of PTSD - 71.43%, 54.05% and

56.76% respectively. These figures are comparable to the rates of PTSD reported by Rothbaum et al. (1992) which were based on a sample of 92 women, the majority of whom presented with a complaint of rape at an inner city hospital within two weeks of the rape. Rothbaum et al. (1992) found that within 12 days post-rape 94% of the women met the criteria for PTSD. This decreased to 65% four weeks post-rape and 47% 12 weeks post-rape. This research constitutes one of the seminal studies, still frequently cited, which is argued to evidence that rape survivors are at the highest risk for the development of PTSD and that there is a discernable pattern of recovery amongst rape survivors from PTSD across time.

With reference to the psychological impact of rape over time, approximately half of the survivors reported lowered self-esteem in the immediate aftermath of the rape with evidence of a steady improvement in self-esteem over time. The results suggest that there is a complex relationship between self-blame and guilt in relation to the rape: Approximately half of the survivors blamed themselves for the rape, but a minority felt that they could have prevented the rape and these perceptions fluctuated within individuals over time. An increase in negative perceptions of the world post-rape was evident amongst the survivors, with a marked drop in perceptions of safety particularly outside the home. Less than a third of the women in this study reported negative changes in relationships and unsupportive responses post-rape. With regard to the psycho-social needs which arose out of the rape, the need for counselling, safe housing, education and employment were most commonly cited across all the interviews. The need for counselling and safe housing evidenced some decrease across time, but the need for education and employment remained relatively constant. It is interesting to note that although the need for counselling was relatively high, suggestive of psychological distress, the number of women who made use of counselling services was relatively small. Initially this seemed to be primarily attributable to a lack of information and logistical constraints. At subsequent interviews logistical constraints remained salient and an apparent ambivalence towards going for counselling also became evident.

Overall a high degree of both psychiatric and psychological distress was evident in over half of the women taking part in this study. In the main these findings are in keeping with the body of literature referred to in Chapter 3 highlighting the highly pathogenic consequences of rape, which have come to be dominated by the diagnostic category of PTSD. Measured through that lens, the findings of this study are in keeping with the findings reported in the literature.

10.3 Identifying pre-assault, assault and post-assault variables which predict a vulnerability to developing PTSD

The next level of analysis sought to identify pre-assault, assault and post-assault variables measured at 1, 4, 12 and 24 weeks post-rape which might assist in predicting a vulnerability to developing PTSD at those timeframes. A prior history of mental illness, a diagnosis of ASD at Week 1 and lowered self-esteem, as measured at Week 1, appeared to be the most consistent predictors of a higher Symptom Severity Score (SSS) on the PDS at Weeks 4, 12, and 24. Negative relational changes and responses, feelings of guilt and worthlessness, self-blame and assault and rape details, appeared to play a role in higher SSS across time, but in a less predictable way. There were fewer significant predictors of a Diagnosis of PTSD on the PDS across time and none which consistently predicted an increased likelihood of a diagnosis of PTSD at each of the timeframes; a diagnosis of ASD appeared to predict a greater likelihood of being diagnosed with PTSD, but not consistently so.

The finding in this study, that a diagnosis of ASD might predict the development of PTSD, is noteworthy. While some authors have argued that ASD may be a precursor to the development of PTSD (Bryant, et al., 2000), the veracity of the ASD diagnosis has been contested and findings have been mixed with regards to the predictive power of ASD in relation to PTSD (Bryant, 2004). Furthermore, the few studies conducted on ASD amongst survivors of rape suggest that the diagnosis is of limited use in identifying women most at risk for developing PTSD (Elklit & Christiansen, 2010). The findings from this study appear to lend some support to the argument that ASD might provide a useful way of assessing a survivor's vulnerability to developing PTSD, however, this needs to be considered in relation to other factors which appeared to predict the subsequent development of PTSD in this study. These factors are in keeping with the broader literature which suggests that survivors with a history of psychiatric illness are more vulnerable to PTSD post-rape, that negative cognitive appraisals relating to self-esteem, self-blame and guilt can influence vulnerability to PTSD and that, in relation to social support, unsupportive responses are associated with greater symptomatology post-rape. It is noteworthy that in this study a prior history of trauma was not associated with a vulnerability to developing PTSD post-rape, an association which, whilst not unequivocal, does appear to have some degree of support in the literature.

10.4 Developing a longitudinal perspective in relation to the variables found to be significant in relation to predicting PTSD symptomatology

The previous set of analyses sought to identify predictors of a vulnerability to developing PTSD at Weeks 4, 12 and 24, post-rape. As such, the aforementioned results did not provide a longitudinal perspective in relation to the predictor variables, nor did the analysis offer any illumination in relation to describing the course of PTSD symptomatology itself, across the period of six months post-rape. The subsequent two sets of analyses focused on exploring this aspect of the data.

10.4.1 Predictors of PTSD at each specific timeframe

With reference to SSS, a prior history of mental illness appeared to be the most consistent predictor of a higher SSS at Weeks 4, 12 and 24 and a diagnosis of ASD at Week 1 was also a relatively stable predictor of elevated SSS at Weeks 4 and 12. Negative relational changes and responses and lowered self-esteem appeared to play a part in a higher SSS at Week 4, 12 and 24, though not consistently. There were fewer significant predictors of a diagnosis of PTSD on the PDS across time and little commonality with the significant predictors of SSS; a diagnosis of ASD appeared to predict a greater likelihood of being diagnosed with PTSD, but inconsistently.

As noted in relation to the findings of the analyses reported in the previous section, which sought to identify pre-assault, assault and post-assault variables which predict a vulnerability to developing PTSD, these findings are largely in keeping with the literature with regards to the salience of a prior history of mental illness, negative cognitive appraisals in relation to self-esteem, self-blame and guilt and unsupportive responses in relation to greater PTSD symptomatology post-rape. Similarly, the findings from this study appear to lend some support to the argument that a diagnosis of ASD at Week 1 might provide a useful way of assessing a survivor's vulnerability to developing PTSD at least at Week 4 and 12. There is however evidence of a complicated set of relationships between the variables at each of the timeframes, which precludes any assumption of a linear relationship between any particular variable and PTSD.

10.4.2 Variables which predict change in PTSD symptom severity across time in participants who attended all four interviews

The final level of analysis was undertaken to address the concern that, while the prior analyses offer a longitudinal perspective on the variables found to be significant in relation to predicting PTSD symptomatology at 4, 12, and 24 weeks post-rape, the analyses failed to consider the intra-individual patterns of change in PTSD symptomatology across time. The final level of analysis therefore set out to identify the variables which predict change in SSS in relation to participants who attended all four interviews.

The results indicated that a diagnosis of ASD at Week 1 is the only predictor which came close to being a statistically significant predictor of change in SSS across time, such that, as the ASDS (Acute Stress Disorder Scale) scores increased, so too did the likelihood of a higher SSS over time and vice versa. It is important to note, however, that the results are not able to provide a more detailed account of the direction of change in SSS over time. In addition, the analysis was not able to suggest which pre-assault, assault and post-assault variables might assist in predicting the trajectory of PTSD over time, in more detail.

In both sets of analyses there was evidence of a complex set of relationships amongst the pre-assault, assault, and post-assault variables, which are likely to inform the course of PTSD symptomatology over time and the trajectory of change in PTSD symptomatology over time. In order to more fully explore the implications of this complex set of inter-relationships between variables in relation to both ASD and PTSD, a substantially larger sample size would be needed to allow for a more sophisticated statistical analysis.

It is noteworthy that the majority of the limited number of longitudinal studies tracking the psychological impact of rape have been quantitative and have relied on the use of multiple regression statistics or repeated measures of variance (ANOVA), covariance (ANCOVA) or multivariate analysis of variance (MANOVA) or covariance (MANCOVA). Very few studies have met the conditions necessary for the use of more sophisticated analyses involving log linear analysis, SEM, individual pathway analysis or multi-level regression analyses. Even with the use of more sophisticated statistical analyses, longitudinal studies do not necessarily provide an inclusive picture of the ways in which a combination of multiple factors may contribute to increased levels of distress post-rape or which combination of factors might facilitate recovery over time. The development of ecological and multi-factorial models has

been driven, at least in part, by an attempt to acknowledge and elucidate the complex interplay between a number of individual and contextual factors which might both predict and account for similarities and differences in survivors' responses to rape. Nonetheless, the sheer number of factors which might arguably inform impact makes it very difficult to develop inclusive and comprehensive cross-sectional or longitudinal models.

10.5 General implications of the findings

10.5.1 Implications in relation to the initial research questions

Using the international research findings as the point of reference, this research was an exploratory study which sought to investigate whether the psychological impact of rape trauma in a group of women, living in a setting palpably different to the settings in which the majority of research has been conducted, present with similar symptoms of trauma. The hypothesis was that, whilst some of these symptoms may be present in this group of survivors, the diagnostic frames offered by research conducted in developed countries would be limited in representing the complexity of the lived experiences of this group of black, women, rape survivors living in a low socio-economic, urban context which contains multiple possibilities for continuous traumatisation on a number of levels, including economic, physical and psychological. It was further hypothesised that in order to more fully represent the impact of rape in the lives of a group of women living in extremely oppressive conditions, an understanding of the meaning of the rape in relation to these broader conditions would be necessary. The two research questions framing this study were thus phrased as follows:

- i. What are the mental health consequences of rape?
- ii. What is the nature of the relationship between these mental health consequences to the broader context within which the rape occurred?

