Social Capital and Utilization of HIV/ AIDS-Related Healthcare in Rural Matabeleland South Province, Zimbabwe

By

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DEDICATION

I dedicate this PhD study to my wife Letwin and daughter Munenyasha Nicole whose everlasting inspiration championed my success throughout this academic journey. Thank you my little Angels for your support. I also salute my parents Tandi & Tom for relentless encouragement since my childhood.

To Whom Much Is Given Much Is Expected

All our dreams can come true if we have the Courage to Pursue Them... Walt Disney

Inspiration gives you a start, endurance gives you a victory… Tim Fargo

Execution-The Discipline of Getting Things Done… Bossidy & Charan

The real nature of man is in the totality of his social relations…Max

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TABLE OF CONTENTS

ABSTRACT 4

CHAPTER 1 6

INTRODUCTION 6

1.1 Background and context 6

1.2 Statement of the research problem 12

1.3 Aims and objectives of the study 14

1.4 Rationale and significance of study 15

1.5 Definition of terms and concepts 17

CHAPTER 2 25

LITERATURE REVIEW 25

2.1.1 Introduction 25

2.2 Global HIV and AIDS review 25

2.3 International response to HIV and AIDS pandemic 28

2.4 Treatment and prevention of HIV/AIDS 30

2.4.1 Sub Saharan Africa (SSA) and the history of HIV/AIDS 32

2.5 HIV AIDS in Zimbabwe 36

2.6 Zimbabwe National HIV and AIDS strategic plan 2015-2018 37

2.7 The Zimbabwe National health yystem 40

2.8 HIV/AIDS legislation and policy and in Zimbabwe 41

2.9 HIV/AIDS-related healthcare utilization 45
2.10 Social capital and healthcare utilization 55
2.11 Health seeking behavior 58
2.12 Determinants of healthcare utilization 59
2.13 Andersen and Newman Model of Healthcare utilization 63
2.14 Behavioural Models of Health Services Utilization 64
2.15 The Grossman Theory of the Demand for Healthcare 66
2.16 Healthcare utilization and education 66
2.17 Health Related Quality of Life (HRQoL) and Healthcare Utilization 67
CHAPTER 3 68
THEORETICAL FRAMEWORK 68
3.1 Introduction 68
3.2 The Andersen Revised Model of Healthcare Utilization 68
3.3 Theory of Planned Behavior (TPB) 70
3.4 The Social Capital Theory 72
3.5 Social Cognitive Theory 77
CHAPTER 4 79
METHODOLOGY 79
4.1 Introduction 79
4.2 Research Design 79

4.3 Research Hypotheses 81
4.3.1 Central Study Variables 82
4.4 Translation of research tools 87
4.5 Psychometrics 88
4.6 Tests for Normality 90
4.7 Study Site 90
4.8 Population and Sampling Method 92
4.9 Data Collection Approaches 94
4.10 Data management and analysis 102
4.11 Non-Parametric statistics 111
4.12 Ethical considerations 112
4.13 Limitations of the study 116
CHAPTER 5 118
STUDY FINDINGS 118
5.1 DESCRIPTIVE FINDINGS 118
5.2 BIVARIATE FINDINGS 126
5.3 MULTIVARIATE FINDINGS 131
5.4 Findings from Key Informant Interviews 134
5.5 Barriers to HIV/AIDS-related healthcare utilization 135
5.6 Perceptions on prevalence of HIV/AIDS in Matabeleland South 137

5.7 Stigma & discrimination of PLHIV 138

5.8 Community participation amongst PLHIV 139

5.9 Healthcare utilization and quality of life 139

CHAPTER 6 140

RESULTS DISCUSSION 141

CHAPTER 7……..…….145

CONCLUSION……....145

7.1 Implications for social development policy and practice 151

7.2 Areas for future Research 151

LIST OF FIGURES

Fig 2.1: Statistics on PLHIV in the World (WHO, 2015) 27

Figure 2.2 Global HIV Prevalence Map (UNAIDS, 2015) 27

Figure 2.3: Percentage of people living with HIV receiving ART in SSA..... 33

Figure 2.4 HIV/AIDS Prevalence Rate in Zimbabwe (2012 Census) 37

Fig 2.5: Conceptual Illustration of the Role of Bridging Social Capital in Health Programs 57

Figure 2.6: Summary of the Andersen Model 65

Fig 3.1: Revised Andersen Model of Healthcare Utilization (1995)..... 69

Figure 3.2: Theory of Planned Behavior..... 71

Figure 4.1: Hypothesized Model of study 82

Fig 4.2: Provincial map of Matabeleland South, Zimbabwe. 91

Fig 5.1: Distribution of Study Participants by District (n=399) 119

Figure 5.1.1 Scree Plot……..…….124

Fig 5.2 District of Respondent & Level of HIV/AIDS-Related Healthcare Utilization..... 125

Fig 5.3: Conceptual Framework of qualitative findings 136

Figure 5.4: Barriers and challenges to utilization of HIV/AIDS- related healthcare..... 137

LIST OF TABLES

Table 4.2: Reliability Tests 89

Table 4.1: Kolmogorov-Smirnov and Shapiro-Wilk Tests for Normality..... 90

Table 4.3: Table: Key Informants..... 102

Table 4.4: Anticipated Risks and Mitigation Plan..... 116

Table 5.1: Socio-demographic characteristics of the study participants..... 121

Table 5.1.1 Factor Anlysis: Rotated Component Matrix……..124

Table 5.2: Summary statistics of continuous study variables..... 124

Table 5.3 Participants Sources of Income..... 125

Table 5.4 Healthcare utilization and socio-economic status..... 127

Table 5.5 Participants age and social capital scores 127

Table 5.6 Relationship between Personal Social Capital and Healthcare Utilization 128

Table 5.7 Mann Whitney U test for gender and health related quality of life 129

Table 5.8 Mean Rank HRQoL Scores by Gender (Mann-Whitney test)..... 129

Table 5.9: Healthcare Utilization and Discrimination 130

Table 5.10 Source of health related information and Social Capital 131

Table 5.11 Binary Logistic Model goodness of fit summary 132

Table 5.12: Model Classification..... 132

Table 5.13 Determinants of HIV AIDS- Related Healthcare Utilization 133

Table 5.14 Health Related Quality of Life and HIV/AIDS-Related Healthcare Utilization 134

Table 5.15 Profiles of Key Informants Interviewed 135

LIST OF APPENDICES

APPPENDIX A: Personal Social Capital scale (PSCS) reliability tests & item correlations 180

APPENDIX B: Health Related Quality of Life Scale (HRQoL) reliability tests & correlations . 181

APPENDIX C: ETHICAL APPROVAL LETTERS (UCT & MRCZ)..... 183

APPENDIX D: Transcript of key informant interview with Village Health Worker..... 185

APPENDIX E: Transcript of key informant interview with a Healthcare Centre Nurse 186

APPENDIX F: Transcript of key informant interview with local leader 188

APPENDIX G: KEY INFORMANT INTERVIEW GUIDE 189

APPENDIX H: MAIN QUESTIONNAIRE FOR PLHIV 191

APPENDIX I: SF-36 ITEMS & SCORING GUIDE 211

APPENDIX J:: Detailed profiles of key informants..... 216

APPENDIX K: INFORMED CONSENT FORM 218

APPENDIX L: PERMISSION LETTER ZNNP+..... 227

APPENDIX M: RAND COOPORATION –SF 36 PERMISSION..... 228

APPENDIX N: RESEARCHER'S MOTIVATION FOR THE STUDY..... 229

APPENDIX O: MEDICAL RESEACH COUNCIL OF ZIMBABWE (GUIDELINES) 230

ABSTRACT

This study examined the relationship between social capital and utilization of HIV/AIDS-related healthcare amongst people living with HIV in rural Matabeleland South province of Zimbabwe. It also explored barriers to optimal HIV/AIDS-related healthcare utilization among this rural population. Grounded on the Andersen and Newman model of healthcare utilization and social capital theory, the study employed a mixed method research design. Using time-location sampling procedure, a total of 399 people living with HIV were interviewed using a survey questionnaire. Semi-structured in-depth interviews were also conducted with 40 purposively selected key informants that included healthcare workers, HIV/AIDS service providers and community leaders. A statistically significant association was found between social capital and healthcare utilization. The binary logistic regression model was statistically significant, $\chi 2$ (11) =129.362, ($p < .005$), it correctly classified 80.20% of cases and explained 59.3% of the variance in healthcare utilization (Nagelkerke R-Square =59.30%). The 16 items of the social capital scale were subjected to principal compoments analysis (PCA). Kaiser-Meyer-Olkin (KMO) value of sampling adequacy was 0.645 and Bartletts's Test of Spehericity reached statistical significance ($\chi 2$ (120) = 128, $p < .001$), supporting the factorability of the correlation matrix. Social capital was a significant predictor of HIV/AIDS-related healthcare utilization ($p<0.001$). The results indicated that for a unit increase in social capital the odds of utilization of HIV/AIDS-related healthcare increased by a factor of 59.84. Other significant predictors of HIV/AID-related healthcare utilization amongst the study participants were gender ($p<.05$, odds ratio=3.4), discrimination ($p<.05$, odds ratio = 7.7) and household headship ($p<.001$, odds ratio = 4.3). Enabling factors such as membership in health insurance schemes and household income had no significant effect on HIV/AIDS-related healthcare utilization. Major barriers to HIV/AIDS-related healthcare utilization were food insecurity and

reliance on informal sources of medication. This study contributed to understanding of the influences of social capital on the utilization of HIV/AIDS-related health care and underscored the need to integrate social capital in designing interventions to improve HIV/AIDS-related healthcare utilization in rural contexts.

CHAPTER 1

INTRODUCTION

This chapter presents background of HIV/AIDS- related healthcare and outlines social capital in the health context. The statement of the research problem, rationale and significance of the study in social development is given to highlight the critical role of understanding social capital and utilizatization of HIV/AIDS-related healthcare nexus in rural areas. The chapter then summarizes aims, objectives and research questions which guide the scope of this research. In the concluding section of the chapter, key terms and concepts are clarified.

1.1 Background and context

Social Capital is one of the most popular crosscutting sociological concepts which have attracted research interests from diverse fields such as public health (Kwon & Adler, 2014). A limited number of studies have however confirmed a link between social capital and healthcare, (Fujiwara & Kawachi, 2008). Individual health conditions can be contingent on network of social relations (Song, 2013), trust and reciprocity which make up social capital. Planned processes of social change cannot succeed without addressing health and basic needs of the population (Hicks & Streeten, 1979). It is therefore imperative for governments to establish strong and responsive healthcare service delivery systems informed by empirical research in healthcare utilization especially amongst most at risk populations such as people living with HIV (PLHIV), (Chappell & Blandford, 1987). Processes of social change depends to a large extent on the wellbeing of people in a community or nation (World Bank, 2012). A weak national healthcare system is a major contributing factor to poverty and inequality through the barriers to preventative and curative health services it creates (John-Langba, 2013). Zimbabwe's HIV epidemic is amongst the worst in the world, and disproportionately affects poorer rural areas and marginalized populations.

Despite progress in the provision of decent healthcare service in Zimbabwe especially for HIV/AIDS and related illnesses, empirical questions on utilization of such healthcare by people living with HIV remain unanswered. Recent data shows that the decline in new infections among adults observed earlier in the epidemic have stalled and incidence is now rising in some areas of the world (UNAIDS, 2016). A study by Markos, Worku and Davey (2008) highlighted that suboptimal adherence to HIV/AIDS- related healthcare is a major challenge amongst PLHIV despite programmes to improve utilization. In public health sector, there is a growing interest in mechanisms that link social inequalities and healthcare utilization which have been historically neglected (Hawe & Shiell, 2000). Since its popularization as a concept in the 1990s, social capital has been recognized as one of the important determinants of health but limited knowledge exist to validate this assertion (Eriksson, Dahlgren, Janlert, Weinehall & Emmelin, 2010). A study in Botswana by Modie-Moroka (2009) underscored the need to fully intergrate the role of social capital especially in low income countries though focus of the study was not primarily on PLHIV. Social capital theory encompasses the notion that our social relationships are productive in nature; that is, 'capital' (Claridge, 2004). Exploratory study on social capital in Morocco found an inverse relationship between social capital and utilization of prenatal healthcare (Bossert, Cakir, Bowser & Mitchel, 2003). This creates room for empirical enquiry in different context to understand the role of social capital in the healthcare utilization nexus. Previous research has centered on supply side aspects of the health system e.g. provision of infrastructure, access to Anti Retro Viral Treatment (ART), Prevention of Mother to Child Transmission (PMTCT) and direct individual subsidies on healthcare cost but little attention has been given to the actual utilization of healthcare especially in marginalized rural communities (Bandason, 2008).

Knowledge and understanding of HIV/AIDS- related healthcare utilization and health seeking behavior is necessary for health resource allocation and planning (Joseph & Philips, 1984). Good health system planning depends on informed decisions (Mate, Bennett, Mphatswe, Barker, & Rollins, 2009). Whilst it is acknowledged that there have been numerous publications on health issues, there is an apparent dearth of scholarly empirical evidence on the role of social capital in explaining healthcare utilization in rural communities especially amongst people living with HIV (PLHIV). Individual health behavior cannot be fully understood when viewed in isolation, there is need to examine inside social networks, voluntary group participation, workplaces, families and even individual perceptions of existing health services and understand how these influence utilization of healthcare. All of these have been shown, largely by social scientists, to have an influence on the health of a community's members in developed countries (Patrick & Wickizer, 1995).

Social capital remains an underutilized local resource with potential to improve desired outcomes for individuals and communities which can provide a solid foundation for robust health policies (Webel, Philips, Rose & Holzemer, 2012). The impetus of this empirical study was to examine and explain the role of social capital in healthcare utilization among PLHIV in rural areas thereby contributing to closing the existing literature gap, inform policy and enhance understanding of the 'social capital-healthcare utilization nexus'. This study also tested the propositions by Gillies, Tolley and Wolstenholme (1996) who argued that social capital might be associated with positive health outcomes in support of previous views on role of social capital (Eriksson 2011). Minimal work has been done to validate this proposition (Ferlander, 2007) especially in rural contexts of developing countries such as Zimbabwe.

Approximately 33 million people are living with HIV in the world today and 70% are in Sub Saharan Africa (UNAIDS, 2016). A cumulative total of 75 million people have contracted HIV since the first reported cases in early 1980s and about 50% (35.6 million) have since died of HIV/AIDS- related illnesses. The socio economic implications of the pandemic underscore the need for continuous scholarly research on HIV/AIDS especially in developing countries.

Healthcare delivery system improvement remains a key priority area for national Governments the world over. A healthy nation is dominantly a desired outcome by governments and policy makers especially in developing countries where utilization, access, adequacy and affordability of healthcare services are major challenges (WHO, 2013). A number of explanatory variables have been studied to understand health seeking behavior including such as age, gender, level of education, income and to a lesser extent social capital (Andersen & Newman, 1973). This has been partly due to the fact that the concept of social capital has posed operationalizing challenges related to measurement and universal conceptualization, however recent years have seen the concept gaining popularity in public health, education, economics and business arena (Portes, 2000). Whilst acknowledging existing literature on social capital in Africa, there is still more empirical research to be done to explore social capital and healthcare utilization especially amongst people living with HIV (PLHIV) in rural areas.

Defining social capital has been one of the contentious debates in literature as noted by Coleman (1993) and Bourdieu (1985) who are popularly cited as the early proponents of the social capital discourse who drew from sociological views initiated by Durkheim (1951). One of the common conceptualizations of social capital stated that, "individuals are embedded in a system of normative obligations created by social consensus," (Furstenberg, 2005, p810). Putnam (1995, 2000) popularized the concept of social capital among socio-political scientists. In this paradigm, social

capital is seen in terms of social trust and civic participation for benefits including healthcare, protection and other reciprocal support. With a population of approximately 738 million, Africa is host to the world's 19 out of 20 countries with the highest maternal mortalities, has the highest neonatal mortality rate and highest proportion of PLHIV globally (World Health organization, 2013). This makes it imperative to understand health seeking behavior of PLHIV in order to guide policies considering the economic problem of resource allocation.

In Zimbabwe, like many African countries, the health sector faces numerous challenges and minimal focus has been given to utilization of healthcare facilities and health seeking behavior of PLHIV (Kerina, Babill, & Muller, 2013). Bandason (2008) in his study on healthcare utilization in selected urban districts of Zimbabwe argued that an understanding of health seeking behavior improves effectiveness of public health policies and planning. Zimbabwe ranks third in Africa after South Africa and Nigeria on absolute counts of PLHIV, which implies a great need for understanding health seeking behavior and utilization of healthcare especially for rural people living with HIV. Zimbabwe Statistical Agency (ZIMSTAT) in 2012 showed that HIV/AIDS prevalence rate ranges from minimum of 13% in Harare and 22% in Matabeleland South province.

The nation of Zimbabwe is landlocked with four bordering countries namely Zambia in the north, South Africa in the south, Mozambique in the East and Botswana in the West. Administratively the country has ten clearly demarcated provinces, two urban which are Harare and Bulawayo and 8 rural (ZNASP, 2015). The provinces are sub-divided into a total of 62 districts and are governed by Provincial Ministers of State. Agriculture contributes the most to the economy of Zimbabwe, making up to 20.1% of the country's gross domestic product (World Bank, 2015) though mining, tourism and industry are significant sectors. The country has a network of roads which connects towns and cities as well as linking with neighboring countries. Like Zimbabwe, all the

neighboring countries are heavily affected by HIV and AIDS with high HIV prevalence. According to the last National Census in 2012, Zimbabwe total population stands at 13 061 239 with 48% being male and 52% female. The demographic breakdown by age show that 41% of the total population is under the age of 15 years while only 4% is over 65 years. With two thirds of the population under the age of 25 years, the country has great prospects for a demographic dividend. Life expectancy currently stands at 58 years (ZIMSTAT, 2012).

Zimbabwe's rural population makes up about 70% of the total population (ZIMSTAT,2012). Since independence in 1980, the country pursued a number of policies to drive economic and social development though limited documentation exist to critique whether intended policy outcomes were achieved or not. Poverty remains a major challenge in both urban and rural communities but the hardest hit are rural people given huge reliance on agriculture which is currently affected by a plethora of challenges ranging from climate unpredictability to political nature. Frequent perennial droughts, high unemployment hitting the country have worsened food insecurity and livelihood options for rural population particularly in the face of the devastating effects of HIV/AIDS. Rural poverty prevalence stood at about 76% in 2015 according to World Food Programme.

Zimbabwe is one of the 22 priority countries in the Global Plan for the elimination of mother to-child transmission of HIV hence a number of programmes have been put in place to support PMTCT (UNAIDS, 2015). The country has one of the highest HIV prevalence at 15.2% among adults aged 15 to 49 years (17.7%) among females and 12.3% among males with even higher prevalence of 22% in Matabeleland South province. Although Zimbabwe has experienced a period of severe economic and social challenges mainly between 2000 and 2009, it made remarkable strides in the fight against HIV and AIDS although there is still need to optimize HIV/AIDS-related healthcare utilization and eliminate stigma and discrimination. The National response to HIV/AIDS

is well coordinated and the next four years are critical as the country further intensifies and fast tracks actions towards attainment of 90 90 90 targets and ending AIDS by 2020 and 2030 respectively. Current efforts in fighting HIV/AIDS are guided by the Zimbabwe National HIV and AIDS Strategic Plan for 2015-2018 (ZNASP III) which is aligned to the ZIMASSET and is aimed at contributing to the national vision of an Empowered Society and a Growing Economy.

1.2 Statement of the research problem

HIV and AIDS is a devastating global health concern posing severe social development challenges especially in the developing world. The statistics on people living with HIV (PLHIV) represents serious health and economic burden that the world is facing since the onset of the pandemic (Khan, Moorthy, Omar & Hasan, 2012). There is compelling evidence to support the need to enhance utilization of HIV/AIDS- related healthcare and examine the link between social capital and utilization of HIV/AIDS- related healthcare amongst rural PLHIV in developing countries.

Matabeleland South province in Zimbabwe has the highest prevalence of HIV/AIDS of 22% (ZIMSTAT, 2012) making it the most infected province in the country according to the National Census Report, (2012). The rural nature of the province presents socio-cultural misconceptions about HIV/AIDS reducing utilization of formal healthcare services to around 30% (UNAIDS, 2014). A number of HIV/AIDS-related healthcare interventions especially ART, PMTCT and opportunistic infections treatments have been implemented by the government of Zimbabwe but low uptake in rural areas (UNAIDS, 2014 & Ministry of Health, Zimbabwe, 2014) remain a challenge despite over 85% of the population living within 10km radius of healthcare centers (Kerina, Babill, & Muller, 2013). .

Several studies at national level have explored the subject of HIV/AIDS from different angles but limited focus has been diverted towards social capital and utilization of HIV/AIDS- related

healthcare. Understanding of healthcare utilization behavior especially for PLHIV has the ability to improve quality of interventions as the current dearth of scholarly literature hinders effective health service planning (WHO, 2015). The importance of identifying determinants of healthcare utilization and integrating social capital cannot be underestimated (Braveman, 2003).

The relationship between social capital and health is poorly understood and complex especially among marginalized populations including PLHIV in comparison to a more general population. Globally, PLHIV are highly marginalized (Webel et al., 2012) often diagnosed with additional chronic health conditions (WHO, 2015), and face decreased access to healthcare resources (Khan et al., 2012) than their counterparts in the general population. Furthermore, many PLHIV experience unique personal environments that lead to negative health outcomes (Wong, Sarkisian, Davis, Kinsler, & Cunningham, 2007). The social environment of rural PLHIV in developing countries such as Zimbabwe provides the context that shapes this population's decisions about healthcare utilization behavior and ultimately health outcomes. Social capital is an important component of the social environment for PLHIV (Fiorillo & Sabatini, 2011). However, there is limited literature on social capital and utilization of HIV/AIDS-related healthcare among PLHIV in Zimbabwe which underscores the need for empirical inquiry.

Knowledge of the influence of social capital on health outcomes such as healthcare utilization among PLHIV in rural areas can inform evidence-based, public health interventions seeking to modify health outcomes. The processes of turning to others for support in the face of uncertainty is a pattern long documented in sociological literature though there are gaps in the context of HIV/AIDS- related healthcare utilization in developing countries.

The decision to utilize healthcare service result from a dynamic interplay of different factors such as demographic (Kandrack, Grant & Segall, 1991), socioeconomic (Alberts,

Sanderman, Eimers and Van den Heuvel, 1997), psychological (Campbell & Roland, 1996), morbidity profiles, and healthcare services availability (Hulka & Wheat, 1985). The effect and relative importance of each on healthcare utilization depends on the culture, social dynamics, the health policy and the healthcare system to which the person belongs (Mendoza-Sassi, Béria, & Barros, 2003).

According to Bailey and Phillips (1990) use of health services has been widely studied in developed countries and marginalized groups such as PLHIV particularly in rural areas continue to lie at the periphery of research focus despite the need to address challenges of low uptake of healthcare services in developing countries and the role of social capital. Many PLHIV do not receive consistent ambulatory medical care and are excluded from studies of patients in medical care. However, these marginalized groups are important to study because they are in greatest need of services (Cunningham et al., 2006).

Whilst much coverage has been given in other countries on socio and non socio economic factors determining healthcare utilization, the concept of social capital has received little attention (Adler & Kwon 2002). Despite interesting findings from other studies linking social capital with unemployment and micro credit access which have linked social capital with significant positive outcomes, its applications in the healthcare utilization nexus are yet to confirm usefulness of social capital in the context of HIV/AIDS- related healthcare amongst PLHIV. This study aimed to examine the role of social capital in explaining utilization of HIV/AIDS- related healthcare among people living with HIV in rural Matabeleland South Province of Zimbabwe.

1.3 Aims and objectives of the study

The overall aim of this study was to examine the relationship between social capital and utilization of HIV/AIDS-related healthcare among people living with HIV/ AIDS (PLHIV) in rural

Zimbabwe focusing on Matabeleland South Province. The study addressed the following specific objectives:

1. Examine the nature and extent of utilization of HIV/AIDS- related healthcare amongst rural people living with HIV
2. Assess predictors of HIV/AIDS- related healthcare utilization in rural Zimbabwe
3. Examine the association between social capital and utilization of HIV/AIDS- related healthcare in rural Zimbabwe
4. Examine the association between Health Related Quality of Life (HRQoL) and utilization of HIV/AIDS- related healthcare
5. Identify barriers and challenges to utilization of HIV/AIDS- related Healthcare in rural areas.

Research Questions. Research questions guide scope of study and provide basis for academic enquiry (Tashakkori & Creswell, 2007). In line with the research objectives and purpose, this research was guided by the following research questions;

i. What is the magnitude and pattern of healthcare utilization amongst rural PLHIV?
ii. What factors predict the likelihood of utilization of HIV/AIDS- related healthcare?
iii. Does social capital as an enabling factor influence HIV/AIDS-related healthcare utilization?
iv. What it the relationship between health related quality of life and healthcare utilization?
v. What are barriers and challenges related to utilization of HIV/AIDS- related healthcare?

1.4 Rationale and significance of study

HIV/AIDS- related healthcare utilization has critical relevance as a public health and social development issue amongst marginalized communities (Bakeera, Wamala, Galea, State, Peterson & Pariyo, 2009). Increasing statistics on people living with HIV (PLHIV) and ravaging impact of

the epidemic has made AIDS the most serious infectious disease challenge to public health worldwide (WHO, 2012). Over 33 million people are living with the virus and approximately two million new infections recorded annually (UNAIDS, 2015). Sub-Saharan Africa (SSA) remains the epicenter of the deadly epidemic with about 70% of people living with HIV (PLHIV) in the region and recording over 2 million deaths annually despite great advancements in HIV/AIDS suppressive medication (WHO, 2013). This implies great need to understand nature and patterns of HIV/AIDS-related healthcare utilization amongst PLHIV especially in marginalized rural communities of countries such as Zimbabwe with an average prevalence rate of 15% (Kerina, Babill, & Muller, 2013). Findings from this study are critical in informing HIV/AIDS and Health related policies in Zimbabwe given the policy gaps as noted by WHO (2013). To date limited research has examined the relationship between social capital and use of health services (Perry, Williams, Wallerstein & Waitzki, 2008).

Resource constrained countries such as Zimbabwe and other nations with extremely limited funding resources face the question of whether it is best to channel scarce resources for primary care or research (Morris, Martin, Quinn & Chaisson, 1998). HIV and AIDS epidemic has brought this issue to the fore front. Healthcare utilization research is vital and neglecting it is tantamount to giving attention to short-term challenges at the expense of finding longer-term solutions hence this study feeds into policy insights on healthcare utilization and bridging existing literature gaps. The global battle against HIV and AIDS thus require concerted efforts fortified by empirical research. Social Capital remains a poorly understood social construct with thinly documented evidence of its usefulness in healthcare utilization especially in developing countries, yet like human and financial capital it is productive and can be leveraged upon to improve desired individual and community level outcomes (Campbell et al.,2013).

A scholarly understanding of healthcare utilization and social capital can be used by health planners to enhance healthcare service which is a key dimension in social development and health related quality of life (Baker & Liu, 2006). Lyons and Santo (2004) argued that social capital has potential to ensure sustainability and continuity of HIV and AIDS prevention and support programmes. Campbell, Wood and Kelly (1999) emphasized that it is imperative for players in the health space to have detailed understanding of social capital context. This study sought to contribute in closing the knowledge gap on the compelling need to ensure widespread integration of the social capital concept in relation to healthcare utilization.

1.5 Definition of terms and concepts

This section presents key terms and concepts used throughout the study highlighting what they imply for the purpose of clarity and consistence.

HIV and AIDS-HIV. Refers to the Human immunodeficiency virus (HIV) which impairs the immune system leading to progressive deterioration in health (UNAIDS, 2015). Acquired Immunodeficiency syndrome (AIDS) is a term which applies to the most advanced stages of HIV infection. It is defined by the occurrence of any of more than 20 opportunistic infections or HIV-related cancers (WHO, 2013). HIV is not AIDS.

HIV/AIDS-Related Healthcare. Collective term which refers to the following healthcare voluntary testing and counselling, Acquiring Anti-Retro Viral Drugs, TB (tuberculosis) screening and treatment, Prevention of Mother to Child Transmission PMTCT, antenatal maternal care, and training related to PLHIV and health check-ps for PLHIV (WHO, 2010).

People Living With HIV (PLHIV). According to UNAIDS (2015), people infected with HIV virus are referred to as 'people living with HIV' (UNAIDS, 2015). This is the universally accepted term to refer to people as being HIV-positive or a person/ people living with HIV. The recently

approved ‘PLHIV’ makes it clear that HIV is not AIDS. Despite the clarity of the abbreviation, the naming itself has been criticized for bringing a segregatory element though plausible efforts are existing to ensure zero tolerance to stigma and discrimination. Previously abolished terms include PLWHA, AIDS patients, positive people, AIDS carriers, AIDS sufferer and AIDS victim. Additionally, in Zimbabwe and other highly affected countries, HIV and AIDS pandemic have also given rise additional vernacular names or labels given to people living with HIV (Campbell et al., 2013).