With reference to the first question, the findings summarised above suggest that in the main, for this group of women, the mental health consequences of rape and impact trajectories were largely in keeping with several of the main trends evident in the broad body of literature measuring the impact of rape on mental health. Thus, in terms of psychiatric impact, there was a strong association of rape trauma with PTSD (which in this study was associated with a diagnosis of ASD in the immediate aftermath of rape). A prior history of psychiatric illness, and to some extent the degree of violence perpetrated during the assault, along with the critical role of post-assault variables, in particular negative social support and meaning-

making (which includes a degree of self-blame and guilt), all played a part in informing post-rape sequelae.

It is noteworthy that a past history of rape did not appear to play a part in accounting for post-rape sequelae and only four women reported additional traumatic events experienced in their lives over and above that of the rape. Similarly, in terms of current exposure to violence, in general the women reported either no or only one incident of either witnessing or being a victim of violence other than rape, with little difference evident with regard to whether the violence was a stranger-, acquaintance- or family-related. This was surprising given that all the women taking part in the research lived in areas with high levels of crime and concomitant high levels of fear. The implication of this finding will be considered more fully in *Section 10.5.3 Research implications* below.

Thus in relation to the second question, it would seem that the diagnostic frames offered by research conducted in the developed countries, particularly the USA, are able to capture something of the lived experience of a group of rape survivors living in a context which differs substantially from the contexts within which the majority of the research has been conducted. Furthermore, in keeping with dominant trends reported in the literature in this study, socio-demographic variables – age, race/ethnicity, level of education, employment status, and marital status – were not associated with psychiatric or psychological impact post-rape. This finding may be, at least in part, attributable to the limited variability with regard to demographics amongst the women in this study, which might have impacted on the possibility of identifying any socio-demographics as predictors of/or contributing to mental health difficulties. This argument could also be made in relation to the international literature, which also often relies on relatively homogenous groups of survivors in terms of socio-demographics; few studies seek to include women from a range of socio-demographic contexts in order to assess the impact of socio-demographics with more precision. In addition, it is extremely difficult to disaggregate socio-demographic variables from socio-cultural identity and the way in which social and cultural norms and role expectations inform the survivor's world view, which in turn impacts on whom survivors may turn to in the aftermath of rape, how they may be responded to and how survivors themselves narrate and make meaning of their experiences.

The aforementioned notwithstanding, it remains noteworthy that, in this study, no association was found between socio-demographic variables and post-rape impact. In the main, for this

group of women, the mental health consequences of rape and impact trajectories were largely in keeping with several of the main trends evident in the broad body of literature measuring the impact of rape on mental health. The implications of these findings theoretically, with regard to research, and practically, are discussed below.

10.5.2 Theoretical implications

The findings of this study are generally in keeping with the main trends reported in the broad body of literature measuring the impact of rape on mental health. This may seem to simply add support to an already sizable body of research which confirms the veracity and legitimacy of PTSD as being the most efficient and comprehensive way of describing and measuring post-rape psychopathology. Furthermore, the findings appear to confirm that, regardless of socio-demographic variables, vulnerability to developing PTSD post-rape is high and there are specific pre-assault, assault and post-assault factors which play some role in predicting the degree of vulnerability. In addition, the findings of this study offer some evidence in support of the predictive power of a diagnosis of ASD, in the immediate aftermath, in relation to the subsequent development of PTSD. However, given the complex and disputed nature of the history of the study of psychological trauma, the contested role of PTSD in that history and how the study of the psychological impact of rape interfaces with that history, it would be injudicious to assume that the main findings of this study unequivocally endorse such a conclusion without some reflection on the key debates highlighted in Chapter 2 and Chapter 4.

The findings appear to lend support to the proposition that the study of the psychological impact of trauma represents a progressive development towards a unified body of knowledge, which has culminated in the diagnostic category of PTSD. However, as highlighted in the aforementioned chapters, such an assumption has been strongly contested, and compelling arguments have been made in relation to the fundamentally different principles which have underpinned various developments in the field, and which have been driven by specific socio-political contexts and imperatives. Furthermore the diagnostic category of PTSD has been questioned on the basis of its socio-political roots, the lack of any neurological signifiers directly associated with PTSD, the complexity of the aetiology of PTSD and the fact that PTSD shares a number of symptoms with other disorders.

The focus on PTSD as an index for assessing the psychological impact of rape begs the question of whether the diagnostic category adequately captures key aspects of rape trauma and what may be lost through a focus on PTSD. It is noteworthy that research on the psychological impact of rape grew out of the feminist movement of the 1970s and, in relation to the complex history of the study of psychological trauma, coincided with the introduction of PTSD into the DSM III. The introduction of PTSD into the DSM III was seen by some as representing the logical endpoint in the progressive development towards a unified body of knowledge, and by others as representing yet another trajectory driven by specific socio-political imperatives – in this case the Vietnam anti-war movement interfacing with a move towards the medicalisation and consequent depoliticisation of human suffering. For the study of the psychological impact of rape this proved to be a timeous and fruitful moment in history, which allowed for the foregrounding of the pathogenic impact of rape through a recognised and legitimate diagnostic category. Over the past 40 years research on the psychological impact of rape has burgeoned and has come to be dominated by the diagnostic category of PTSD. This dominance is not without its critics, and in relation to rape trauma it has been argued that this focus narrows the scope and range of our understanding in terms of defining what constitutes rape, understanding the complex ways in which individuals experience and respond to those experiences and how broader contextual issues inform those processes.

In light of these complex debates, both in relation to the history of the study of psychological trauma and the diagnostic category of PTSD, at the end of Chapter 4 a middle road was proposed: One which recognises the problematic nature of the PTSD diagnosis, which does not and cannot capture everything of interest about psychological/psychiatric responses to trauma/rape, but nonetheless may be argued to offer a way of conceptualising a particular kind of response to trauma/rape evidenced in a substantial minority of survivors. Thus, the findings of this study appear to confirm that psychiatric instruments measuring PTSD might accurately measure and categorise certain phenomena and identify particular patterns of responses to rape. But to say that these findings, therefore, provide evidence of a fundamental sameness in responses between adult female survivors of rape from very different socio-demographic contexts would be a leap too far. Instead, the findings can be taken to mean that psychiatric instruments measuring PTSD are weighted on the side of reaching generalisations, rather than describing the multi-layered and nuanced lived experiences of individual survivors and as such are able to capture a particular aspect of rape trauma, but not

the full experience. The implications of this for research on the psychological impact of rape on under-researched populations are discussed below.

10.5.3 Research implications

The implications for research in light of the findings of this study and their meaning in relation to theoretical considerations may be broadly divided into two main areas. Taking the findings at face value, it would be useful to more fully explore the finding that ASD was the single most consistent predictor (though not significantly so) of a vulnerability to the subsequent development of PTSD. Although findings have been mixed with regard to the predictive power of ASD in relation to survivors of trauma (not limited to sexual violence), Peleg and Shalev (2006) assert that in longitudinal studies of PTSD “[p]ractically ASD and persistent dissociation are extremely good identifiers of potential problems” (p. 601). The limited research on ASD amongst adult female survivors of rape seems to suggest that ASD is of limited use in identifying women most at risk for developing PTSD (Elklit & Christiansen, 2010). In addition, given the debates relating to whether it is ASD itself or the assessment of degree of dissociation incorporated within the assessment of ASD (Bryant, 2004), it might be instructive to understand what particular aspects of the diagnosis of ASD are most strongly associated with the subsequent development of PTSD.

In addition, the findings of this study suggest that there are several pre-assault, assault and post-assault variables which are associated with a vulnerability to developing PTSD, however, results also suggested a complex interplay between these factors which might account for similarities and differences in individual survivors’ responses to rape. In particular, more recent research has focused on the way in which meaning-making informs post-rape impact and on how the process may be mediated by several factors relating to pre-assault, assault and post-assault variables. Furthermore, research suggests that meaning-making is informed by socio-cultural identity, and social and cultural norms which inform a survivor’s world view, thereby informing how experiences of sexual coercion/violence/rape are interpreted and responded to. Whether quantitative research instruments are able to illuminate this intricate web of relationships is questionable and in-depth qualitative interviews with survivors might allow for a more nuanced and detailed exploration of this complex set of relationships.

The question of how to more fully represent the lived experiences of research participants is, arguably, highlighted in this study by the finding noted earlier in this discussion (*Section 10.5.1 Implications in relation to the initial research questions*), that the questionnaires screening for exposure to violence both past and current evidenced surprisingly low numbers of reported incidents amongst a group of women living in areas with very high levels of crime and violence. Previous research indicates that when research participants live in contexts of continuous violence the ability to accurately recall and report experiences of violence may be compromised (Brandt, et al., 2004). In light of what might be expected, and based on anecdotal evidence emerging out of conversations between interviewers and interviewees before and after the research interviews themselves, it seems clear that the measures used in this study to assess past and current exposure to violence were unable to adequately represent either the degree of insidious daily trauma experienced by the women taking part in the study and/or the range and severity of exposure to traumatic events experienced throughout their lifetime. This finding does not seem to be attributable solely to the use of quantitative measures; doctoral research currently underway with women living in similarly oppressive contexts using both quantitative and qualitative methods to elicit exposure to trauma has revealed a similarly puzzling pattern (Sarah Crawford-Browne, personal communication, 22 February, 2013). Perhaps this returns us to the arguments made by Young (1995), Leys (2000) and others, discussed in Chapter 2, which suggest that the study of trauma does not represent a progressive development towards a unified understanding of the psychological impact of trauma, and that such an assumption actually obfuscates the possibility of elucidating the ways in which individuals in particular socio-demographic and political contexts experience, respond to and make meaning of adverse life circumstances.