Stigma..The term “stigma” was derived from ancient Greece to connote branding of slaves so that they could be easily identified from other people with visible marks. Slaves would be pricked on their skin (Ogasawara, 2009). In the context of HIV/AIDS stigma is a critical challenge as PLHIV often face stigma and discrimination at family level, community and at work though frantic efforts are put in place to safeguard PLHIV against stigmatization. The two terms stigma and discrimination are used interchangeably though they differ in exact meaning. As study is Ethiopia posited that understanding of stigma is critical in winning the fight against HIV/AIDS as highlighted by Feyissa, Abebe, Girma, & Woldie (2012)

Discrimination. UNAIDS (2015) defines discrimination as the actions and exclusions targeted towards those who are stigmatized e.g. denial of employment opportunity due to HIV/AIDS status. Global conventions are vehemently against stigma and discrimination through intensive educational programmes meant to bridge the knowledge gaps especially around HIV/AIDS though in reality PLHIV face discrimination (Campbell et al.,2013). A study on discrimination conducted by Ogasawara (2009) highlighted the following as denoting discrimination against PLHIV in the family/community; shunning, avoiding everyday contact, verbal harassment, and physical violence, blaming and gossip, segregation, refusal of access to care,

service or preferential treatment in accessing desired needs which would otherwise be equally accessed to everyone.

In Zimbabwe, study by ZNNP+ (2014) pointed out that PLHIV still experience dissimilar forms of stigma and discrimination which include being gossiped about, segregation from social, religious and family activities, verbal and physical abuse. HIV related stigma is reported to be still rife in the workplace, educational institutions, and also in the health institutions. However, there is evidence that some PLHIV suffer from self-imposed –stigma through failure to accept with their HIV status and adjust to normal life.

HIV/AIDS-related healthcare utilization. HIV/ AIDS is associated with a number of opportunistic infections which come out as a result of a weakened immune system amongst PLHIV (WHO, 2010). For the purpose of this study HIV/AIDS related healthcare utilization covered the frequency of visiting a formal healthcare facility within the previous 6 months from the date of the interview (Mendoza-Sassi, Béria, & Barros, 2003) for the following purposes;

i. Visiting healthcare Centre for collection of antiretroviral therapy (ART).
ii. Visiting a health center for PMTCT (Prevention of Mother to Child Transmission) during pregnancy
iii. Visiting healthcare center for Tuberculosis screening and/or treatment
iv. Visiting healthcare service for Oral health care. About 90% of PLHIV have been found to have at least one manifestation of oral health challenge such as oral watts, oral candidiasis and HIV salivary gland disease which cause dry mouth (Xerostomia). Oral healthcare has been discovered to be one of the main unmet need for PLHIV (Fox, Tobias, & Verdecias, 2012)

Cunningham et al. (2006) used similar approach in comparative study of healthcare service utilization amongst PLHIV in USA.

Healthcare Utilization. The medical dictionary (2009) defines healthcare utilization in general as the number of visits made by a person to access a defined health related service over a specified time period. The term can also cover number of hospitalizations and amounts of drugs or medication taken per defined time period or traits of drug clinically tested in user's system at any given time.

Health Seeking Behavior (HSB). Healthcare seeking behavior has been defined as 'any action undertaken by individuals who perceive themselves to have a health problem or to be ill for the purpose of finding an appropriate remedy', Olenja, (2003). HSB also focuses on preliminary considerations or steps taken prior to the actual decision of seeking healthcare support and is influence by a number of endogenous and exogenous factors. Cornally & McCarthy (2011) highlighted that health seeking behaviour involves the health problem focused, intentional action and interpersonal interaction with ultimate goal to ensure a health status is achieved. The highlighted definitions however do not explicitly bring out the aspect of actual healthcare utilization which is critical in achievement of desired outcome.

Antiretroviral Medication (ARV). According to UNAIDS, (2015), ARV is used to mean antiretroviral medicines i.e. the actual drugs and medicines to suppress HIV e.g. in Zimbabwe preferred first line regimen is Tenofovir (TDF) plus Lamivudine (3TC) plus Efavirenz (EFV) (Ministry of Health, 2013).

Antiretroviral therapy (ART). Antiretroviral therapy refers to clinical part of the provision of comprehensive services for HIV and AIDS prevention, treatment, care, and support, (Ministry of Health, Zimbabwe, 2013). It involves combining three or more antiretroviral medicines to suppress

HIV. Antiretroviral therapy is highly active in suppressing viral multiplication, decreasing the amount of the virus in the blood to undetectable levels and slowing the progress of HIV in the human body (UNAIDS, 2015). The usual antiretroviral therapy regimen combines three or more different medicines, such as two nucleoside reverse transcriptase inhibitors (NRTI) and a protease inhibitor, two nucleoside analogue reverse transcriptase inhibitors and a nonnucleoside reverse transcriptase inhibitor (NNRTI), or other combinations. More recently, entry inhibitors and integrase inhibitors have joined the range of treatment options. Suboptimal regimens are monotherapy and dual therapy (UNAIDS, 2015). AIDS has no cure yet but ART enables people living with HIV to live longer.

Adherence to Antiretroviral Therapy (ART). Ramasamy (2009) pointed out that optimal adherence to medication is a major challenges amongst patients but has individual and healthcare system implication. There are varying definitions of the concept of adherence in relation to healthcare utilization. The World Health Organization (WHO) defined adherence as "the extent to which individual's behaviour in terms of taking medications, following a diet and executing lifestyle change following agreed recommendations from a health provider" (WHO, 2003). Weinreich and Benn (2004) defined adherence to ART as "a measure of completeness and consistency of drug intake". Knobel et al (2000) defined non-adherence to ART as being when "a patient forgets to take medication, taking the incorrect dose, poor observation of treatment intervals/frequency, as well as neglecting other agreed recommendations like diet restriction, smoking and alcohol consumption". Saleh (2012) pointed out that adherence below 95% is suboptimal for effective treatment.

There are however a handful of individual, household and community level factors which interfere with a person's ability to optimally adhere to medication. The main aim of this study was

to examine the link between social capital as a locally available resource and healthcare utilization amongst people living with HIV in rural Zimbabwe. Optimal adherence of at least 95% has also been recommended for immunological improvement and virological suppression (Jordan et al. 2008 and Paterson et al. 2000). In Zanzibar a threshold of ≥95% adherence level is recommended in the current national HIV/AIDS treatment guidelines (Saleh, 2012). Below this threshold, people are considered non-adherent to treatment.

Mother-to-child transmission (MTCT). MTCT is the abbreviation for mother-to-child transmission of HIV. PMTCT, the abbreviation for prevention of mother-to-child transmission, and defines the four-prong strategy for preventing new HIV infections among infants and promoting healthy of their mothers and family (UNAIDS, 2015). The four prongs of PMTCT are: a) helping reproductive-age women avoid HIV ; b) reducing unmet need for family planning; c) providing antiretroviral (ARV) medicine prophylaxis to prevent HIV transmission during pregnancy, labour and child birth, and breastfeeding; and d) providing care, treatment and support for mothers and their families (UNAIDS, 2015).

Social Capital. Refers to the cohesion within a community that results from civic engagement, membership to voluntary associations usually built of trust and positive local identity (Putman, 2000). Research on the concept of Social Capital asserts that such informal networks have potential to bolster health enhancing behaviors in a community (Gregson et al., 200). Social Capital has also been defined as resources linked to having a strong social network (Webel, Philips, Rose & Holzemer, 2012).

People with good social networks have been found to enjoy better psychological and physical health (Baker, 2000). Other scholars have argued that developing social networks is linked to happiness, growth, satisfaction and a meaningful life. This study focused on individual level

social networks for PLHIV measured using the 16- Item Personal Social Capital Scale and synergies with HIV/AIDS –related healthcare utilization.

Socio Cultural Factors. Collective term which refers to a system of integrated patterns of beliefs, behaviors, thoughts and differences amongst people (Armenakis & Kiefer, 2007). Socio cultural factors include level of discrimination, social capital, language, religion and other local level perceptions of people which may have an effect on how people behave or respond.

Health-related Quality of Life (HRQoL). Assessing HRQoL is critical for measuring chronic disease burden and track impact of interventions overtime (Hays et al., 1999). Burckhardt and Anderson (2003) defined HRQoL as a quantitative measure of individual wellbeing that looks at the following domains; material and physical well-being, relationships with other people, social, community and civic activities, personal development and fulfilment, recreation and ability to do for yourself.

This study focused on Health-Related Quality of Life (HRQoL) which refers to quality of life in relation to self-reported health aspects of wellbeing (Cunningham, Li, Ramsey, & Sohler, N. L. (2007) and measured using the SF-36 scale (WHO, 2010). There are disease specific and generic HRQoL assessment tools (Grossman, Patrick, Sullivan & Albert, 2003) which cover amongst other aspects the following; symptom status, functional status, biologic and physiologic variables, individual and environmental characteristics directly affected by the overall state of health (Mbada, Onayemi, Ogunmoyole, Johnson & Akosile, 2013). In essence, Quality of life entails an individual's opinion, satisfaction, contentment, aspirations, happiness, and other areas of social, personal and occupational significance, based on current and previous living and health status (Modie-Moroka, 2009).

Predisposing factor. According to Andersen and Newman (1995) model of healthcare utilization, distinction is made between three sub categories of predisposing factors which are demographic, social structure and beliefs. According the model demographic factors are age, sex, marital status and past illness. Social structural factors include education, race, occupation, family size, ethnicity, religion and residential mobility. Belief factors are outlined as values concerning health and illness, attitudes and knowledge about the disease.

Enabling factor. These are classified into two categories; as family and community according to the Andersen and Newman model of healthcare utilization. Family factors include income, health insurance, type of regular sources, access to regular sources and community factors include local perceptions of health care, membership to local groups and social capital.

CHAPTER 2

LITERATURE REVIEW

2.1.1 Introduction

This chapter presents a review of existing literature relevant to this study. In order to give contextual background to the study, the chapter starts by a global review of the HIV/AIDS pandemic, followed by the African perspective and a closer analysis of Zimbabwe. Related empirical studies done on healthcare utilization and social capital are critically examined as well as underlying theories and models. A detailed account of the Zimbabwe healthcare system and policies in relation to HIV/AIDS is presented in line with the objective of identifying barriers to utilization of HIV/AIDS related healthcare.

> *Research has indicated that the utilization of social capital can assist in the upward mobility of an individual. By identifying an individual's ability to access network resources, we stand to learn much about how goals and objectives can be achieved, as asserted by Hatala (2009, p53)*

2.2 Global HIV and AIDS review

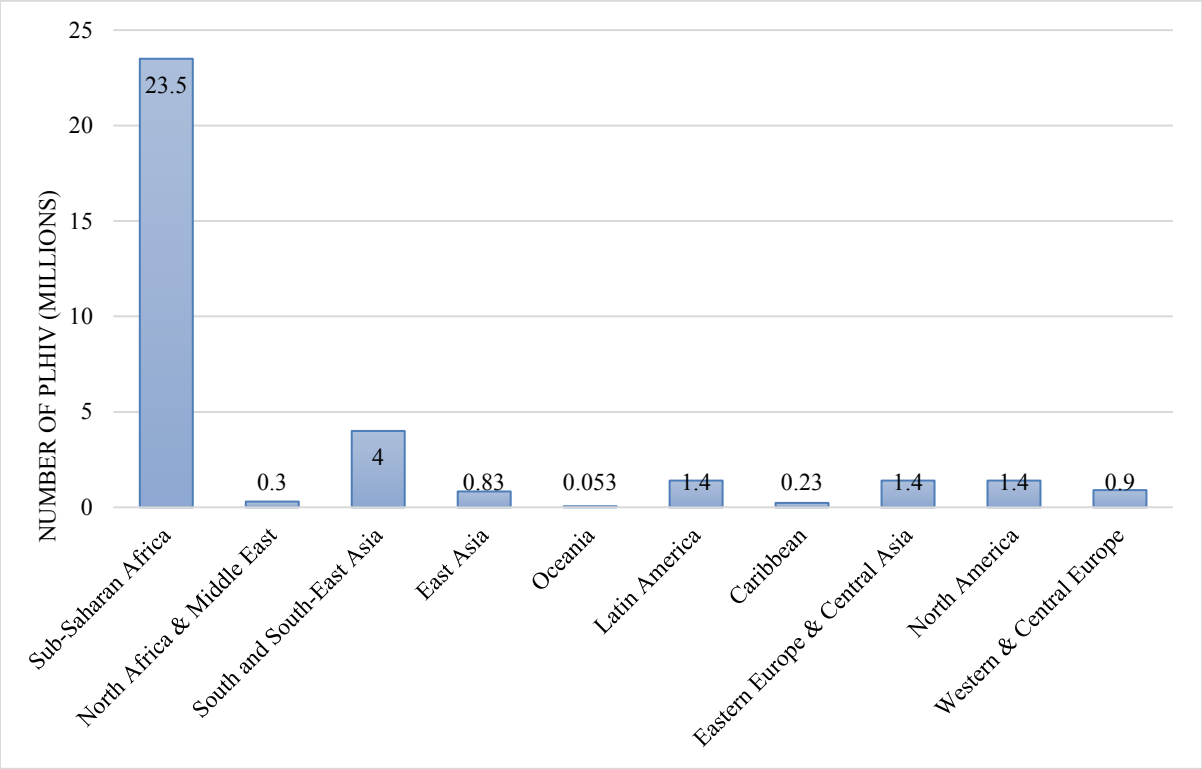
In June 1981, a first public message was shared by Center for Disease Control and Prevention (CDC) on a relatively rare form of pneumonia among a small group of young gay men in Los Angeles, USA, which was later determined to be AIDS-related. Researchers still believe that HIV existed years before the first case was brought to public attention, however 1981 is globally referenced as the year which marked the genesis of the deadly global epidemic. Since that time, millions of people have been infected with HIV worldwide (Global HIV/AIDS Timeline, 2015). Given the health and socio-economic impact of HIV/AIDS, a lot of literature has been documented about the pandemic though gaps still exist

especially in developing countries where more resources were channel towards combating the disease with limited focus on research especially understanding HIV/AIDS-related healthcare utilization amongst marginalized groups such as people living with HIV.

HIV/AIDS remains a key contemporary threat to humanity in both developed and developing countries with an estimated 33.3 million people living with HIV in the world despite huge investments being made on preventative programmes and risk behavior change (WHO, 2015). A total of 2.6 million children under 15 years of age are living with HIV (UNAIDS, 2015). The high statistics on the epidemic reflect the ever important need to examine HIV AIDS issues such as utilization of HIV/AIDS- related healthcare through scholarly lenses. The United Nations Member States implicitly recognized persistent burden associated with HIV/AIDS in undermining efforts to reduce poverty, prevent hunger and preserve human potential in the world's most resource-limited settings (UNAIDS, 2015) by endorsing the Millennium Declaration to reduce impact of HIV/AIDS. Globally, the number of PLHIV continue to grow with an average of 2.3 million new infections recorded annually.

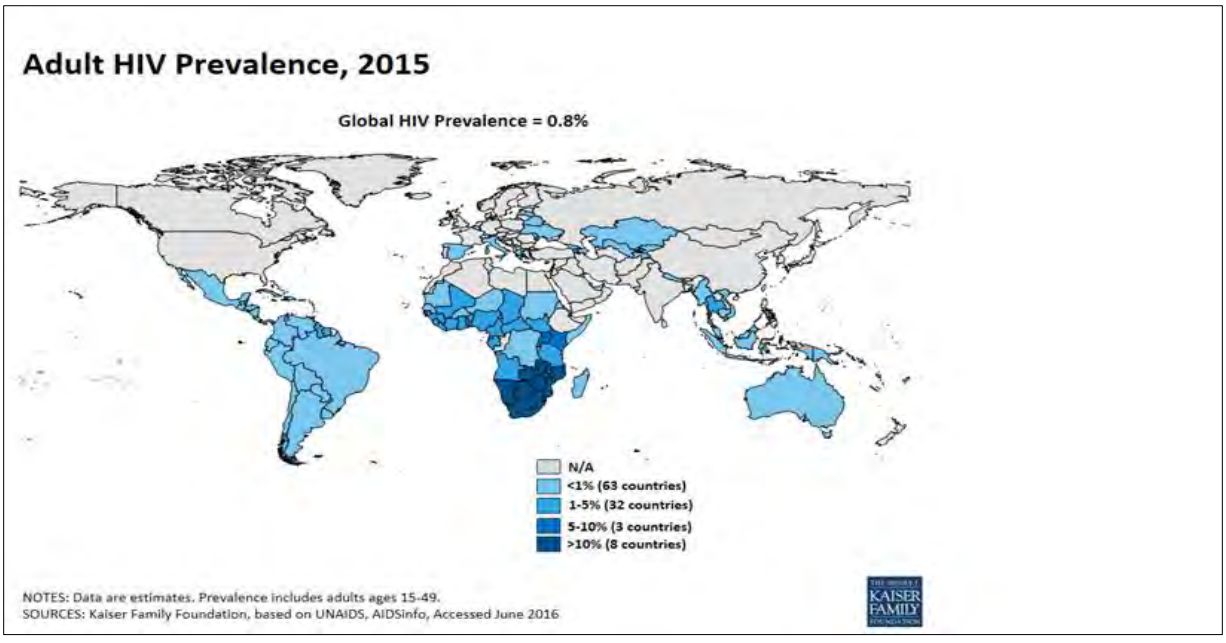
An increasingly significant global trend is the number of elderly people over 50 years living with HIV which was estimated at 3.6 million (UNAIDS, 2014). This could be due to the efficacy of Anti-Retrovirus Virus treatment access and people now live longer with the virus or increase in risk behavior amongst the elderly who were historically marginalized in health education programmes. The bar chart below shows the number of PLHIV by region.

Fig 2.1: Statistics on distribution of PLHIV in the world (WHO, 2015)



Sub-Saharan Africa remains the epicenter of the pandemic with the highest proportion of PLHIV and high prevalence rates as shown in fig 2.1.

Figure 2.2 Global HIV prevalence map: UNAIDS, 2015



2.3 International response to HIV and AIDS pandemic

Global measures to fight HIV/AIDS pandemic commenced in the 1980s with the emergence of the World Health Organization's Global Initiative on AIDS in year 1987. The United Nations then formed UNAIDS in 1996 to serve as the global epicentre for coordinating efforts towards combating the global scourge. National country governments for affected countries, Non-Governmental Organizations and civil society have been vital in responding to impact of HIV/AIDS (WHO, 2015). Developing and least developed countries however remain at the periphery in terms of progress on outcomes of fight against HIV/AIDS mainly due to poverty and competing demands for limited resources. In the past years, funding by donors and international community saw increased trends in funds and many key programmes were initiated to fortify the battle against HIV/AIDS.

In the year 2000, United Nations agreed on global HIV targets to stop and commence to reverse the spread of HIV by 2015, in tandem with the globally agreed and endorsed Millennium Development Goals (MDGs), and the World Bank launched its Multi-Country AIDS Program (MAP). By the year 2015, the AIDS-related targets of MDGs were met with much applaud to the joint efforts by all involved partners. In 2015, the international community agreed upon new Sustainable Development Goals (SDGs), which included a target to end the AIDS epidemic by the year 2030, a resolution endorsed by UN member states and would require harmonized efforts to achieve in the next 15 years (UNAIDS, 2015).

The UN Special Session on HIV/AIDS (UNGASS) was convened in 2001 leading to the setting up of Global Fund which to date support health programmes on HIV/AIDS in many countries including Zimbabwe as part of the top nations. More recently, at the June 2016 UN General Assembly High-Level Meeting on Ending AIDS, world leaders adopted a new Political Declaration that reaffirmed global commitments and called for an intensification of efforts to end

AIDS by the year 2030. The highlighted efforts and resolutions are testimony to the overwhelming political will amongst leaders to ensure HIV/AIDS is combated sustainably given the magnitude of the ravaging impact the pandemic has had globally.

During the year 2014 December, UNAIDS set (90.90.90) targets for 2020 whose main thrust is towards ensuring that HIV/AIDS is ended by the next 15 years. The targets included achieving "90% of people living with HIV knowing their HIV status; 90% of people who know their HIV-positive status on treatment; and 90% of people on treatment with suppressed viral loads (UNAIDS, 2015). Such targets are however possible if adequate mechanisms are put in place to optimize utilization of HIV/AIDS- related healthcare. There is critical need to ensure adequate resources are mobilized and equitably distributed to meet the 2020 targets. These goals and targets were reiterated in UNAIDS' 2016-2021 strategy, which also aligns with the 2030 agenda on Sustainable Development Goals.

Funding to support HIV/AIDS programmes in developing countries has come from major donor governments such as UK, Norway, USA, and Canada who disbursed $7.5 billion in the year 2015 though lower than previous years financing (UNAIDS, 2015). Most affected nations are also making frantic efforts through domestic resource mobilization to finance HIV/AIDS-related programmes e.g. through targeted levies and increasing government expenditure on healthcare in strengthening health delivery systems. The Global Fund has committed approximately $17 billion for HIV efforts in more than 100 countries including Zimbabwe to date (WHO, 2015),and the private sector including foundations, philanthropists and corporations, also play crucial roles, particularly the Bill & Melinda Gates Foundation which has committed more than $2.5 billion for HIV and AIDS programmes and further support to the Global Fund

UNAIDS approximated that a total of USD$19 billion was mobilized to finance HIV and AIDS interventions in developing nations in the year 2015, but USD$26.2 billion required by the year 2020 to meet global set targets to end AIDS as a global public health threat by the year 2030. This again calls for deeper commitment from the donor community, developed countries and developing countries with stiffer measures required to ensure proper governance and accountability. There is also need to ensure robust measure are in place to track progress and encourage end users to adhere to medication and optimize healthcare utilization especially marginalized groups.

2.4 Treatment and prevention of HIV/AIDS

Researchers, medical practioners and policy makers across the globe have come up with a number of prevention interventions over the years in the fight against HIV and biomedical researches on emerging measures such as vaccines are underway (WHO, 2015). The role of academic institutions, strong political will and robust health systems cannot be over emphasized if success against the global epidemic is to be achieved in the years to come. Despite documented strategies which exist to date, limited efforts have however been executed to ensure that end users are involved in order to guarantee optimal HIV/AIDS-related healthcare utilization and adherence to medication especially amongst marginalized groups in rural areas.

The Global HIV/AIDS Epidemic, 2016 report noted that robust HIV/AIDS prevention strategies include risk-behavior change programs especially amongst reproductive age groups and marginalized groups, condoms, HIV testing, blood supply safety, harm reduction efforts for injecting drug users, and male circumcision (UNAIDS, 2015). Recent research has shown that providing HIV related treatment to people living with HIV significantly lowers the risk of transmission to their negative partners thereby ensuring rate of prevalence can be reduced going forward (Campbell et al.,2013). Highlighted prevention measures are unequally implemented in

developing countries owing to scarce resources to ensure intensive interventions and other local level barriers such as socio-cultural beliefs and value systems. WHO (2015) highlights that pre-exposure antiretroviral prophylaxis (PrEP) is effective as an HIV prevention strategy amongst high at risk individuals. In 2016, the United Nations Political Declaration on HIV/AIDS emphasized that PrEP research and development should be accelerated globally.

According to the Henry and Kaizer Foundation (2016), health and policy experts recommended that prevention be based on "knowing your epidemic," that is, tailoring prevention to the local context and epidemiology, and using a combination of prevention strategies, bringing programs to scale, and sustaining efforts over time. Access to HIV/AIDS prevention resources remains a challenge especially in resource poor region such as Sub- Saharan Africa, and there have been renewed calls for the strengthening of prevention efforts globally.

According to UNAIDS, 2015, HIV/AIDS treatment incorporates the utilization of combination of antiretroviral treatment to attack the HIV itself, and pharmaceuticals to anticipate and treat the numerous opportunistic infections and diseases brought about due to weakened immune system after HIV infection. In light of ongoing research discoveries, WHO discharged a rule in 2015 prescribing beginning HIV treatment sooner throughout sickness. Antiretroviral therapy (ART), first introduced in 1996, has led to dramatic reductions in morbidity and mortality globally, and access has increased in recent years, rising to 17 million people in 2015, surpassing a global goal set in 2011 to have 15 million people on treatment by 2015. Globally approximately, 46% of people living with HIV are receiving treatment.

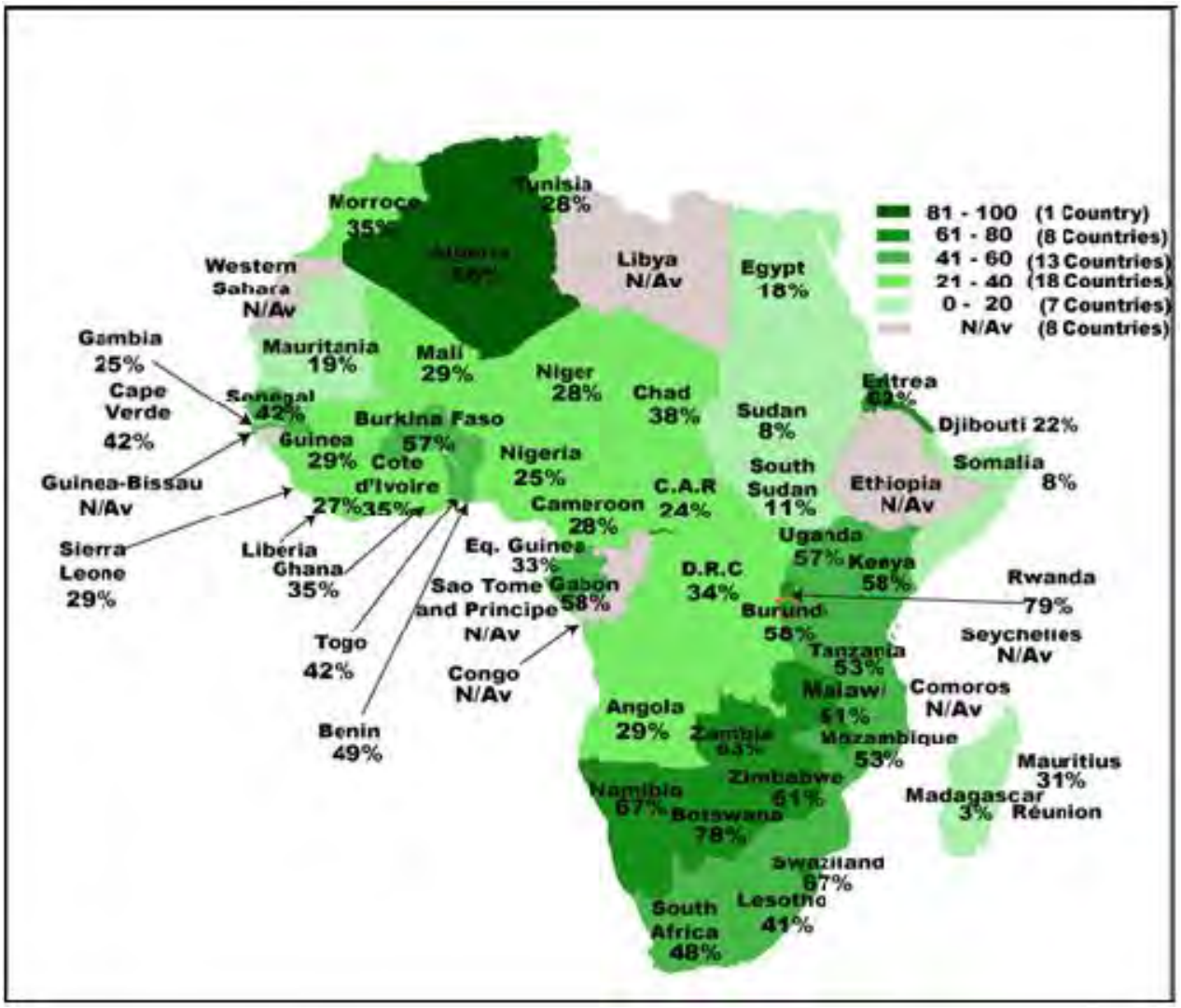
Approximately 38% of all people living with HIV are virally suppressed, which means they are likely healthier and less likely to transmit the virus. Viral suppression varies greatly by region, key population, and sex (UNAIDS, 2016). Despite such successes and rising trends in access to

HIV/AIDS- related healthcare there is need to ensure PLHIV optimally adhere to medication and minimize risky behaviors. The percentage of pregnant women receiving ART for the prevention of mother-to-child transmission of HIV increased to 77% in 2015, up from 50% in 2010. Access to ART among children has also risen significantly, from 21% in 2010 to 49% in 2015.

2.4.1 Sub Saharan Africa (SSA) and the history of HIV/AIDS

Geographically SSA covers all countries in the African continent south of the Sahara desert as shown in the Fig 2.2 below which also show national level statistics on PLHIV in Africa. About 11% of the world's total population is located in SSA but the region is host to 70% (about 25 million) of all the people living with HIV with an average prevalence of 9.0% compared to 1.2% worldwide average (Population Reference Bureau, 2015).

Figure 2.3: Percentage of people living with HIV receiving ART in Sub Saharan African countries



Source: Africa Development Information (UNAIDS, 2015)

HIV/AIDS has dominated the public health arena for more than three decades to date and SSA is the most adversely affected region with a total of 23.5 Million people living with HIV and recording 1.9 million new infections annually (WHO, 2012). The first cases of the epidemic were recorded as far back as early 1980s in Kinshasa (Democratic Republic of Congo), Tanzania, Kigali (Rwanda) and parts of Uganda but with mixed socio-cultural misconceptions (Denis & Becker, 2006). Zimbabwe recorded its first case of HIV/AIDS in 1985. In 1993 a rise in awareness of the

reality of the epidemic took off as health sectors recorded significant rise in morbidity and mortality associated with HIV/AIDS.