Alternatively, it could be argued that whilst the study of the psychological impact of trauma has brought us some way towards better understanding and responding to the needs of trauma survivors, it remains a work in progress. Since the introduction of PTSD into the DSM, several constructs have been introduced to account for complicated forms of traumatic stress including Complex Post-Traumatic Stress Disorder (Herman, 1992a), Developmental Trauma Disorder (van der Kolk, 2005) and Historical Trauma (Gone, 2009) or Collective Trauma (Kira, 2001). More recently, in relation to survivors living in contexts with multiple sites and possibilities for ongoing traumatisation on a number of levels, interest has been growing on understanding the impact of living in contexts of Continuous Traumatic Stress (Eagle &

Kaminer, In press-b). This concept recognises that whilst individuals living in contexts of ongoing threat may well have experienced prior and multiple exposure to traumatic events, the current context of ongoing threat is primary and real and unlikely to be resolved by usual systems of law and order (Eagle & Kaminer, In press-a). These contextual factors are likely to profoundly inform the ways in which individuals in those contexts respond to, experience and make meaning of their daily lives and any specific traumatic events they may survive whilst living in those contexts.

It seems clear from the discussion above that the research implications of the findings of this study are informed by the theoretical lens one chooses when viewing the findings. This holds true for any consideration of the practical implications of the findings of this study, which are discussed in the following section.

10.5.4 Applied implications

On the face of it the main findings of this study appear to suggest that women assessed to be highly traumatised in the immediate aftermath of rape (as evaluated through an ASD score), are most in need of some form of therapeutic intervention. In a context of limited resources this seems to suggest that assessment of ASD in the immediate aftermath of rape would provide a useful screening tool or starting point for identifying women most at risk for PTSD and that appropriate and efficient intervention strategies could then be developed for the women identified as most at risk. It is important to note, however, that it is not clear whether early intervention for symptoms of ASD would necessarily reduce PTSD symptomatology and what form such an intervention should take.

The nature and utility of therapeutic interventions in the immediate aftermath of trauma has fuelled much debate (Bryant, 2004). A middle ground on this issue seems to point to ensuring that early interventions should be guided by the principles of psychological first-aid, such an intervention does not interfere with the natural recovery process, but rather seeks to enable and support the conditions needed to promote a natural process of recovery (Brewin, 2003). According to Shalev (2002), the principles of psychological first-aid focus on:

1. First restoring physical safety;
2. Ensuring that the seriousness of the trauma is acknowledged by those support systems who survivors first turn to, more often than not, family and friends and possibly extending to employers and the broader community;

3. Providing contact details or links to formal support networks so that the survivor can access these services should she wish to;
4. Providing information pertaining to the forensic (why and how forensic evidence is collected and what will happen to that evidence), clinical (information about medication and side-effects, dates for follow up appointments etc.) and legal (contact details for investigating officer, prosecutor etc.) aspects of the process.

It is noteworthy that, with reference to the aforementioned principles, the majority of women taking part in this study reported that they had returned to a safe place after their initial visit to the TCC, and that in the main they had accessed and received positive support from their social network. In addition, the women in this study had accessed the TCC which seeks to provide a comprehensive service in terms of forensic, clinical and legal support. Nonetheless at 4, 12, and 24 weeks post-rape over half of the women participating in the research met the criteria for a diagnosis of PTSD, which appears to indicate that, even when the necessary conditions enabling natural recovery processes were met, over half of the survivors developed PTSD.

This finding would seem to suggest that just over half of the women taking part in this study were in need of some sort of psychological/psychiatric support. As noted in *Chapter 7: Section 7.6.2 Mental health and counselling*, this is a need which the women themselves appeared to endorse; in the assessment of psycho-social needs, counselling was the greatest need at the Week 1 and Week 4 interview and remained in the top four most frequently reported needs across all four timeframes. According to the TCC protocol, counselling support is routinely provided for survivors seen there, both at the first appointment and at subsequent follow-up appointments. In addition, women taking part in this study, who indicated a need for counselling, were referred directly to Rape Crisis, an NGO which provides counselling services for survivors and which, at the time of the study was based at the SBC which is where the interviews for this study were conducted. Nonetheless, across all four interviews, on average, only a fifth of the women reported receiving counselling. Whilst lack of awareness of the availability of counselling and logistical constraints appeared to be the greatest barriers to receiving support in the immediate aftermath of the rape, at the subsequent interviews logistical constraints seemed to continue to pose serious difficulties for survivors wishing to access counselling as did an apparent ambivalence about whether counselling was actually wanted, despite an expressed need for it.

The counselling services offered at the TCC or Rape Crisis are provided by trained lay counsellors and as such treatment of PTSD per se is not a focus of the counselling model, but is more in keeping with the principles of psychological first-aid. Today standard treatment directed at PTSD is usually provided by professional mental health practitioners often with particular expertise in trauma and is guided by cognitive-behavioural principles (Foa & Rothbaum, 1998; Yehuda, 2002b). Thus it could be argued that the counselling services offered at the TCC and by NGOs such as Rape Crisis may not be able to meet the needs of women suffering from a diagnosis of PTSD post-rape. Without a better understanding of what the women in this study hoped for and needed in relation to counselling services, such a conclusion would be premature. In addition, in light of the discussion in the previous section relating to the difficulty of more fully representing and understanding the lived experiences of the women taking part in this study, and the limitations of the PTSD diagnosis in relation to contexts of continuous trauma, a narrow focus on the treatment of PTSD, without a more fully considered evaluation of psychological needs, would be likely to fail in terms of providing effective and comprehensive mental health care post-rape.

10.6 Limitations

As noted in the concluding section of Chapter 6 the women taking part in this study constituted a non-probability sample and were not seen to be representative of rape survivors who report rape in South Africa or the Western Cape. Nonetheless, relative to the comparative international, national and regional data referred to in the aforementioned chapter, it could be argued that the survivors taking part in this study were similar in relation to the demographics reported in the national and regional research and in relation to the details of the rape, as reported in the regional, national and international literature. It could, therefore, be argued that the results summarised in this chapter may be generalised to a broader group of adult female survivors presenting at a public health facility with a complaint of rape.

Nonetheless the sample size is small, which limits statistical power and, given the large number of significance tests conducted in the analysis of this data, it is important to note that results reported in Chapter 8 and Chapter 9 should be interpreted with caution due to a likely inflated Type I error. Furthermore, as noted earlier in this chapter, the results from the analyses indicated that there is a complex set of mediating and moderating relationships amongst a number of variables which would need to be taken into account to more fully

explicate the nature of the relationships between variables and their impact on the course of PTSD symptomatology over time. Once again the small sample size in this study precluded the application of more sophisticated and nuanced statistical analyses which might have shed more light on these relationships.

With regard to the assessment instruments used in this study, selection was informed by a consideration of the tools most frequently used in the assessment of the psychological impact of rape in the international field, which could be administered by interviewers who were not mental health professionals and would also be most pertinent to the participants in this study and which would allow for comparison with international findings. No instruments specific to the assessment of rape trauma have been standardised in South Africa, but the standardised instruments used in this study have been standardised in developed countries, in particular the USA, and evidenced good reliability and validity. These instruments were supplemented by several questionnaires developed specifically for this study. Translation of all the instruments into isiXhosa and Afrikaans followed the procedures recommended in the literature and was supplemented with an additional four-day workshop to address issues related to the complexity of interpretation, meaning and cultural sensitivity in relation to each translated question. Nonetheless, it is possible that some accuracy in relation to specific questions was lost in translation, which would ultimately have a bearing on the findings of this study.

Perhaps of more concern is the question of whether the research instruments employed in this study accurately and comprehensively captured whatever particular aspect of mental health post-rape the instrument sought to assess. This is arguably of particular interest in relation to the measures used to assess the degree of ASD severity post-rape in the immediate aftermath of rape and PTSD symptomatology 4, 12 and 24 weeks post-rape. The diagnostic category of ASD is itself contested and studies suggest that the ASDS satisfies the criteria for content validity, convergent validity and test-retest reliability. However, with reference to predictive validity of the ASDS in relation to PTSD the optimal cut-off score incorrectly identified 33% of participants to be at risk for developing PTSD, who subsequently did not develop PTSD (Bryant, et al., 2000). On the basis of these findings Bryant et al. (2000) caution that the results of the ASDS should be supplemented by additional assessments to identify participants at risk of developing PTSD. This caution does speak to the finding in this study that, although ASD appeared to be the most consistent predictor for the subsequent development of PTSD, there were clearly several additional variables which informed a

vulnerability to the development of PTSD with evidence of a complex interplay between the variables.

With regard to the assessment of PTSD symptomatology at 4, 12 and 24 weeks post-rape it was argued that the PDS provided a more accurate reflection of PTSD rates than the MINI and this was attributed to differences between the two measures in terms of language, phrasing and structure of the questionnaire. It is noteworthy that both measures evidence good validity and reliability. In addition, the MINI was the only instrument used in this study which has been previously translated into Afrikaans and isiXhosa and, although it has not been validated in South Africa, it has been used in research conducted in the South African context. Nonetheless, the two instruments yielded very different PTSD rates. The finding suggests that even when participants are assessed in their first language, their responses to questions about PTSD symptoms vary substantially depending on how exactly questions are phrased, which in turn alters the reported rates of PTSD.

Finally, as discussed earlier in this chapter (see *Section 10.5.2 Theoretical implications*), whilst this study has drawn on PTSD as a lens through which to measure the psychological impact of rape, a tension remains between drawing on the findings of this study to illuminate and deepen our understanding of the impact of rape over time whilst simultaneously recognising the limitations of such an approach and identifying what might be obscured through adopting this particular viewpoint.