In Sub-Saharan Africa, some cultural and socioeconomic characteristics have contributed to the extensive spread of HIV/AIDS infection, including gender imbalances, impoverishment and decline of social services, rapid urbanization and modernization, tribal wars and conflicts (WHO, 2012). Populations in many parts of Africa are becoming trapped in vicious circles of poverty as the HIV/AIDS epidemic leads to high mortality rates in the young and economically productive age groups, and thus leads to further impoverishment. Interventions to control HIV/AIDS should not only target individuals, but also aim to change those aspects of cultural and socioeconomic context that increase utilization of healthcare and reduce vulnerability to HIV/AIDS in the region (Buve, Nsarhaza & Mutangadura, 2002).

In countries such as South Africa, the disease was mainly attributed to homosexuality and drug users until early 1990s when prevalence amongst heterosexual individuals surpassed homosexuals and formal strategies to combat the disease were institutionalized especially formation of National AIDS Coordinating Committee of South Africa (NACOSA) which put up a broad inclusive approach to tackling HIV with actions including prevention, research, human rights, counselling and welfare, with the involvement of a number of government departments (AVERT, 2011).

Healthcare is a universal need for every citizen, however disparities in terms of equitable access are a huge challenge given income level variations across countries and within. Igna (2012) highlighted that the extent to which healthcare use is distributed equitably, i.e. according to people's needs rather than their ability to pay, is an important concern of health policy makers worldwide. There is greater need to understand how best to promote healthcare utilization especially in rural

communities. Income-related inequities in healthcare delivery have been well documented for developed countries and some high income Asian countries (Lu, et al. 2007; Van Doorslaer et al. 2000; Van Doorslaer & Masseria 2004; Van Doorslaer et al. 2004) but comparative studies for developing countries especially Sub Saharan Africa (SSA) are very limited (Bonfrer, Van de Poel, Grimm, & Van Doorslaer, 2013). The existence of these inequities is not only a societal concern in itself, their persistence may also cement a possible health-poverty trap that can retard economic and social development (Sala-i-Martin, 2005; Strauss & Thomas 1998). A fair distribution of healthcare delivery system is therefore vital, especially in SSA where health indicators are lagging far behind other developing regions. Socio-economic inequalities in under-five mortality, underweight and diarrhoea are considerable in SSA and to the disadvantage of the poor and marginalized communities (Gwatkin, et al. 2007).

The literature on equity in health care delivery and utilization in SSA is worryingly narrow. Earlier work has focused mainly on supply side indicators with bias towards maternal and child health (Zere & McIntyre 2003) or on interventions for specific for HIV/AIDS-related healthcare (Loewenson, 2007). While maternal and child care are indeed crucial components of emerging health care systems, they only represent one segment of the system and consist of largely anticipated and relatively affordable services. Moreover, health inequities may widen in the near future when the sharply rising prevalence of chronic diseases (Aikins, Boynton, & Atanga. 2010) will add to the currently dominant burden of infectious diseases, creating further challenges for health care systems. This study explored a historically neglected segment of healthcare delivery system which is the social capital healthcare utilization nexus targeting PLHIV with a goal to help bridge the existing literature gap and provoke useful policy insights to promote optimal utilization of

HIV/AIDS- related healthcare in ongoing fight against the ravaging impact of the HIV/AIDS pandemic in low income countries such as Zimbabwe.

Key findings outlined by Igna (2012) point out three lessons for policy makers aiming to close the gap between needs and use of healthcare as follows;

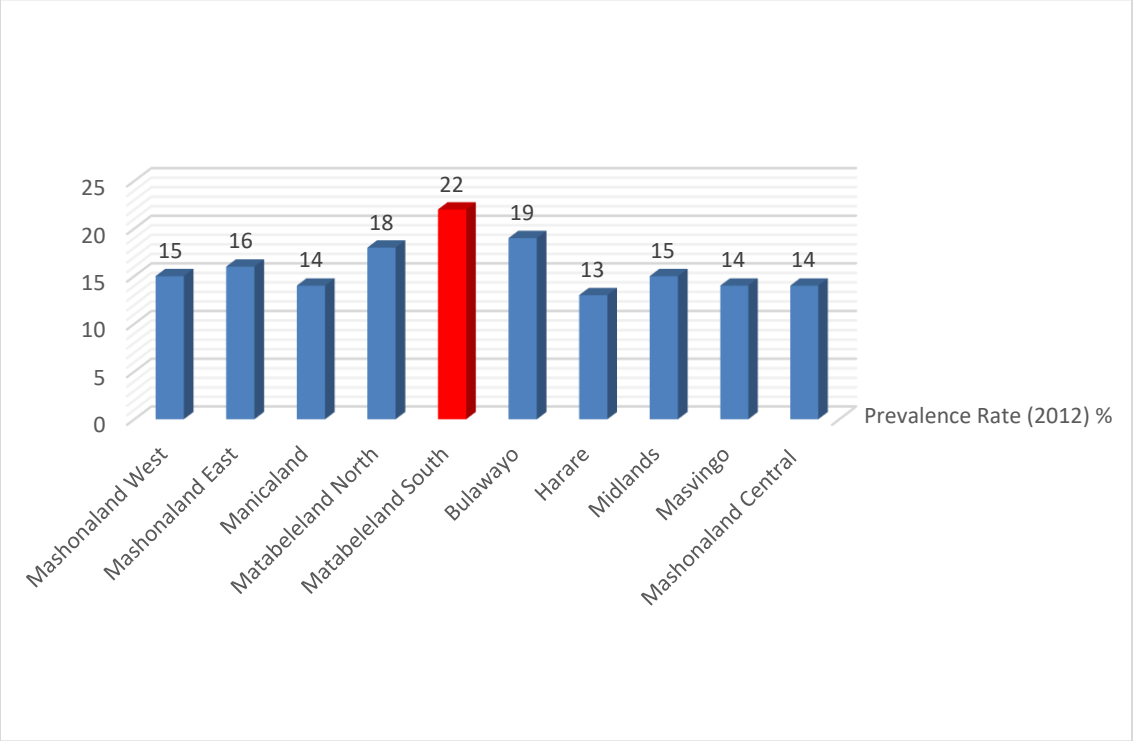
1. In the absence of health insurance coverage for the poor, any intervention that raises the income generating capacity of poor households is likely to have considerable positive effects on healthcare use as well. This highlights the need for livelihood support programmes at local level especially in rural communities where poverty is a major challenge as well as strengthening social fabric which is central focus of this study.
2. The unequal distribution of education also plays an important role in explaining healthcare inequity in Africa. There is therefore need to promote educational advancement especially in marginalized communities and giving priority to health education.
3. Need for good governance and accountability structures at all levels. Poor systems for accountability threaten sustainability of interventions hence authorities must put in place robust systems to guard against abuse of resources for personal gain embezzlement.

2.5 HIV AIDS in Zimbabwe

Zimbabwe is one of the countries seriously affected by the HIV/AIDS pandemic (WHO, 2013). The first reported case of HIV/AIDS was recorded in 1985 and since then the pandemic has been at the centre of healthcare issues and policy (Kerina, Babill, & Muller, 2013).). A legislative response by the government of Zimbabwe has seen HIV/AIDS being declared a national disaster and enacting of the National HIV and AIDS Policy of 2000 and the Statutory Instrument (SI 202) of 1998 which also prohibits HIV screening for purposes of employment (Cameron, Burris & Clayton, 2008). The prevalence rate stands at 22% in rural communities and 14.5 % in urban centers

(ZIMSTAT 2012). The map in Fig. 3 below presents variations on prevalence in Zimbabwe by province. The highest prevalence rate is in Matabeleland South which is 22% and Harare (Capital City) with approximately 13% (Kerina, Babill, & Muller, 2013). The high rate in rural province could be a result of inadequate access to health education facilities, poverty as well as perceived urban rural migration for the sick in developing countries.

Figure 2.4 HIV/AIDS prevalence in Zimbabwe (2012 Census)



2.6 Zimbabwe National HIV and AIDS strategic plan 2015-2018

The government of Zimbabwe has been consistently putting in place guiding frameworks to champion the battle against HIV/AIDS given the ravaging impact the pandemic has had over the years. The current 3rd National HIV and AIDS Strategic Plan (ZNASP III 2015-2018) is a continuation of the ZNASP II (2011-2015) as an effort to align the national response to the national economic blue print, ZIM Asset (2013- 2018) priorities of Government with the aim, to contribute through the HIV sector. There is every indication that the country can begin ending AIDS epidemic

in every district, province, in every location, in every population and every community and the country at large.

HIV/AIDS still remains a huge battle in Zimbabwe affecting all age groups and exacerbated by plethora of economic challenges facing the country though we continue to see decelerating rates of new HIV infections, one step closer to eliminating new HIV infections among our children from HIV positive pregnant mothers through intensive PMTCT programmes. Despite intensive programmes at local levels, interventions to fight stigma, discrimination and to improve healthcare utilization remain critical. Issues of gender and equitable access especially in the rural areas still require solid attention if set national targets are to become a reality. An increasing number of people living with HIV know their status and are receiving most efficacious HIV treatment as lifesaving drugs, relatively fewer people are dying of AIDS-related illnesses in the country. TB-related deaths among people living with HIV have also declined by triple fold. More evidence in the country is also showing that service delivery in terms of ART and PMTCT increased by up to five times between 2004 and 2013 as a result of frantic government efforts and support from the donor community and non-governmental partners. It was also noted that majority of the PLHIV live within less than 10 Km from an ART site which shows a generally good service coverage. However, there is strong recommendation to increase the functionality, quality, laboratory capacity supporting existing services. In addition, the epidemic still remains feminized with women and girls bearing most of the burden and risk. Female prevalence is generally higher than that of males. Previous studies link the phenomena to socio-cultural practices which put females at higher risk than men

and these include early marriages as well as generic patriarchal mentality which favors the boy child.

While the epidemic appears homogenous by geographical location, Matabeleland South Province which is the site of the current study consistently show the highest HIV prevalence of HIV and AIDS. Possible explanations could be due to the semiarid nature of the province which may contribute to promoting risk behaviours as people seek alternative means of livelihoods. The national incidence was also noted to be highest in this province as well as in Bulawayo. These two areas present the highest likelihood of having new infections and therefore require an enhanced prevention investment portfolio. Also provinces housing the main borders entry points (Beitbridge, Kariba, Victoria Falls, Plumtree, Forbes and Nyamapanda) generally showed high risk factors with most new infections in the country (sex workers data showed new infection rate of tenfold higher than the national incidence rate).

The same pattern of high prevalence was observed in farming areas, growth points and mining areas in the country. More efforts and interventions are required in these populations and locations in order to reduce the spread and impacts of HIV and AIDS affecting communities. In summary, the main geographic hot spots cover the entire Matabeleland South Province, two districts in Matabeland North (Nkayi and Bubi) as well as Bulawayo, Mazowe and Marondera. There are 14 districts which have a high potential to become hotspots and need to be prioritized for investment especially on prevention and treatment as well as response management. These include: Bindura, Buhera, Centenary, Chegutu Urban, Chipinge, Epworth, Hurungwe, Makonde, Makoni, Mhondoro-Ngezi, Mount Darwin, Mutasa, Mutare, Nyanga, Shamva and Chipinge.

The preceding 2011-2015 framework was designed to coordinate and inform Zimbabwe's action towards meeting zero new infections cases of HIV, zero discrimination and zero AIDS related

deaths by 2015. The strategic plan was take over as continuation the ZNASP (I) developed to cover the period 2006-2010. In developing the strategic plan, Zimbabwe has adopted human rights, evidence and results based planning and management approaches. Gender insights have been mainstreamed in the plan guided by empirical evidence gathered over the years. The development process builds on the achievements and lessons learnt during the implementation of the outgoing strategic plan 2006-2010. The strategic plan has identified national priorities and strategies that have the potential to contribute to the anticipated impact and outcome results though insights to cover detailed aspects on healthcare utilization were not rigorously covered. Its multi-sectoral and decentralized design provided meaningful opportunities for diverse stakeholders‟ participation based on their mandate, technical capacity and comparative advantage.

2.7 The Zimbabwe national health system

In Zimbabwe, the Health System is governed by a central authority, Ministry of Health and Child Care whose mandate is subdivided in onto six complementing dimensions as follows; Health Policy, Mobilization and Allocation of Resources, Human Resources Planning, Regulation, Surveillance, Monitoring and Evaluation (Osika et al., 2010).

A decentralized hierarchical structure links four levels of healthcare provision starting at Primary, Secondary, Tertiary and Quaternary/central care. Primary healthcare consists of village health workers, community-based distributors, and small clinics/facilities that patient's usually first encounter, especially in rural areas. Healthcare at this level is mainly basic prevention, maternity, and curative services; most facilities are run by a nurse, or possibly several nurses in a larger urban area. The primary health facility refers all serious cases to district level hospitals. Approximately 1,118 rural health clinics, rural hospitals, and urban polyclinics make up the primary healthcare facilities and represent 78 percent all health facilities in Zimbabwe (HAS, 2010). In the context of

HIV/AIDS in the rural areas, primary healthcare centers are also collection points for ARVs and other support services for PLHIV.

Secondary level healthcare facilities in Zimbabwe consists of facilities that receive patients via referrals from the primary care facilities and these are mainly district level centers expected to be within reach to a catchment of approximately 140,000 people (Makuto & James 2007). There about 46 district hospitals and 5 mission hospitals under this category which make up to 3.6% of all healthcare facilities in Zimbabwe.

Tertiary level health facilities account for approximately 1% of all health facilities in Zimbabwe. They comprise of provincial hospitals strategically built in provincial towns and receive all referred cases from district level facilities. They have more specialized services offered also refer complicated cases to central hospitals which fall under the last level of quaternary facilities which are found in Harare and Bulawayo, (Capital and second capital cities of Zimbabwe respectively)..

2.8 HIV/AIDS legislation and policy in Zimbabwe

Health legislation is governed by the Health Services Act of 2002, The Public Health Act (2000) and the Health Profession Act (2000). The Health Services Act was designed to enhance participation of communities in health related issues at each level of the Nation Health System through creation of community committees and local councils on health. The Public Health Act empowers the Ministry of Health and Child Care to protect the health of the population through regulating sanitation standards in the country.

A number of countries have responded to the HIV/AIDS pandemic but there is still a dearth of legislative response directly targeted to HIV/AIDS and PLHIV. The unique challenges posed by HIV/AIDS as a health, social and economic challenge deserves specific legislation and policies to

address the impact of the pandemic. In Zimbabwe two pieces of legislation directly linked to HIV/AIDS and PLHIV are;

1. *Sexual Offences Act (Act 8 of 2001)*

This Act is cited as the Sexual Offences Act [Chapter 9:21]. It was amended and enacted by the president and parliament of Zimbabwe to include a section which guards against deliberate spread of HIV through sex and makes it mandatory for sexual offenders to be tested for HIV. The act specifically states that: 'Any person who, having actual knowledge that he is infected with HIV, intentionally does anything or permits the doing of anything which he knows or ought reasonably to know (a) will infect another person with HIV; or (b) is likely to lead to another person becoming infected with HIV; shall be guilty of an offence, whether or not he is married to that other person, and shall be liable to imprisonment for a period not exceeding twenty years'. (ILO, 2001). The act ensure that it is crime to deliberately spread HIV but may be adjusted to also incorporate making it an offence for deliberate stigma and discrimination on the basis of HIV status.