10.7 Conclusion

In short, analysis of the data drawn from this study indicates that there was evidence of a high degree of both psychiatric and psychological distress over a period of six months from the time of the rape, in over half of the women taking part in this study. With reference to ASD over two-thirds of the survivors met the criteria for the diagnosis at the Week 1 interview, and over half of the women participating in the research met the criteria for PTSD at the subsequent interviews. A diagnosis of ASD, a prior history of psychiatric illness, negative cognitive appraisals relating to self-esteem, self-blame and guilt, and unsupportive responses all appear to play a role in predicting a vulnerability to developing PTSD over time. It is, however, noteworthy that there is evidence of a complicated set of relationships between a number of variables at each of the timeframes, which precludes any assumption of a linear relationship between any particular variable and PTSD. With regard to variables which predict change in PTSD symptom severity across time, ASD was the only predictor which

came close to being a statistically significant predictor of change in symptom severity. Though, once again, there was evidence of a complex set of relationships between pre-assault, assault and post-assault variables which seem to influence the course of PTSD over time.

In the main these findings are in keeping with several of the main trends evident in the broad body of literature measuring the pathogenic consequences of rape and appear to lend support to the evidence of the predictive power of a diagnosis of ASD in relation to the subsequent development of PTSD. These findings seem to suggest that instruments measuring the pathogenic impact of rape, in particular PTSD, are able to capture something of the lived experience of a group of rape survivors living in a markedly different context to the contexts within which the majority of the research has been conducted.

That being said, as highlighted in the second part of this chapter, there are a number of factors which preclude the conclusion that the findings of this study simply confirm the veracity and legitimacy of PTSD as being the most efficient and inclusive way of describing and measuring the pathogenic consequences of rape. This includes recognising that PTSD is a highly contested diagnostic category, which has nonetheless come to dominate the trauma field including studies relating to rape trauma, at least in part, because of a particular confluence of factors at both a broader societal level and in relation to the development of the field of psychiatry and the study of psychological trauma including rape.

Furthermore, even if, as has been proposed in this research, PTSD may be argued to offer one way of measuring a particular kind of response to rape trauma, albeit a limited one, results from this study indicate that the relationship between rape and PTSD is clearly not a linear one, but is moderated and mediated by a range of pre-assault, assault and post-assault variables, and the relationship between these variables and the development and course of PTSD over time requires further exploration and elucidation. In particular, evidence from this study is in keeping with a growing recognition in the literature of the critical role of the ways in which survivors make meaning of their experiences when seeking to understand and predict similarities and differences in individual survivors' responses to rape.

The aforementioned notwithstanding, the findings of this research indicate that, for this group of women, the mental health consequences of rape and impact trajectories were largely in keeping with several of the main trends evident in the substantial body of literature measuring the impact of rape on mental health, particularly in relation to the diagnostic category of

PTSD. It is not, however, as easy to summarise the meaning and implication of these findings, which need to be considered in relation to a number of caveats relating to the complex relationship between a range of variables and the measurement of post-rape impact. In addition, the meaning and implication of these findings alter in relation to the theoretical lens through which one views the research – most simply represented as a binary between a medicalised psychiatric understanding of trauma and a critical and socio-politically informed reading of trauma. Ultimately it is hoped the findings of this study contribute towards our understanding of the impact of rape over time on a poorly researched population, whilst remaining cognisant of the shortfalls of such an approach, both of which could inform the development of future research in this field.

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Appendix A
Protocol cover sheet

Name of participant: _____

Number assigned to the participant: _____

Date of interview: _____

Number of this interview (circle):

Week 1

Week 4

Week 12

Week 24

Name of interviewer: _____

Appendix B
Contact Details Report Form

Participant Number:	<hr/>
Date of interview:	<hr/>
Interview no.:	Baseline 1 wk 4 wks 12 wks 24 wks
Interviewer's name:	<hr/>

Thank you for agreeing to be part of this research. I am going to start by asking you some questions about your contact details.

1. What is your full name?

2. What do you like to be called?

3. What is your address?

4. Is this your mailing address? Yes / No

5. If no, note mailing address below:

6. Is it ok if we send you mail to this address? Yes / No

7. Is there a home phone number where we can contact you? Yes / No

If yes, list home phone number below:

9. Is it ok if we leave a message for you at this number if you are not there? Yes / No

10. Is there a work phone number where you can be reached? Yes / No

If yes, list work phone number below:

11. Is it ok if we leave a message for you at this number? Yes / No

12. Is there a cell phone number where you can be reached? Yes / No

If yes, note phone number below:

13. Is it ok if we leave a message for you at this number? Yes / No

14. What is the best way to contact you? _____

15. Could you give me the names and phone numbers of two people who we could contact to locate you if we cannot locate you at the above numbers?

i.

ii.

University of Cape Town

Appendix C
Demographics Report Form

Participant Number:	<hr/>
Date of interview:	<hr/>
Interview no.:	Baseline 1 wk 4 wks 12 wks 24wks
Interviewer's name:	<hr/>

These questions are about your age, your relationships, who you live with and your work.

- | | |
|-----------------------|--------------------|
| 1. Age/ Year of birth | <hr/> |
| 2. Race | Black African = 1 |
| | Black Coloured = 2 |
| | Asian = 3 |
| | Indian = 4 |
| | White = 5 |
| | Other = 6 |

3. First Language

Sepedi = 1

Sesotho = 2

Setswana = 3

siSwati = 4

Tshivenda = 5

Xitsonga = 6

Afrikaans = 7

English = 8

isiNdebele = 9

isiXhosa = 10

isiZulu = 11

4. Relationship status

Single/ Never married = 1

Living with partner = 2

Partnered but not living with partner = 3

Married = 4

Separated/ Divorced = 5

Widowed = 6

5. Sexual orientation

Gay/ lesbian/ homosexual = 1

Straight/ heterosexual = 2

Not sure = 3

Decline to state = 6

6. How many children do you have?

7. What area do you live in?

8. Where are you living?

House = 1

Shack on serviced site = 2

Shack on unserviced site = 3

Other. Specify _____ = 4

9. How many rooms are there in that dwelling?

10. How many people do you live with?

11. What is the highest level of education you have completed?

No schooling = 1

Grade 3/ Std 1 or less = 2

Grade 4/ Std 2 = 3

Grade 5/ Std 3 = 4

Grade 6/ Std 4 = 5

Grade 7/ Std 5 = 6

Grade 8/ Std 6 = 7

Grade 9/ Std 7 = 8

Grade 10/ Std 8 = 9

Grade 11/ Std 9 = 10

Grade 12/ Std 10 = 11

Any tertiary/ university = 12

12. Do you have a job:

Yes = 1

No = 2

13. If you have a job, what do you do? _____

14. Have you been back to work since the rape?

Not applicable = 0

Yes = 1

No = 2

15. If you have not gone back to your job yet, do you think you will go back to this job when you have recovered?

Not applicable = 0

Yes = 1

No = 2

Unsure = 3

16. What is your current monthly income, before taxes?

R800 or less = 1

R800 - R 1000 = 2

R1000 – R 1500 = 3

R1 500 – R2 000 = 4

R 2000 – R 3 000 = 5

More than R3000= 6

Declined = 7

17. How many people do you support on your income?

Appendix D
Brief Assessment of Initial Reaction

Participant Number:	
Date of interview:	
Interview no.:	Baseline 1 wk 4 wks 12 wks 24wks
Interviewer's name:	

1. After the rape where did you **first** go for help?

Police = 1

Hospital = 2

Relative = 3

Friend = 4

Stranger = 5

Perpetrator = 6

Other, please specify _____ = 7

Don't know = 8

2. Did you talk to anyone to help you decide what to do?

Yes = 1

No = 2

3. If yes, who did you talk to?

4. After the rape who brought you to Thuthuzela? (Ring only one.)

Ambulance = 1

Police = 2

Relative = 3

Friend = 4

Stranger = 5

Perpetrator = 6

Came on own = 7

Other, please specify _____ = 8

Don't know = 9

5. When you arrived at Thuthuzela after the rape what did you expect would happen when you got there/ here? (Can ring more than one.)

Medical treatment = 1

Counselling = 2

See the police = 3

Forensic examination = 4

Treatment for STIs = 5

Treatment for HIV/AIDS = 6

Other, please specify _____ = 7

6. When you left/leave Thuthuzela after the examination where did/will you go? (Ring one only.)

Own home = 1

Home of family = 2

Home of friend = 3

Shelter = 4

Nowhere to go = 5

Other, please specify _____ = 6

7. How did/will you get there? (Ring one only.)

Taxi = 1

Train = 2

By foot = 3

Lift with police = 4

Lift with ambulance = 5

Lift with family or friend = 6

Other, please specify _____ = 7

8. Did/Will you feel safe there?

Yes = 1

No = 2

9. Have you spoken to anyone you are close to since the rape happened?

Yes = 1

No = 2

10. If yes, who did you speak to? (Can ring more than one.)

Not applicable = 0

Partner = 1

Parents/ Family = 2

Friend = 3

Professional person (doctor, police, mental health practioner, religious/ spiritual leader) =
4

Other, please specify _____ = 5

11. If no, why not? (Can ring more than one.)

Not applicable = 0

Haven't seen anyone = 1

Fear of reaction = 2

Unsure who to tell = 3

Other, please specify _____ = 4

12. What is your greatest medical/ health worry right now? (Ring one only.)

Pregnancy = 1

STIs/ Infections = 2

HIV/Aids = 3

Psychological/ mental health = 4

Other, please specify: _____ = 5

13. Other than medical/ health worries, what is your greatest worry right now?

Food = 1

Shelter = 2

Clothing = 3

Money = 4

Perpetrator will come back = 5

Reaction of partner/ family = 6

Other, please specify _____ = 7

14. What do you need most at the moment? (Ring one only.)

Food = 1

Shelter = 2

Clothing = 3

Money = 4

Protection = 5

Medical/ Health care = 6

Someone to look after me = 7

Other, please specify _____ = 8

15. Who would be most useful to you right now? (Ring one only.)

Partner = 1

Parents/ Family = 2

Friend = 3

Other, please specify _____ = 4

16. Can you describe to me how you felt straight after the rape? (Can ring more than one.)

Afraid = 1

Shocked = 2

Numb = 3

Tearful = 4

Hysterical = 5

Confused = 6

Sad = 7

Other, please specify: _____ = 8

17. Can you describe to me how you are feeling right now? (Can ring more than one.)

Afraid = 1

Shocked = 2

Numb = 3

Tearful = 4

Hysterical = 5

Confused = 6

Sad = 7

Other, please specify: _____ = 8

Appendix E
Details of the Rape Report Form

Participant Number: _____

Date of interview: _____

Interview no.: Baseline 1 wk 4 wks 12 wks 24wks

Interviewer's name: _____

Now I am going to ask you about the rape. You do not have to answer any questions which feel too personal or difficult to answer and we can take a break at any time you feel you need to.

1. When were you seen for your first medical examination at Thuthuzela?

Date: _____

2. What time was it when you were first examined at Thuthuzela?

Time: _____

3. What was the medical/forensic examination at Thuthuzela like for you?

4. On what date were you raped?

Date: _____

Now I am going to ask you some questions about the details of the rape. You may have answered some of these questions already when you described what happened. Some of the questions are personal and may be upsetting, please remember that you do not have to answer any questions which you feel are too personal or difficult to answer and we can take a break at any time you feel you need to.

7. Were you conscious at the time of the rape?

Yes = 1

No = 2

Unsure = 3

8. If no, what is the last thing you remember happening before you lost consciousness?

9. If no, what is the first thing you remember when you woke up/ became conscious again?

10. How many perpetrators were there?

11. How would you describe your relationship with the perpetrator(s)?

(Allow for spontaneous response and then prompt: For example was he a stranger, ex-boyfriend, husband etc.)

	#1	#2	#3	#4	#5
Husband					
Partner/ Boyfriend					
Ex partner/ boyfriend/ husband					
Family member					
Casual sex partner					
Someone who paid for sex					
Friend					
Family friend					
Acquaintance					
Lives in neighbourhood					
Stranger					
Employer/employee/ colleague					
Other, specify: _____					

12. If perpetrator(s) is (are) known to the survivor: Do you live with the perpetrator(s)?

#1	#2	#3	#4	#5
Yes	Yes	Yes	Yes	Yes
No	No	No	No	No

13. How old was/ were the perpetrator(s). If you don't know for sure can you estimate/ guess?

	#1	#2	#3	#4	#5
Younger than 20					
20 – 30					
31-40					
41 – 50					
51 – 60					
Older than 60					

Known					
Estimate					

14. What race was/ were the perpetrator(s)

	#1	#2	#3	#4	#5
White					
Black					
Coloured					
Asian					

15. Did the perpetrator(s) say anything to you when he/they attacked you?

Yes = 1

No = 2

Can't remember = 3

Declined = 4

16. If yes, what did he/they say?

17. Did the perpetrator(s) say anything to you while he was/they were raping you?

Yes = 1

No = 2

Can't remember = 3

Declined = 4

18. If yes, what did he/they say?

19. Did you say anything to the perpetrator(s)?

Yes = 1

No = 2

Can't remember = 3

Declined = 4

20. If yes, what did you say?

21. How did you react when he/they assaulted you? (Allow spontaneous response and then prompt re: did she physically resist and if so how – kicking, screaming, scratching, trying to run, freeze, submit etc.)

22. How did you react when he/they was/were raping/raped you? (Allow spontaneous response and then prompt re: did she physically resist and if so how – kicking, screaming, scratching, trying to run, freeze, submit etc.)

23. Why do you think you reacted to the assault in that way?

24. Why do you think you reacted to the rape in that way?

25. Can you describe how you felt during the assault? (Note: it is important to establish degree of perceived threat, i.e. did the survivor think she may be killed or die as a result of the assault?)

27. Were you abducted to another place?

Yes = 1

No = 2

Don't know = 3

28. Where did the rape occur?

Survivor's home = 1

Perpetrator's home = 2

Motor car = 3

Work place = 4

Alley = 5

Beach = 6

Public toilet = 7

Open space = 8

Don't know = 9

Other: Specify _____ = 10

29. Can you remember experiencing any of the following?

No = 0

Punched = 1

Kicked = 2

Hit = 3

Throttled = 4

Stabbed = 5

Other: Specify _____ = 6

30. Was a weapon used?

Yes = 1

No = 2

Unsure = 3

31. If yes, what was used?

Not applicable = 0

Knife = 1

Gun = 2

Bottle = 3

Screwdriver = 4

Don't know = 5

Other: Specify _____ = 6

32. Did any of the perpetrators put his penis into your vagina?

Yes = 1

No = 2

Don't know = 3

Declined = 4

33. Did any of the perpetrators use a condom when doing this?

Not applicable = 0

Yes = 1

No = 2

Don't know = 3

Declined = 4

34. Did any of the perpetrators ejaculate (finish) when doing this?

Not applicable = 0

Yes = 1

No = 2

Don't know = 3

Declined = 4

35. Did any of the perpetrators put his penis into your mouth?

Yes = 1

No = 2

Don't know = 3

Declined = 4

36. Did any of the perpetrators use a condom when doing this?

Not applicable = 0

Yes = 1

No = 2

Don't know = 3

Declined = 4

37. Did any of the perpetrators ejaculate (finish) when doing this?

Not applicable = 0

Yes = 1

No = 2

Don't know = 3

Declined = 4

38. Did any of the perpetrators put his penis in your anus (at the back)?

Yes = 1

No = 2

Don't know = 3

Declined = 4

39. Did any of the perpetrators use a condom when doing this?

Not applicable = 0

Yes = 1

No = 2

Don't know = 3

Declined = 4

40. Did any of the perpetrators ejaculate (finish) when doing this?

Not applicable = 0

Yes = 1

No = 2

Don't know = 3

Declined = 4

41. Did any of the perpetrators use an object in your vagina, anus or mouth?

Yes = 1

No = 2

Don't know = 3

Declined = 4

42. If yes, what object? (Wait for spontaneous replay and prompt only if necessary: For example a bottle, stick etc.)

43. Was there anything else that the perpetrator(s) did to you? (Allow for spontaneous response and then prompt, such as pulling her breasts, biting her, or other degrading acts)

Yes = 1

No = 2

Declined = 2

44. If yes, can you tell me what he/they did to you?

45. Can you describe any injuries you sustained as a result of the assault/ rape?

46. Was the perpetrator/ Were the perpetrators under the influence of alcohol at the time of the rape?

Yes = 1

No = 2

Don't know = 3

Declined = 4

47. Was the perpetrator/ Were the perpetrators under the influence of drugs at the time of the rape?

Yes = 1

No = 2

Don't know = 3

Declined = 4

48. If yes, what drug?

49. Were you under the influence of alcohol at the time of the assault/rape?

Yes = 1

No = 2

Don't know = 3

Declined = 4

50. Were you under the influence of drugs at the time of the rape/ assault?

Yes = 1

No = 2

Don't know = 3

Declined = 4

51. If yes, what drug(s)?

52. Were you pregnant at the time of the rape?

Yes = 1

No = 2

Don't know = 3

Declined = 4

53. If no, following the rape did you receive treatment to prevent pregnancy?

Yes = 1

No = 2

Don't know = 3

Declined = 4

54. Are you pregnant as a result of the rape?

Yes = 1

No = 2

Don't know = 3

Declined = 4

55. Do you know the HIV status of any of the perpetrator(s)?

Yes = 1

No = 2

Declined = 3

56. Before the rape did you know your own HIV status?

Yes = 1

No = 2

Declined = 3

57. Following the rape did you receive treatment for prevention of HIV/AIDS?

Yes = 1

No = 2

Don't know = 3

Declined = 4

58. If yes, did you take all the medication?

Not applicable = 0

Yes = 1

No = 2

Don't know = 3

Declined = 4

59. If no, why not?

60. After the rape were you diagnosed as HIV+ve?

Yes = 1

No = 2

Don't know = 3

Declined = 4

61. Did you report the rape to the police?

Not applicable = 0

Yes = 1

No = 2

62. If yes, how satisfied were you with the way the police managed your complaint?

Not applicable = 0

Satisfied = 1

Dissatisfied = 2

63. If no, why did you decide not to report the rape to the police?

64. Other than this rape, have you ever been raped before?

Yes = 1

No = 2

Declined = 3

65. If yes, how old were you?

#1 _____

#2 _____

#3 _____

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Appendix F
Details of the Rape Report Form: Follow-up

Participant Number:	
Date of interview:	
Interview no.:	Baseline 1 wk 4 wks 12 wks 24wks
Interviewer's name:	

Follow up questions on reporting rape to the police and subsequent contact

Note to interviewer: you will need to remember from the previous interview whether the rape was reported or withdrawn etc. If the rape was previously reported go to Question 1. If the participant has not up to this interview reported the rape go to Question 3.

These questions are about reporting the rape and your contact with the police since we last met.

If the participant **did** report the rape to the police:

1. Since we last met have you withdrawn the charge of rape that you made to the police?

Yes = 1

No = 2

If yes, can you say why?