2. *Labour relations Act (HIV/AIDS) regulations of 1998*

The Labour Relations Act (1998) requires that employees are educated and trained on HIV/AIDS and restricts discrimination of employees on the basis of their HIV/AIDS status (Dirwayi, Shisana, Udjo, Mosala & Seager, 2004). In as much as the highlighted legislature are directly linked to HIV/AIDS there is need for additional laws governing access to healthcare, social inclusion and welfare of PLHIV.

Since independence from colonial rule in 1980 after the popular liberation struggle, the National Health System in Zimbabwe has been principally guided by three policy frameworks. According to Zhou and Zvoushe (2012), policy decisions in Zimbabwe were mainly based on imperative for nation building with interventionist and social welfare thrusts especially in the 1980s then

contractionary and reactive approaches in the face of economic downturns from 1990s on wards given the volatility in the economy. Significant documentation of health policies and frameworks exist but corresponding write ups to inform the public on extent of success or failures of each of the well-articulated policy documents remain to be done or shared for public critique. In exploring and understanding the Zimbabwe health policy arena, the researcher took a closer analysis and briefly critiqued each of the following policy frameworks;

i. Planning for Equity in Health (1980s)

Zimbabwe accomplished its freedom in 1980 following a tiring seven year battle. This authentic reality remains an unequivocal component in national approach to policy making up to the present time. At independence, the new government confronted the squeezing test of reconstituting and realigning the inherited national policy making structures in line with the new socio-politico-financial discourse that had set in to ensure a transition from minority-centered to majority rule. The acquired economy was additionally full of disparities and marginalization of majority in income and allocation resources. Against this background, the need to address disparities and imbalances promoted by previous governance systems became imperative especially in key sectors such as health by the new central government.

The 'Equity in Health' policy was aimed at ensuring the majority of black Zimbabweans historically disadvantaged in terms of access and provision of healthcare were to get improved service delivery especially in rural areas. It was aligned with the Transitional National Development Plan (Sanders, 1990). Under this framework, rural clinics, health centers and hospitals were established in both rural and urban areas (Zhou and Zvoushe, 2012). According to Sanders, (1990) a total 224 rural health centers were completed by 1987. Healthcare was highly subsidized and free

for low income people and deployment of village health workers was done to ensure micro level support in terms of health in rural areas.

Whilst there were visible signs of immediate impact of the 'Planning for Equity in Health' framework sufficient periodic reviews adjustments and documentations were not sufficiently done to calibrate extent of success and achievement of desired outcomes. Despite the pressing need from the majority to start to enjoy benefits of free a Zimbabwe, policy makers must also have enlightened masses on the need to enjoy and sustain for future generations through balancing equity, quality and efficiency as there was great need to integrate sustainability. Sustaining the equity driven policy would have been made effective through rallying international community support or crowd funding in national building.

ii. Working for Quality & Equity in Health (1997-2007)

The policy reinforced health sector reforms building on previous framework under the 'Equity in Health' in order to address historical imbalances in health system. It also aimed to promote core health services for all Zimbabweans especially in rural areas and promote prevention and primary healthcare initiatives as well as establishing social health insurance. Despite the highlight in 'quality' the framework was more biased towards equity and did not incorporate issues of sustainability to ensure continuity of programmes implemented. Very limited success evaluations exist to critique extent to which this policy succeeded.

iii. Equity and Quality in Health: A People's Right (2009-2013)

Zimbabwe faced severe economic challenges since entry into the millennium which peaked up in 2008 despite efforts to ensure stability. The coming in of government of national unity in 2009 brought in a new dawn of hope to revive the country across all sectors especially health. Taking into

account the existing situation during period around 2009, the system 'Equity and Quality in Health' framework was centered on four critical focal areas;

a) Determinants of Health- addressing the factors outside the national health sector which have an impact on health and how such could be integrated to boost health service delivery
b) Diseases affecting Zimbabweans: addressing the burden of specific major diseases and conditions affecting the population of Zimbabwe such as AIDS, malaria and non-communicable diseases
c) Health System Strengthening: Improving the overall healthcare system context in which services must be organized, delivered, monitored and evaluated for the betterment of quality of life amongst the population.
d) Inclusive Implementation- Bringing together all players such as private sector, NGOs, faith based organizations and the public sector for collaborative implementation.

The equity and quality in health framework underscored importance of improving quality of service delivery in health and viewed the health sector as requiring collaborative efforts of diverse partners to ensure intended outcomes but however no specific measurable targets were put in place to measure success and its continuity was affected by political friction under the government of national unity.

2.9 HIV/AIDS-related healthcare utilization

Studies on utilization of healthcare services have historically focused on developed countries creating literature gaps in third world countries (Kalin, 2011) especially Sub-Saharan Africa as available findings cannot be generalized to the global population. This section reviews some of the existing related studies on utilization of healthcare services.

In Botswana, a strong positive association was found between social capital and environmental quality (Modie-Moroka, 2009) but social capital was found to be negatively correlated with physical health. The cross sectional study used the World Health Organization Quality of Life scale on a sample of 388 adults. Key dimensions of social capital covered were neighborhood characteristics and trust. The study revealed useful insights on role of social capital in predicting health outcomes but findings are only limited to urban population and did not explore the bigger picture of social capital to include group participation, distinction between boding and bridging social capital and relevance in the healthcare context. This study applied some significant insights on social capital and health related quality of life to examine the context of social capital and utilization of healthcare by PLHIV.

In Ghana, Health Seeking Behavior study on PLHIV showed that source of healthcare was influenced mainly by knowledge of and understanding of disease cause (Awusabo-Asare & Anarfi, 1997). The study used the Health Seeking Behavior and found out that 70% of people living with HIV utilize hospital and 16.7% relied on traditional healers for health service. A key limitation of the study was the exclusion of social capital dimension and its possible implications on choice of healthcare as individual decisions especially for the sick are usually not made in isolation (WHO, 2010). The data used for the study was primarily intended for a study on social dimensions of HIV/AIDS in Africa hence did not present deeper insights into the plight of PLHIV such as incorporation of quality of life dimension and breaking down the different dimensions of social capital.

A study in USA by Cunningham et al., (2006) on utilization of healthcare by PLHIV compared the socio-demographic, clinical and healthcare utilization characteristics of a multisite outreach probabilistic sample of PLHIV. The study used number of visits to healthcare facility 6 months

prior to interview as proxy for healthcare utilization where 2 visits or more indicated recommended level of utilization, (Shapiro &Keyes, 2008). Key findings were that the respondents were poor people, drug abusers and racial minorities and reflected very low levels of utilization of healthcare services. Socio- Demographic factors analyzed were age, income, and education, race/ethnicity, housing stability (rented, homeless, owned or squatting), employment status, language and medical insurance cover. Though the study found out useful insights in the dynamics of healthcare utilization amongst PLHIV, a key limitation is exclusion of social capital dimension and limited generalizability of findings given the geographic context of the study.

In a similar cross- sectional study on social capital and health amongst PLHIV covering 5 countries, social capital was found to be positively correlated with positive health outcomes in an international sample of PLHIV (Webel et al., 2012). The analyzed composite measures of social capital which do not explicitly explain each dimension of social capital is positively correlated with positive health outcomes.

The need to understand HIV and AIDS beyond the medical laboratory has widened scope for research, hence social capital concept has becomes a critical consideration issue. Campbell et al. (2013) in a study on role of the church in fighting Stigma in Zimbabwe found out that community connections play a critical role in promoting action planning and reflection on participants. This underscores the need to unpack the likely healthcare utilization implications of such social fabric especially amongst rural PLHIV. Berkman and Kawachi (2000, p. 15) defines social capital as, "those features of social structures such as levels of interpersonal trust and norms of reciprocity and mutual aid which act as resources for individuals and facilitate collective action". The critical role which social capital plays or can play in promoting health is currently widely debated within international public health contexts (Campbell et al., 2013).

Portes (1998) concluded that social capital can equally function in both a socially exclusive and an inclusive way, having beneficial welfare effects for some and negative for others. As highlighted by Campbell, Williams and Gilgen (2002) in investigating the effectiveness of an HIV peer-education program in rural South Africa, they reported that social capital was strongly related to health behaviours, although it did not always enhance positive health behaviour. Pronyk et al. (2008) suggested that high levels of social capital and community cohesion might be protective and facilitate more effective collective responses to the HIV/AIDS epidemic. There are however contrasting views which highlights strong social ties as hubs for anti-social behaviors which are highly detrimental to social image as reinforced by findings from Campbell et al., (2002) who posited that group membership has been a risk factor for HIV infection especially among intravenous drug users. There are a number of mechanisms through which social capital might affect the prevalence and distribution of HIV in populations (Berkman & Kawachi, 2000; Campbell & Macphail, 2002; Campbell et al., 2002; Gregson, et al., 2004).

Well-functioning community networks may protect community members from engaging in risky sexual behaviors through collective actions against unwanted behaviors at local community level. Strong social networks have been found to exert social or cultural pressure on members in ways which deter high risk sexual activity. These networks facilitate the exchange of information between peers who may be able to discuss issues on safe sexual health. In addition to information exchange, these networks may shape community norms around gender relations, communication and sexual negotiation (Pronyk et al. 2008).

Notwithstanding the growing popularity and attention on linking social capital and health, limited scholarly research has been done in Africa and more specifically in rural Zimbabwe on how HIV/AIDS- related healthcare utilization can leverage social capital which is the crux of this study

and how group membership affects members' risk of HIV and attitudes towards HIV/AIDS. Campbell et al. (2002) focus on the impact of social capital on health issues in a South African mining community, and Gregson et al. (2004) examined links between social capital and HIV prevention in Zimbabwe. Both studies suggested that group memberships have a significant link with HIV avoidance or vulnerability. Campbell et al. (2002) found that some groups (e.g. women's' groups, youth groups) protect people against HIV, but others (e.g. stokvels, unions) make it more likely that people will be HIV positive as some closed community tendencies of risk behaviours tend to replicate such behaviours amongst members and fuel the spread of HIV. Thus their findings suggest that some groups have properties that protect members from high risk sexual activity while others endanger members by creating environments conducive to risky sex. In Nigeria, Gruber and Caffrey (2005) argued that mobilizing social capital (in their paper referred to as community human resources) is a core strategy on which successful HIV prevention initiatives have been built. Gruber and Caffrey (2005) illustrate that community conflicts erupt when community gate keepers individuals who have high amounts of respect and control over change within a community and the wider community were not accorded the opportunity to participate in the process of prioritizing needs, defining interventions, monitoring programs and evaluating outcomes. They highlight the need to develop HIV/AIDS interventions that are genuinely responsive to different socio-cultural contexts to avoid community conflict and break down (Miller & Bell, 2002). Disclosure of HIV status often has important positive implications for HIV prevention and treatment in communities with high HIV rates. HIV/AIDS-related policies and interventions often recommend the promotion of openness about HIV status as a vital aspect of effective HIV and AIDS management. There is evidence that women's efforts to participate in prevention of mother to child transmission (PMTCT) programs, adhere to infant feeding guidelines and prevent unintended pregnancies are difficult

without the knowledge and support of other trusted people in their communities (Brou et al., 2007; Buskens, Jaffe, & Mkhatshwa, 2007; Medley et al., 2004). Hence there is an urgent call to encourage and enhance opportunities to support disclosure, with community groupings being seen to constitute a vital arena for support and assistance to those who disclose (Takyi, 2003).

Gittens (2000) pointed out that AIDS-afflicted people are often victims of stigma and prejudice at work, in the community, and at home. They often lack the support mechanisms available to sufferers of most other fatal disease. The Sonagachi Project, a community-based HIV intervention in the red light district of Kolkata, India, is an example of a successful effort to address HIV stigma through building strong social capital. The Project was able to foster increased community organization by female sex workers, leading to the women gaining more information about HIV, adding more value and acceptability to HIV prevention efforts (Jana et al., 2004) as well as enabling women there to challenge the stigmatization of commercial sex work (Cornish, 2006). The same initiative would however need to be replicated in different contexts. There is a need for Zimbabwe as a nation to confront the escalating health, social and economic challenges caused by HIV, including building the capacity of existing community organizations to support those in need. This study sought to build our understanding of how social capital can be harnessed to enhance HIV/AIDS-related healthcare utilization in rural Zimbabwe.

Barnett and Whiteside (2002) argued that both prevention and impact mitigation programs in Africa have to date been halfhearted and inadequate. The epidemic exacerbates poverty and perpetuates inequality at the individual, household, community and national levels. Winning the battle against HIV and AIDS stigma and discrimination as well as promoting sustainable utilization of healthcare have been cited as one of the key drivers to effective HIV prevention (Ogden & Nyblade, 2005).

In Zimbabwe, HIV is strongly associated with promiscuity to the extent that the terms are interchangeable (Gregson et al., 2007). Fear, suspicion and victim blaming has been the norm in most families. Research in many sub-Saharan African countries have found high levels of HIV stigma. Most people do not want to associate or share anything with an AIDS sufferer (Duffy, 2005). People with HIV and AIDS are often shunned and treated with contempt and described as immoral (Parker & Aggleton, 2003). Even in situations where a handful of people living with HIV and AIDS (PLHIV) are open about their condition, stigma remains and tends to prevent PLHIV from receiving adequate care and treatment (Haddad & Gillespie 2001).

The situation is often worse in rural areas where community leaders and tribal authorities make discriminatory statements during funeral orations of people who have died from AIDS though efforts to reverse such discrimination are being implemented. Newman et al. (2008) studied how Black Canadian women perceive HIV risk and prevention. Their findings suggest that stigma, cultural disconnection, lack of engagement of black religious institutions and multiple intersecting forms of discrimination serve as potent barriers to existing HIV preventive interventions. They cite how current models of HIV preventive intervention require individuals to combat powerful structural forces such as sexism, racism and HIV/AIDS stigma, and to circumvent social pressures emerging from cultural institutions such as the church and the family. They further stated that, "HIV prevention strategies that require individuals to protect themselves at the cost of alienation from traditional bastions of support seem ill conceived and unlikely to be effective" (Newman, et al., 2008). Traditional sources of social support, such as families, churches and schools, need to play a central role in supporting people with HIV and AIDS.

This study examined how personal social capital relates with healthcare utilization. Chiu et al.'s (2008) study in a South African township found that social capital, measured in terms of

components including empowerment, trust and group membership, significantly predicted levels of stigma above and beyond demographic covariates (e.g. age, gender, marital status) and whether the participant knew someone with HIV. They found that people with a higher sense of empowerment tended to make changes in their lives and had less stigmatizing attitudes. Individuals who felt trust and safety in their community were less likely to think that others in their community held stigmatizing attitudes. Sivaram et al. (2009) examined links between social capital and HIV stigma among commercial female sex workers and men who frequent beer halls in Chennai, India. They found that, among men and women, membership in formal community groups was associated with reduced fear of HIV transmission, reduced shame, blame and judgement, and reduced personal support for discriminatory actions against PLHIV.

In addition, a sense of trustworthiness and the ability to rely on others for financial help were strongly associated with lower levels of stigma. In South Africa, HIV infected and affected individuals were found not to be passive victims, but as active survivors who attained ownership and acceptance of one's status (Squire, 2007). Overall, the literature on links between social capital and stigma tends to be qualitative in nature, often using small samples. There is an urgent need for an integration of both qualitative and quantitative studies hence this study findings feed well into the existing literature from a mixed method research perspective.

Bond and Nyblade (2006) illustrated how in Zambia tuberculosis (TB) and HIV have become intertwined in the social reality of people living in high settings with HIV prevalence. They argue that TB, the most common and serious of HIV's opportunistic infections in sub- Saharan Africa, has become progressively more stigmatized through its growing association with HIV. The psychological mechanism of creating a boundary between 'us,' the morally upright, normal, uninfected people, and 'them,' the 'other,' immoral, deviant and infected people, is one strategy

people use to protect their positive sense of identities (Ogden & Nyblade, 2005). This strategy has been repeated in many societies as a response to the HIV epidemic (Joffe, 1999; Parker & Aggleton, 2003). Bond and Nyblade (2006) highlighted how women are particularly susceptible to this type of judgement. Similarly, a study conducted by Ogden and Nyblade (2005) in Zambia and Vietnam highlight the tendency to link HIV and morality. They argued how associating illness with immoral behaviour has been a major feature in contributing to HIV and AIDS related stigma. In most African societies, stigma has been worsened by the serious condition of the illness and its association with behaviours that are socially sensitive such as sex and prostitution. Given the traditional intolerance of the church to behaviours such as prostitution and infidelity, this research examines the possibilities and limitations of using church groups as spaces for critical dialogue about myths and misconceptions about HIV/AIDS that resonate within churches and communities.

Despite vague references on the importance of mobilizing social networks for stigma reduction (Maluwa, Aggleton, & Parker, 2002) much remains to be learned about the potential role of grassroots personal social networks such as local church groups in addressing this challenge. Stigmatizing attitudes towards people living with HIV and AIDS (PLHIV) have long been one of the major problems facing infected individuals and hampering attempts to control HIV epidemics in Zimbabwe (Gittens, 2008) and elsewhere (Bond & Nyblade, 2006).

Low-Beer and Stoneburner (2004) argued that relatively high levels of communication about HIV and AIDS in Uganda may have served as one of the factors for positive behaviour change in Uganda in the 1990s. Their findings suggest that significantly more Ugandans had heard about HIV and AIDS from people they know, rather than an impersonal source such as the media, as compared to countries such as Zimbabwe. The authors suggest that communication in face to face networks reduce levels of stigma, making people more likely make optimal use of HIV prevention and AIDS

care information and services. My research conceives of HIV risk as less a result of individual choices and more a product of social forces. Therefore HIV prevention models must be rooted in the social contexts, life experiences and perspectives of local people. The research viewed churches as highly prevalent form of community institutions, and explored, amongst other things, how church groups can address HIV and AIDS stigma. A lot of research has been done on the need for various top-down interventions to address stigma including multi-level programmes to fight for legal protection of HIV sufferers within a human rights approach and large scale poverty relief (Parker & Aggleton, 2003).

The challenge of reducing poverty and promoting human rights in sub-Saharan Africa has been long pursued with varying degrees of success by a range of actors. However, large-scale poverty reduction and human rights improvements are unlikely to be achieved in time to help millions of existing HIV sufferers. More immediate action must be pursued concurrently. Furthermore, Campbell et al. (2007) suggest that without parallel bottom up efforts to address stigma such top-down efforts may have limited success. This study also explored extent of stigma and discrimination in Matabeleland South province. Recent research in Zimbabwe (Genberg et al., 2008; Genberg et al., 2009) has focused on AIDS stigma. However, this research is limited to highlighting perceptions on stigma rather than in-depth exploration of its implications for health behaviours. For instance, some studies cite how HIV stigma has obscured people from accessing health services, but do not discuss interventions to combat stigma.

A notable exception is Duffy (2005) who reported on HIV stigma implications for health promotion in Zimbabwe. Duffy suggested the need for health promotion messages not to further stigmatize particular groups such as commercial sex workers and truck drivers. The limited research on the impact of HIV/AIDS stigma on HIV prevention is a major problem for Zimbabwe

considering that it is experiencing high HIV prevalence levels. In one of the few studies on HIV and AIDS stigma in Zimbabwe, ZNNP+ research on stigma index (2014) found that despite high levels of awareness of HIV and AIDS in Zimbabwe, there are also high levels of stigma. One promising but little explored approach is the possibility that social capital, in the form of community group participation, might be a useful resource in challenging and reducing stigma as well as how it can also promote HIV/AIDS-related healthcare utilization.

Community groups are rooted in the local social contexts within which individuals form attitudes towards PLHIV and can help to reduce stigma by providing opportunities for discussion and renegotiation of previously stigmatizing social norms. Community group memberships affect the formation of self-identity as well as a person's attitudes to others (Brewer & Gardner, 1996). Social capital has been found to be associated with reduced rates of HIV acquisition (Campbell et al., 2002; Gregson et al., 2011 and Pronyk et al. 2008) and with a number of factors linked to the risk of infection including alcohol consumption (Campbell et al., 2002), intimate partner violence (Pronyk et al. 2008) and sexual behaviour (Crosby, Holtgrave et al., 2003). However, examination of the link between levels of social capital and stigma-related attitudes held by the general population towards those with a potentially stigmatizing condition (e.g. PLHIV) have not been adequately investigated. This study contributed to closing this gap, examining the link between social capital and healthcare utilization as well as significance of social capital as an enabling factor.

2.10 Social capital and healthcare utilization

James Coleman, Pierre Bourdieu, Alejandro Portes, Robert Putman and Fracis Fukuyana are amongst the scholars significantly cited as principal theorists of Social Capital (Kreuter & Lezin, 2003). The concept of social capital has had several interpretations but four key characteristics are pointed out consistently conceptual definitions which are;

a) the existence of community networks,

b) civic engagement (participation in these community networks),

c) local identity and a sense of solidarity and equality with other members

d) norms of trust and reciprocal help and support, (Campbell and Wood 1999).

e) ability of social capital to command scarce resources for group benefit

At individual and societal levels social scientists have observed that people tend to form social linkages and groups where they share information and provide collective support (Macinko & Starfield 2001). Robert Putnam (2000) defined social capital as the "connections among individual social networks and the norms of reciprocity and trustworthiness that arise from them".

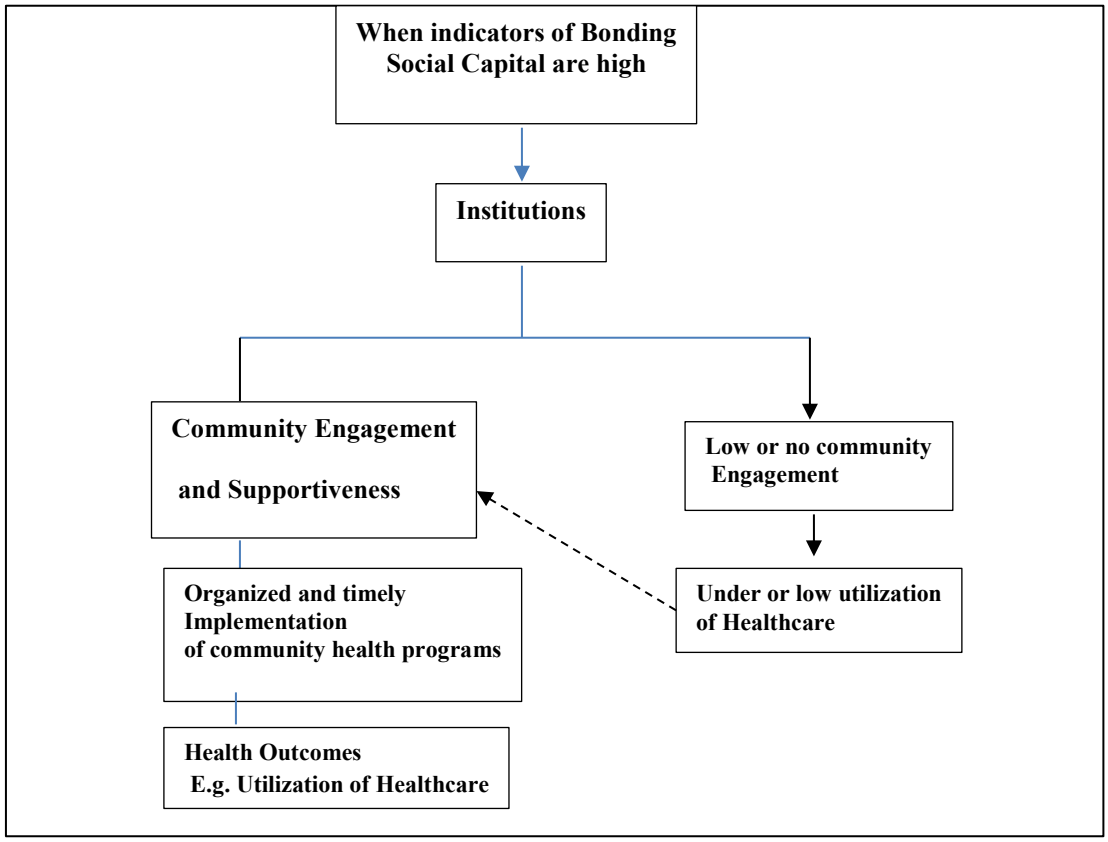
The concept of social capital has received wide attention in terms of linkages with positive social, political, economic and environmental outcomes but limited evidence exist on its relationship to healthcare utilization particularly amongst PLHIV (Macinko & Starfield, 2001). Though acknowledging existence of fundamental scholarly literature on social capital, major gaps still exist in terms of its universal measurement and this study contributed to bridging this gap by building on existing measurement scales and examining how social capital affects utilization of healthcare amongst rural PLHIV in Zimbabwe.

Measurement of social capital has generated debate as the social capital theory itself resulting in a number of scales and proxy measures (Kawachi, 1997 & Sampson, 1997) being developed. These include the Network Assessment Scale (Hatala, 2007), Social Capital Assessment Tool (SCAT, Narayan & Prichett 1997) and the Social Capital Scale (Chen et al., 2008). In search of a robust tool, this study critically analyzed existing Social Capital assessment tools based on applicability, fairness, psychometric properties (Yari et al, 2005) and comprehensiveness in line with the objectives of the study.

The assessment of social capital for this study was based on the 16 item Personal Social Capital Scale (Chen, 2009). The scale measures two basic constructs of social capital which are bonding and bridging using 5 point likert scale questions and has confirmed psychometric assessments to affirm reliability and validity of the instrument.

Psychological Interconnectedness measures the cognitive dimension of social capital by using four point likert scale on level of trust, sense of belonging and safety. Community Participation was assessed by membership to local associations (formal and informal), type of membership (group leader/in active leadership position, frequent ordinary member and inactive member). These tools have been applied in health studies done in South Africa, Zambia and Colombia and Nigeria and were tested for desired psychometric properties through Confirmatory Factor Analysis, (Harpham, Grant & Thomas, 2002).

Fig 2.5: Conceptual Illustration of the Role of Bridging Social Capital in Health Programs



2.11 Health seeking behavior

Health seeking behavior is a complex and multifaceted dimension in healthcare system (Rebhan, 2008), it encompasses interaction of intrapersonal and exogenous factors before one decides to utilize healthcare service. Nevertheless understanding of Health seeking behavior is central in improving health related quality of life, can assist in disease prevention and treatment through creation of effective health campaigns, policies, and promotion programs. Likewise, the study of utilization can further prepare healthcare organizations for the impending growth of aged and heterogeneous populations. Ultimately, this knowledge improves understanding of the determinants of healthcare utilization.

Chappel and Blandford (1987) defined healthcare utilization in terms of accessing home care, physician and hospital services. Healthcare utilization is defined as a visit to healthcare facility in the event of illness, (Bandason, 2008). A measure of the population's use of healthcare services available to them has also been viewed as healthcare utilization (Menec et al., 2002).

Though many conceptual definitions of healthcare utilization exist in literature, there is a dearth of scholarly literature on healthcare utilization amongst PLHIV hence the impetus of this study. Utilization of healthcare in general lies at the periphery of policy issues as governments are preoccupied with the desire to ensure provision of functional health delivery systems (WHO, 2012) despite the fact that existence of services alone is a necessary but not sufficient to achieve desired health outcomes hence the need to examine utilization of health care. A study by Chappell and Blandford (1987) on healthcare utilization amongst the elderly utilized the Andersen and Newman model which states that healthcare utilization is dependent on three factors which are predisposing, enabling and need factors. This study defined healthcare utilization as visit and use of healthcare facility by PLHIV in rural areas.

2.12 Determinants of healthcare utilization

Healthcare Utilization is influenced by a number of factors which can be at individual, household, society and national level. Geitona, Zavras, & Kyriopoulos, (2007) concluded that healthcare utilization is influenced mostly by health status rather than socio-economic status though the study did not explore the underlying link between health status and socio-economic status. Despite existence of such factors, investments in healthcare delivery systems are meaningless unless utilization is fully understood, promoted and sustained for the betterment of human lives. This section discusses key factors affecting healthcare utilization.

Gender is a social construct which defines the different roles played by men and women. It is different from biological orientation which is defined by sex. Previous scholars have identified gender as an important factor in health studies as women and men differ in health behaviour and perceptions. Chiremba (2013), used gender in examining determinants of demand for healthcare services in rural Zimbabwe. The fundamental differences in how men and women behave in relation to health issues makes gender a critical factor is research hence this study also examined gender as a predictor of HIV/AIDS healthcare utilization in a rural context. The fact remains that in most low income countries there is still limited documentation of gender implications on health itself, access to health information, utilization of services, and health outcomes (AbouZahr, Wardlaw, Stanton, & Hill, 1995). Most studies expect to find the likelihood of seeking health care services to be higher in female headed households than in male headed households. The argument is that females by nature are risk averse and they prefer household members to be attended by health professionals during illness. This implies greater need incorporate gender in research and policy recommendations as it is widely unpacked in education, economics and other disciplines. Despite the undisputed role of gender as a potential predictor and key variable in explaining different

phenomena there is also need to further analyze if observed gender induced disparities are uniform across different age groups.