2. If no, since we last met have you had any contact with the police about the rape?

Yes = 1

No = 2

If yes, what contact has there been?

If the participant **did not** report the rape to the police:

3. Since we last met have you reported the rape to the police?

Yes = 1

No = 2

If yes, why did you decide to report the rape now?

Follow-up questions related to pregnancy and HIV

Note to interviewer: it will be helpful to the interview if you can recall from the previous interview the survivor's pregnancy status and HIV status.

These questions are about pregnancy and HIV:

4. Since we last met has your pregnancy status changed?

Yes = 1

No = 2

Unsure = 3

Declined = 4

If yes, has your pregnancy status changed as a result of the rape? Please note way in which pregnancy status has changed (i.e. now pregnant but not as a result of the rape, pregnant as a result of the rape, pregnancy terminated, natural miscarriage, has given birth etc.).

5. Since we last met has your HIV status changed?

Yes = 1

No = 2

Unsure = 3

Declined = 4

6. If yes, has your HIV status changed as a result of the rape?

Yes = 1

No = 2

Unsure = 3

Declined = 4

Appendix G

Social Support I: Week 1

Participant Number:	
Date of interview:	
Interview no.:	Baseline 1 wk 4 wks 12 wks 24wks
Interviewer's name:	

These questions are about who you go to when you have worries or feel sad:

1. Before the rape, when you felt sad or upset who did you most often go to?

No one/ myself = 1

Friends or housemates = 2

Parents and/or other family members = 3

Child/ Children = 4

Husband/ Partner/ Spouse = 5

Support group/ Counsellor = 6

God = 7

Other, specify: _____ = 8

2. Since the rape who is the person in your life who has helped you the most when you have felt sad, worried or upset about the rape?

No one/ myself = 1

Friends or housemates = 2

Parents other relatives = 3

Child/ Children = 4

Partner/ Spouse = 5

Support group/ Counsellor = 6

God = 7

Other, specify _____ = 8

3. Since the rape who is the person in your life who has helped you the most when you have felt worried, sad or upset about other things (not about the rape)?

No one/ myself = 1

Friends or housemates = 2

Parents other relatives = 3

Child/ Children = 4

Partner/ Spouse = 5

Support group/ Counsellor = 6

God = 7

Other, specify _____ = 8

4. Since the rape have any of your close relationships changed in a way that feels bad to you?

No = 1

Yes =2

If yes, list which relationship(s):

5. Since the rape has anyone close to you been unhelpful or unsupportive to you about the rape?

No = 1

Yes =2

6. If yes, who has been unhelpful or unsupportive? (Can circle more than one.)

Not applicable = 0

Friends or housemates = 1

Parents and/ or other family members = 2

Child/ Children = 3

Husband/ Partner/ Spouse = 4

Support group/ Counsellor = 5

God = 6

Other, specify: _____ = 7

Appendix H
Social Support II: Week 4, 12 and 24

Participant Number:	
Date of interview:	
Interview no.:	Baseline 1 wk 4 wks 12 wks 24wks
Interviewer's name:	

These questions are about who you go to when you have worries or feel sad:

(Question 1 omitted).

2. Since we last met who is the person in your life who has helped you the most when you have felt sad, worried or upset about the rape?

No one/ myself = 1

Friends or housemates = 2

Parents other relatives = 3

Child/ Children = 4

Partner/ Spouse = 5

Support group/ Counsellor = 6

God = 7

Other, specify _____ = 8

3. Since we last met who is the person in your life who has helped you the most when you have felt worried, sad or upset about other things (not about the rape)?

No one/ myself = 1

Friends or housemates = 2

Parents other relatives = 3

Child/ Children = 4

Partner/ Spouse = 5

Support group/ Counsellor = 6

God = 7

Other, specify _____ = 8

4. Since we last met have any of your close relationships changed in a way that feels bad to you?

No = 1

Yes = 2

If yes, list which relationship(s):

4. Since we last met has anyone close to you been unhelpful or unsupportive to you about the rape?

No = 1

Yes = 2

5. If yes, who has been the most unhelpful or unsupportive?

Not applicable = 0

Friends or housemates = 1

Parents and/ or other family members = 2

Child/ Children = 3

Husband/ Partner/ Spouse = 4

Support group/ Counsellor = 5

God = 6

Other, specify: _____ = 7

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Appendix I
Self-blame/Guilt and Self-esteem Questionnaire - I

Participant Number:	
Date of interview:	
Interview no.:	Baseline 1 wk 4 wks 12 wks 24wks
Interviewer's name:	

These questions are about how you have felt about yourself since the rape.

1. Do you think that the rape happened because of something you did or said?

Yes = 1

No = 2

Don't know = 3

Declined = 4

If yes, can you explain:

2. Do you think there was something you could have done to prevent the rape from happening to you?

Yes = 1

No = 2

Don't know = 3

Declined = 4

If yes, what is it you thought you could have done?:

3. Do you blame yourself in any way for the rape?

Yes = 1

No = 2

Don't know = 3

Declined = 4

If yes, what do you blame yourself for?

4. Do you feel that you are worth less because of the rape?

Yes = 1

No = 2

Don't know = 3

Declined = 4

5. Has the way you feel about yourself changed in a negative way/ bad way because of the rape?

Yes = 1

No = 2

Don't know = 3

Declined = 4

If yes, what is it that you see negatively about yourself since the rape?

6. Do you feel that the rape took something away from you?

Yes = 1

No = 2

Don't know = 3

Declined = 4

If yes, what do you feel was taken away from you?

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Appendix J
Self-blame/Guilt and Self-esteem Questionnaire – II

Participant Number:	
Date of interview:	
Interview no.:	Baseline 1 wk 4 wks 12 wks 24wks
Interviewer's name:	

N.B. to say to the participant - These questions are about how you have felt about yourself since the rape. I asked you these questions when we last met. I am going to ask you the questions again and would like you to tell me which answer suits you best if you think about how your life has been since we last met.

1. Do you think that the rape happened because of something you did or said?

Yes = 1

No = 2

Don't know = 3

Declined = 4

If yes, can you explain:

2. Do you think there was something you could have done to prevent the rape from happening to you?

Yes = 1

No = 2

Don't know = 3

Declined = 4

If yes, what is it you thought you could have done?

3. Do you blame yourself in any way for the rape?

Yes = 1

No = 2

Don't know = 3

Declined = 4

If yes, what do you blame yourself for?

4. Do you feel that you are worth less because of the rape?

Yes = 1

No = 2

Don't know = 3

Declined = 4

5. Has the way you feel about yourself changed in a negative way/ bad way because of the rape?

Yes = 1

No = 2

Don't know = 3

Declined = 4

If yes, what is it that you see negatively about yourself since the rape?

6. Do you feel that the rape took something away from you?

Yes = 1

No = 2

Don't know = 3

Declined = 4

If yes, what do you feel was taken away from you?

Appendix K
Health Questionnaire - I

Participant Number: _____

Date of interview: _____

Interview no.: Baseline 1 wk 4 wks 12 wks 24wks

Interviewer's name: _____

These questions are about your health.

1. Before the rape would you say your health was:

1. Excellent

2. Very good

3. Good

4. Fair / OK/ Average

5. Poor/ Bad

2. If you have had physical health difficulties before the rape, what were the physical difficulties you were suffering from?

3. Since the rape/ we last met would you say your health has been:

1. Excellent

2. Very good

3. Good

4. Fair/ Ok/ Average

5. Poor/ Bad

4. If you have had physical health difficulties since we last met, other than the list we just went through, what are the physical difficulties you have been suffering from?

5. Since the rape/ we last met have you visited a clinic or doctor for medical reasons, other than for follow-up with the Thuthuzela staff?

Yes = 1

No = 2

6. What did the doctor/ sister/ nurse say was wrong? (You are checking here if the complaint had a physical basis or whether the complaint is a somatic one).

7. If medication was given, did the medication help?

Not applicable = 0

Yes = 1

No = 2

Unsure = 3

8. Since the rape/ we last met have you been in hospital/ hospitalised for psychiatric reasons?

Yes = 1

No = 2

9. If yes, when and what for?

10. Before the rape did you receive any medicine for emotional problems such as depression or stress/ anxiety problems?

Yes = 1

No = 2

11. Since the rape/ we last met have you received any medicine for emotional problems, such as depression or stress problems?

Yes = 1

No = 2

12. Before the rape did you ever go for counselling or see a therapist or counsellor?

Yes = 1

No = 2

13. Since the rape/ we last met have you gone for counselling or seen a therapist (for example at Rape Crisis, or Illitha Labantu)?

Yes = 1

No = 2

14. If no, why not? (Wait for spontaneous response and then prompt.)

Not applicable = 0

Didn't need help = 1

Didn't know there was counselling available = 2

Too embarrassed or afraid to go = 3

Not able to go for counselling for logistical reasons (e.g. no transport etc.) = 4

Other, please specify _____ = 5

15. If yes, was it helpful?

Not applicable = 0

Yes = 1

No = 2

Appendix L
Health Questionnaire - II

Participant Number:	
Date of interview:	
Interview no.:	Baseline 1 wk 4 wks 12 wks 24wks
Interviewer's name:	

These questions are about your health since we last met.

1. Omit.
2. Omit.
3. Since we last met would you say your health has been:
 1. Excellent
 2. Very good
 3. Good
 4. Fair/ Ok/ Average
 5. Poor/ Bad

4. If you have had physical health difficulties since we last met, other than the list we just went through, what are the physical difficulties you have been suffering from?

5. Since we last met have you visited a clinic or doctor for medical reasons, other than for follow-up with the Thuthuzela staff?

Yes = 1

No = 2

6. If yes, what did the doctor/ sister/ nurse say was wrong? (You are checking here if the complaint had a physical basis or whether the complaint is a somatic one).

7. If medication was given, did the medication help?

Not applicable = 0

Yes = 1

No = 2

Unsure = 3

8. Since we last met have you been in hospital/ hospitalised for psychiatric reasons?

Yes = 1

No = 2

9. If yes, when and what for?

10. Omit.

11. Since we last met have you received any medicine for emotional problems, such as depression or stress problems?

Yes = 1

No = 2

12. Omit.

13. Since we last met have you gone for counselling or seen a therapist (for example at Rape Crisis, or Illitha Labantu)?

Yes = 1

No = 2

14. If no, why not? (Wait for spontaneous response and then prompt.)

Not applicable = 0

Didn't need help = 1

Didn't know there was counselling available = 2

Too embarrassed or afraid to go = 3

Not able to go for counselling for logistical reasons (e.g. no transport etc.) = 4

Other, please specify _____ = 5

15. If yes, was is it helpful?

Not applicable = 0

Yes = 1

No = 2

Appendix M
Exposure to Violence Scale - I
Adapted Harvard Trauma Questionnaire

Participant Number: _____

Date of interview: _____

Interview no.: Baseline 1 wk 4 wks 12 wks 24wks

Interviewer's name: _____

This part of the questionnaire is concerned with your safety and your exposure to violence:

Please read/listen to each statement/sentence and then choose the answer which best suits what you think about the statement. The sentences are written as if you were saying the sentence, so it doesn't sound like a question but a statement you are making about yourself. For the first four questions there are four responses you can choose to tell me what you feel about the sentence, they are: Not at all, Somewhat (A bit), Usually (Most of the time) and Always. There is no right or wrong answer, I just want to know which response best describes how you feel about each statement. You can tell me or point to the response which suits you best for each sentence we read.

In the past twelve months up until you were raped/ In the twelve months before the rape:

1. I felt safe when I was at work

Not at all = 1

Somewhat = 2

Usually = 3

Always = 4 I felt safe when I was at home.

Not at all = 1

Somewhat = 2

Usually = 3

Always = 4

2. I felt safe outside my home.

Not at all = 1

Somewhat = 2

Usually = 3

Always = 4

3. I felt safe with my family.

Not at all = 1

Somewhat = 2

Usually = 3

Always = 4

The rest of the questions are yes or no answers. If you answer yes, I would like to know how often this has happened and you can choose between Hardly ever (this has happened but not very much), Sometimes (It has happened more than once or twice), A lot (this has happened many times). So in the last twelve months:

4. I have heard gunshots

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

5. I have seen a stranger being beaten up.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

6. I have seen someone I know (not a family member) being beaten up.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

7. I have seen a member of my family being beaten up.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

8. I have been beaten up by a stranger.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

9. I have been beaten up by someone I know (not a family member).

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

10. I have been beaten up by a member of my family.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

11. I have seen a stranger get stabbed.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

12. I have seen a stranger get shot.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

13. I have seen someone I know (not a family member) get stabbed.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

14. I have seen someone I know (not a family member) get shot.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

15. I have seen a member of my family get stabbed.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

16. I have seen a member of my family get shot.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

17. A **stranger** threatened to stab me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

18. A **stranger** threatened to shoot me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

19. Someone I know threatened to stab me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

20. Someone I know threatened to shoot me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

21. A member of my family threatened to stab me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

22. A member of my family threatened to shoot me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

23. I have been stabbed by a stranger

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

24. I have been shot by a stranger

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

25. I have been shot by someone I know.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

26. I have been stabbed by someone I know.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

27. I have been shot by a member of my family.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

28. I have been stabbed by a member of my family.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

29. I have been chased by a gang.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

30. I have been kidnapped.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

31. A stranger *tried* to rape me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

32. Someone I know *tried* to rape me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

33. A family member *tried* to rape me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

34. A stranger raped me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

35. Someone I know raped me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

36. A family member raped me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

37. I have seen a dead body of a stranger.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

38. I have seen the dead body of a family member (not at a funeral).

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

39. I have seen the dead body of someone I know who was not a family member (not at a funeral).

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

40. I have seen a stranger trying to commit suicide.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

41. I have seen someone I know trying to commit suicide.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

42. I have seen a member of my family trying to commit suicide.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

43. People in my home hit each other.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

44. People in my home scream at each other.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

45. People in my home hit me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

46. People in my home always scream at me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

47. I have seen a stranger get stabbed in my home.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

48. I have seen a stranger get shot in my home.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

49. I have seen someone I know get stabbed in my home.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

50. I have seen someone I know get shot in my home.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

51. I have seen a member of my family get stabbed in my home.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

52. I have seen a member of my family get shot in my home.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

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Appendix N
Exposure to Violence Scale - II
Adapted Harvard Trauma Questionnaire

Participant Number:	
Date of interview:	
Interview no.:	Baseline 1 wk 4 wks 12 wks 24wks
Interviewer's name:	

N.B. to say to the participant – Now I am going to ask you the same questions but this time I would like you to tell me which answer suits you best if you think about your life since the rape.

Please read/listen to each statement/sentence and then choose the answer which best suits what you think about the statement. The sentences are written as if you were saying the sentence, so it doesn't sound like a question but a statement you are making about yourself. For the first four questions there are four responses you can choose to tell me what you feel about the sentence, they are: Not at all, Somewhat (A bit), Usually (Most of the time) and Always. There is no right or wrong answer, I just want to know which response best describes how you feel about each statement. You can tell me or point to the response which suits you best for each sentence we read.

Since the rape:

1. felt safe when I was at work

Not at all = 1

Somewhat = 2

Usually = 3

Always = 4

2. I felt safe when I was at home.

Not at all = 1

Somewhat = 2

Usually = 3

Always = 4

3. I felt safe outside my home.

Not at all = 1

Somewhat = 2

Usually = 3

Always = 4

4. I felt safe with my family.

Not at all = 1

Somewhat = 2

Usually = 3

Always = 4

The rest of the questions are yes or no answers. If you answer yes, I would like to know how often this has happened and you can choose between Hardly ever (this has happened but not very much), Sometimes (It has happened more than once or twice), A lot (this has happened many times).

Since the rape:

5. I have heard gunshots

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

6. I have seen a stranger being beaten up.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

7. I have seen someone I know (not a family member) being beaten up.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

8. I have seen a member of my family being beaten up.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

9. I have been beaten up by a stranger.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

10. I have been beaten up by someone I know (not a family member).

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

11. I have been beaten up by a member of my family.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

12. I have seen a stranger get stabbed.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

13. I have seen a stranger get shot.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

14. I have seen someone I know (not a family member) get stabbed.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

15. I have seen someone I know (not a family member) get shot.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

16. I have seen a member of my family get stabbed.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

17. I have seen a member of my family get shot.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

18. A **stranger** threatened to stab me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

19. A **stranger** threatened to shoot me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

20. Someone I know threatened to stab me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

21. Someone I know threatened to shoot me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

22. A member of my family threatened to stab me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

23. A member of my family threatened to shoot me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

24. I have been stabbed by a stranger

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

25. I have been shot by a stranger

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

26. I have been shot by someone I know.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

27. I have been stabbed by someone I know.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

28. I have been shot by a member of my family.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

29. I have been stabbed by a member of my family.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

30. I have been chased by a gang.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

31. I have been kidnapped.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

32. A stranger *tried* to rape me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

33. Someone I know *tried* to rape me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

34. A family member *tried* to rape me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

35. A stranger raped me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

36. Someone I know raped me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

37. A family member raped me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

38. I have seen a dead body of a stranger.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

39. I have seen the dead body of a family member (not at a funeral).

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

40. I have seen the dead body of someone I know who was not a family member (not at a funeral).

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

41. I have seen a stranger trying to commit suicide.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

42. I have seen someone I know trying to commit suicide.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

43. I have seen a member of my family trying to commit suicide.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

44. People in my home hit each other.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

45. People in my home scream at each other.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

46. People in my home hit me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

47. People in my home always scream at me.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

48. I have seen a stranger get stabbed in my home.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

49. I have seen a stranger get shot in my home.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

50. I have seen someone I know get stabbed in my home.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

51. I have seen someone I know get shot in my home.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

52. I have seen a member of my family get stabbed in my home.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

53. I have seen a member of my family get shot in my home.

Yes = 1

No = 2

If yes, has this happened:

Hardly ever = 1

Sometimes = 2

A lot = 3

Appendix O
To Conclude the Interview

Participant Number:	
Date of interview:	
Interview no.: Baseline 1 wk 4 wks 12 wks 24wks	
Interviewer's name:	

We have come to the end of this interview. I wonder how you are feeling right now?

Afraid = 1

Upset = 2

Numb = 3

Tearful = 4

Relieved = 5

Confused = 6

Other, specify: _____ = 7

As reported by interviewee:

What was it like for you to answer all these questions?

Difficult = 1

Upsetting = 2

Manageable = 3

Helpful = 4

Other, specify: _____ = 5

As reported by the interviewee:

Thank you for talking to me

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Appendix P

Consent Form

CONSENT TO JOIN A RESEARCH STUDY

Why is this study being done?

Ms Anastasia Maw and her research team are doing a study about rape. You are being asked to join this study because you were raped. We want to understand more about how people feel over time after a rape has happened.

What happens in the study?

If you join the study,

- On that day you will be asked to give your contact details and you will be asked questions about how you feel.
- At your follow-up visits at 1, 4, 12 and 24 weeks you will be asked questions about what happened to you, how you are feeling and about your life.

Other things you should know

- Each interview will last about 1 ½ hours. The interviews will take place at the Saartjie Baartman Centre.
- The questions are personal and may make you feel sad or unhappy. Sometimes people find that talking about the rape helps them to feel better. If you feel very upset after the interview you can call the researcher and she will tell you where to go for help.
- You do not have to answer any questions that you think are too personal or make you feel uncomfortable.
- Some of your answers to questions will be written down and some will be taped. The researcher will keep information about you confidential. Your name will not be used in any reports or anything written about this study.
- If you decide to join this study you can leave it at any time.
- If you do not join in this study, you will still get the same care as someone who joins the study.
- It will not cost you anything to be part of this study.
- You will be given R30.00 for transport costs for each visit you make for the study.

- If you have questions about the study you can call Ms Anastasia Maw at 021 6503420 on weekdays between 9.00am and 5.00pm.
- In the case of an emergency please contact Rape Crisis on the 24 hour emergency line at: 0832225158.

If you decide to join the study you should sign here:

_____	_____	_____
Participant's signature	Printed name	Date
_____		_____
Signature of person obtaining consent		Date

You will be given a copy of this signed and dated consent.

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Appendix Q

A comparison of the assessment of PTSD on the MINI and the PDS

A careful examination of how women responded to questions on the PTSD module on the MINI at Weeks 4, 12 and 24, as opposed to questions related to similar symptoms on the PDS, provides some explanation for the unexpected findings referred to in *Chapter 7: Section 7.7.2 Results from the ASDS*. A detailed discussion of the reasons for the differences in a number of diagnoses of PTSD on the MINI as opposed to the PDS across the Weeks 4, 12 and 24 interviews follows.

Firstly, the actual structure of the PTSD module needs to be considered. As with all other modules (except for the Psychotic Disorders module) at the beginning of the PTSD module, screening questions corresponding to the main criteria of the disorder are presented in a gray box. The first two questions refer to the first cluster identified under PTSD and evaluate whether the interviewee had experienced an event which could be defined as traumatic and whether they had responded with intense fear, helplessness or horror. Given that all the women taking part in this study were survivors of rape these two questions were routinely marked 'Yes' for all the women of the study. The third question refers to the second cluster – Cluster B - which focuses on any evidence of re-experiencing the traumatic event in any way. As with the first two questions, if the interviewee answers 'No' to this question the bold arrow above the answer 'No' indicates that one of the criteria necessary for the diagnosis has not been met and that the interviewer should not proceed any further with the module and should circle 'No' in all the diagnostic boxes and move onto the next module.

A comparison of the wording of this particular screening question to the questions related to re-experiencing on the PDS reveals an important difference, namely that the screening question on the MINI is very broad: "During the past month, have you re-experienced the event in a distressing way" and refers to examples of re-experiencing in parentheses only: "(such as, dreams, intense recollections, flashbacks or physical reactions)?". In contrast the PDS breaks down each of the clusters' symptoms into specific questions and asks women to rate their experience of the problem on a scale from 0-3:

- (22) 0 1 2 3 Having upsetting thoughts or images about the traumatic event that came into your head when you didn't want them to.
- (23) 0 1 2 3 Having bad dreams or nightmares about the traumatic event.

- (24) 0 1 2 3 Reliving the traumatic event, acting or feeling as if it was happening again.
- (25) 0 1 2 3 Feeling emotionally upset when you are reminded of the traumatic event (for example, feeling scared, angry, sad, guilty, etc.).
- (26) 0 1 2 3 Experiencing physical reactions when you were reminded of the traumatic event (for example, breaking out in a sweat, heart beating fast).

It is hypothesised that the broad screening question on the MINI might not have provided enough scaffolding and/or guidance for the interviewees and that women may have responded 'No' which would then lead automatically to no diagnosis of PTSD, when in fact they did have symptoms of re-experiencing as evidenced by their responses on the PDS.

Furthermore, even if the woman responded in the affirmative to the re-experiencing screening question the next seven questions on the PTSD module, which refer to Cluster C: Numbing and Avoidance, is also structured in such a way that if less than three responses are coded 'No' this is taken to indicate that one of the criteria necessary for the diagnosis has not been met and that the interviewer should not proceed any further with the module and should circle 'No' in all the diagnostic boxes and move onto the next module. Similarly the following five questions, which refer to Cluster D: Increased Arousal, require at least two answers to be coded 'Yes' to continue to the final question. A closer examination and comparison of the phrasing of these questions in the MINI and the PDS shows that the MINI uses more formal language, which draws directly from the DSM IV in its phrasing, whilst the PDS questions are written in a more colloquial, and therefore more accessible, language. For example with reference to feelings of dissociation the questions are phrased as follows in the PTSD module and PDS respectively:

I4e. Have you felt detached or estranged from others?

As opposed to:

31. Feeling distant or cut off from people around you

and with reference to Cluster C: Arousal:

I4c. Have you had difficulty concentrating?

As opposed to:

36. Having trouble in concentrating (for example, drifting in and out of conversations, losing track of a story on television. Forgetting what you read)

I4d. Were you nervous or constantly on your guard?

As opposed to:

37. Being overly alert (for example, checking to see who is around you, being uncomfortable with your back to the door, etc.)

Finally, there is a noticeable difference with regard to the phrasing of the question relating to current functioning. The PTSD module phrases the question as follows: “During the past month, have these problems significantly interfered with your work or social activities, or caused significant distress?” as compared to the PDS which phrases the question as follows:

Indicate if the problems you rated in Part 3 have interfered with any of the following areas of your life IN THE PAST MONTH. Circle Y for Yes and N for No

(41) Y N Work

(42) Y N Household chores and duties

(43) Y N Relationships with friends

(44) Y N Fun and leisure activities

(45) Y N Schoolwork

(46) Y N Relationships with family

(47) Y N Sex life

(48) Y N General satisfaction with life

(49) Y N Overall functioning in all areas of your life

The differences between the MINI and the PDS both in terms of language, phrasing and structure of the questionnaire is not surprising; the MINI is designed to be administered by a trained researcher in a one-on-one interview, whereas the PDS is a self-report questionnaire and therefore needs to be written in simpler and more accessible language, however the differences in responses elicited is noteworthy. An analysis of participants who met the

criteria for PTSD on the MINI as compared with women who met the criteria for PTSD on the PDS revealed the following:

At Week 4, 18 (42.86%) participants met the criteria for PTSD (MINI) in comparison with 30 (71.43%) participants on the PDS. With the exception of one participant all the participants diagnosed with PTSD on the MINI were also diagnosed with PTSD on the PDS. Of the additional 13 participants diagnosed on the PDS but not on the PTSD (MINI) ten participants had answered 'No' to the re-experiencing screening question on the PTSD (MINI) module. However, an examination of these particular participants' responses to the questions pertaining to re-experiencing on the PDS evidenced an average of 4.1 symptoms of re-experiencing per participant. The remaining three participants did not report enough symptoms in clusters C, D and/or E to meet the criteria for PTSD on the MINI. However these participants' responses to questions pertaining to Clusters B, C and D on the PDS evidenced an average of 14.00 symptoms per participant, and their symptomatology was rated as being 'moderate to severe' or 'severe'. In addition all three reported significant distress and severe impairment in all areas of their lives on the PDS.

At Week 12, 2 (5.41%) participants met the criteria for PTSD on the MINI (both of whom were diagnosed with PTSD on the PDS) in comparison with 20 (54.05%) participants on the PDS. Of the 18 women participants who met the criteria for a diagnosis of PTSD on the PDS but not on the PTSD (MINI), nine had answered 'No' to the re-experiencing screening questions on the PTSD (MINI) module. However, these nine participants' responses to the questions pertaining to re-experiencing on the PDS evidenced an average of 4.22 symptoms per participant. Nine participants had not reported enough symptoms to meet the criteria for a diagnosis of PTSD on the MINI, however these participants' responses to the questions pertaining to Clusters B, C and D on the PDS evidenced an average of 14.33 symptoms per participant and their symptomatology was rated as being 'moderate' or 'moderate to severe'. In addition all nine women reported significant distress and severe impairment in all areas of their lives.

At Week 24, 5 (13.51%) participants met the criteria for a diagnosis of PTSD on the MINI (four of whom were diagnosed with PTSD on the PDS and one was scored incomplete on the PDS). Twenty-one participants (56.76%) met the criteria for PTSD on the PDS. Of the 17 participants diagnosed with PTSD on the PDS but not the MINI, 15 had answered 'No' to the re-experiencing screening questions. However, these participants' responses on the questions

pertaining to re-experiencing on the PDS evidenced an average of 4.13 symptoms per participant. Two participants had not reported enough symptoms to meet the criteria for PTSD on the MINI, however, these participants' responses to the questions pertaining to Clusters B, C and D on the PDS evidenced an average of 12 symptoms per participant and their symptomatology was rated as being 'moderate', 'moderate to severe' or 'severe' on the PDS. In addition both participants reported significant distress and severe impairment in all areas of their lives.

Thus across Weeks 4, 12 and 24, 34 women who met the criteria for a diagnosis of PTSD on the PDS did not do so on the PTSD (MINI) because of their response to the re-experiencing screening question and 14 who met the criteria for PTSD on the PDS but not on the PTSD (MINI) did not do so because they had not reported a sufficient number of symptoms on the PTSD (MINI). It was clear, however, from a comparison of individual scores in relation to both re-experiencing and other symptoms that given the detailed scaffolding and user-friendly language of the PDS, women reporting no symptoms of re-experiencing or only a limited number of other symptoms on the PTSD (MINI) provided very different responses to similar questions on the PDS.