As a determinant of health care seeking behaviour, literacy is intimately tied to gender, education level, and regular income and is considered an indicator of socio-economic status (Bharmal, 2000 and Sudha et al., 2003). A number of studies have also used education level as a proxy for literacy level and socio-economic status of the household or individual given the notion of better economic prospects as years in school increase. Males are generally perceived to have higher education than females due to historical inequalities. The National Council for Population and Development in Kenya states that "one of the most important determinants of a woman's social and economic status is her education level". Though education is an important predictor in social studies, current economic challenges facing many countries are undermining the role of education as a proxy for better income and social status given rising 'Educated Unemployment' as the global job markets are failing to create adequate opportunities to absorb school graduates (ZIMSTAT, 2012).

Employment status is an indication of how likely a person is able to afford a service though it also depends to a greater extent on the type of employment. Employment status was analysed in this study as a determinant for healthcare utilization, and has been utilized as a part of past studies to decide wellbeing and source of treatment (Nyamongo, 2002). Regular income is one of the variables utilized as a measure of financial status (Dressler, Balieiro, and dos Santos, 1998) (Pavlova, Groot, and van Merode, 2003) (Rosenberg and Hanlon, 1996) (Matthews and Power, 2002) (Mehrotra and Jarrett, 2002; Zwi and Yach, 2002) and it is this financial status that is regularly utilized as a pointer of wellbeing. There is substantial documentation with respect to wellbeing status and wellbeing results as an aftereffect of financial status. Writing in regards to salary, separate

to the socio –economic class which is financial status is more scanty. Many studies distinguish employment status as the most noteworthy indicator of service use (Pillai et al., 2003) and how pay influences the level to which human services offices are looked for and utilized (Buor, 2003, p. 296). While regularly the choice to look for human services is based upon the expense when compared with the apparent advantage (Hjortsberg, 2003). As indicated by Buor (2003) the capacity to pay decides the utilization of wellbeing services. As anyone might expect low wage has been observed to be a boundary to wellbeing looking for and can make a mind-boggling monetary weight for an decision to be made (Gotsadze, Bennet, Ranson, and Gzirishvili, 2005). It is additionally the expense of physically getting to treatment (Buor, 2003), or the exchange off between loss of income as a consequence of being sick versus looking for treatment (Nyamongo, 2002). The real reason given for self-treatment in a study in Zambia was that individuals did not have enough cash to look for human services and this included not just the expense of the treatment from clinic outpatient offices given employment status. As far as the genuine expenses of human services utilization, one reason there is such contention over the presentation of cost-sharing and cost-recuperation programs in developing nations is the influence these projects have on the lower pay bunches. One thought for those that are independently employed in faming or little businesses is that income can be erratic as far as sum and normality and this can be risky in utilizing healthcare.

Age is an element connected with wellbeing as highlighted by Kaplan, Newsom, McFarland, and Lu, (2001I) and Mishra, Ball, Dobson, Byles, and Warner-Smith, 2002). It can be a determinant all alone or in conjunction with different components. Age can be viewed as an element of more noteworthy defenselessness, as with youngsters under five years or the elderly, or more noteworthy vigor, or on the grounds that the age bunch 18 to 25 years will probably be taking part in higher danger practices, for example, sexual action, and liquor, tobacco and other medication use. It is a

helpful demographic predictor and has been widely used in research to find answers to phenomena of interest. The impact of age can be because of contrasts in financial status as characterized by vocation, instruction and wage (Mishra et al., 2002), and additionally more prominent monetary reliance, poor lodging, depression and brought down self-regard (Waweru, Kabiru, Mbithi, and Some, 2003). The elderly are frequently not able to get to satisfactory healthcare which can add to their weakness status (Waweru et al., 2003). This can be a worry in developed nations (Wiet, 2005) and those less developed (Waweru et al., 2003). While ladies are liable to live more than men more elderly ladies are considerably more prone to encounter practical hindrance in versatility and individual self-care than men of the same age. These discoveries endure in the wake of controlling for the differential social position of men and ladies as indicated by their conjugal status, social class, wage and lodging residency. Though age is a widely used variable in researches there is need to unpack observed variations and possible analyze age in different categories in order to bring out subtle differences by age groups

The role of Marital status as a social capital enhancer and its linkages with reduced mental illness is well documented (Shapiro & Keyes, 2008) in literature though there are gaps in interms of applicability of such assertions in marginalized groups such as people living with HIV in rural context. Marriage represents a powerful social construct and widely referenced institution associated with additional benefits such as higher sense of belonging. Marital status broadly has the following non-exclusive categories which are widely used in research; married, never married, widowed, divorced and separated. Each of the categories connotes time specific meaning.

Membership to medical aid is another important factor in healthcare utilization studies (Campbell et al.,2013). Having medical insurance is an enabling factor which increases the odd of

utilizing healthcare especially where cost implications are a major factor. In this study research participants were asked on modes of payment for healthcare service.

2.13 Andersen and Newman model of healthcare utilization

The Andersen model (1995) is one of the key theoretical healthcare utilization models which explain factors determining utilization of healthcare (Chappel & Blandford, 1987). This study applied this model to identify independent variables which explain healthcare utilization amongst PLHIV. The model distinguishes between three key factors which are classified as;

a) Predisposing factors
b) Enabling factors
c) Need factors

Predisposing Factors

These include demographic factors such as such as age, gender, social structural factors such as ethnicity, marital status and education level (Chappel & Blandford, 1987). The Andersen model (1973) distinguishes between three sub categories of predisposing factors which are demographic, social structure and beliefs. According the model demographic factors are age, sex, marital status and past illness. Social structural factors include education, race, occupation, family size, ethnicity, religion and residential mobility. Belief factors are outlined as values concerning health and illness, attitudes and knowledge about the disease.

Enabling and Need factors

These are classified into two as family and community. Family factors include income, health insurance, type of regular sources, access to regular sources and community factors include local perceptions of health care, membership to local groups, price of health services, region of country

and location. Need factors Perceived disability, symptoms, diagnosis, symptoms and diagnoses (Chappel & Blandford, 1987).

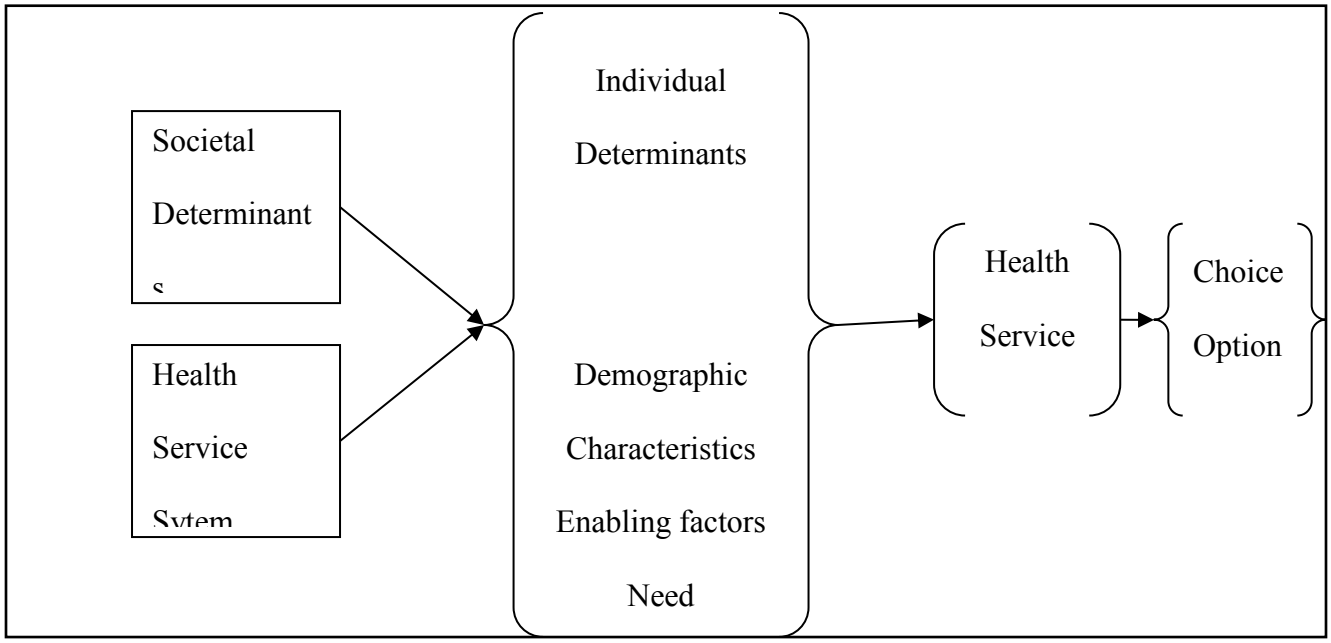
The Andersen model has been widely applied to examine heath care utilization but different authors proposed further adjustments to the initial model (Chappel & Blandford, 1987). Factors such as use of preventative services, household composition, living situation, labor force participation are some of the additions to the predisposing factors (Wright et al., 1980, Evashwick et al, 1984 & Wolinsky 1983). Though the Andersen model is fundamental in shaping the individual health utilization discourse, it does not present how the proposed factors especially enabling and need factors can be operationalized. Despite these shortcomings (Chappel & Blandford, 1987) found insightful evidence using the Andersen model that the functional ability of the need factor, education level and social capital are significant in explaining utilization of healthcare utilization. Social Capital was found to be positively related to health outcomes, (Fujiwara & Kawachi, 2009).This study included social capital variables into the model and examined the role of social capital as a determinant of healthcare utilization amongst PLHIV in rural Zimbabwe.

2.14 Behavioural models of health services utilization

This model was first developed by Ronald Andersen in 1968 with an aim of demonstrating the factors that lead to the use of health services. Andersen stated that, utilization of healthcare services (including inpatient care, physician visits, dental care etc.) is determined by three dynamics: predisposing factors, enabling factors, and need. Predisposing factors include socio demographic characteristics such as race, age, and health beliefs. For instance, an individual who believes health services are an effective treatment for an ailment is more likely to seek care. Enabling factors include factors such as social capital, income level, and health insurance and need include both perceived and actual need for healthcare services.

This model has however underwent modifications since 1968 with the latest model focusing on the individual as the unit of analysis and goes beyond healthcare utilization, adopting health outcomes as the endpoint of interest. This model is further differentiated from its predecessors by using a feedback loop to illustrate that health outcomes may affect aspects such as health beliefs, and need. By using the framework's relationships we can determine the directionality of the effect following a change in an individual's characteristics or environment. For example, if one experiences an increase in need as a result of an infection, the Andersen model predicts this to lead to an increased use of services (all else equal). Despite the usefulness of this model in understanding health behavior, a major criticism is in the oversimplification of reality and overlook of the major role played by internal and external social capital (Guendelman, 1991). One of the key objectives of this study was to understand the health seeking behavior of rural PLHIV as such the Andersen Health Seeking Behavior model.

Figure 2.6: Summary of the Andersen Model with Modifications: Adopted from Kroeger 1983a



2.15 The Grossman theory of the demand for healthcare

This theory was proposed by Henryk Grossman (1972) as an application of consumer theory to healthcare demand and has been widely used to analyze determinants of utilization of healthcare (Ensor & Cooper 2004). In this theory Grossman states that Health is an outcome produced by combining inputs such as utilization of health care, Income, employment, diet, education, social cultural factors and is regarded a component of Human Capital. The demand for healthcare (proxy for healthcare utilization) is a derived demand curve from the demand for health. On the other supply side factors for healthcare include price, management efficiency, input prices, technology analogous to production economics.

The key assumptions of the Grossman theory are as follows

i. Individuals value health
ii. There are limited resources to finance health and other activities
iii. Individuals have high degree of control over their health through ability to influence consumption pattern, healthcare utilization and environment

2.16 Healthcare utilization and education

An improved understanding of the role played by female education can assist in the design of health interventions and, at the same time, advance our knowledge of the association between maternal education and child mortality. Evidence from previous research suggests that maternal education has a positive effect on the use of health-care services in Africa (Mbacké & van de Walle 1987), some Middle-Eastern countries (Tekce & Shorter 1984, Abbas & Walker 1986), Asia (Akin et al., 1986, Wong et al. 2007, Streatfield, Singarimbun and Diamond 1990) and Latin America (Fernandez 1984, Monteith et al. 1987). Furthermore, both Barrera (1990) and Caldwell (1979, 1990) have argued that educated mothers are more likely than uneducated women to take advantage

of modern medicine and comply with recommended treatments because education changes the mother's knowledge and perception of the importance of modern medicine in the care of her children.

In a study of child nutrition in the Philippines, Barrera (1990) found that access to health-care services benefited children of educated mothers more than children of mothers with less schooling, a finding which suggested to the author that educated mothers were more likely to take advantage of available public health-care services than uneducated women. In Nigeria, Caldwell (1979) also found that educated women benefited more from available public health-care services than did uneducated mothers.

2.17 Health -related quality of life (HRQoL) and healthcare utilization

HRQoL provides a measure that is sensitive to the patients' perspective and subjective experience of health and illness that expand beyond clinical measures. This clearly supports the consideration of HRQoL outcomes in planning, implementation and evaluation of health provision and policies on a wider level (Leow, Griva, Choo & Thumboo, 2013). Findings by Nicolaou, Papathanassoglou, Kouta, & N Middleton (2015) show that HRQoL is positively associated with social support and social capital in a sample of mothers from the general population and among mothers of children with. In this study SF36 scale was used to evaluate the quality of life for rural PLHIV and examine whether there is a direct causal relationship between HRQoL and Utilization of HIV/AIDS- related healthcare. A study by Chappel and Funk (2010) concluded that self-reported health was not associated with social capital and instead underscored the important of income and socio-economic factors as key determinants of healthcare utilization. Such contrasting findings support further scholarly enquiry into the context specific role of social capital in the healthcare utilization nexus particularly HIV/AIDS hence the thrust of this study.

CHAPTER 3

THEORETICAL FRAMEWORK

3.1 Introduction

Theories seek to explain social phenomena and provide the benchmarks for studying, interpreting and predicting reality. This chapter examines the theoretical foundations for this study by examining existing theories on social capital, healthcare utilization and health seeking behavior and how they are applied in this study. The overall aim of this study was to examine the role of social capital in utilization of HIV/AIDS- related Healthcare in rural Matabeleland South Province of Zimbabwe. Key assumptions underlying each of the relevant theories, applicability to current study and limitations are presented. Crotty (1998) on the foundations of social research, underscored the importance of theory in informing scholarly research.

3.2 The Andersen revised model of healthcare utilization

This study applied the revised model of healthcare utilization by Ronald Andersen in 1995 and is a result of continued modification to the original model which was developed in 1968 by Andersen and Newman. The model provides a theoretical framework for analyzing utilization of healthcare services by focusing on the interaction between individual, societal and healthcare system determinants as presented in Fig 3.1 below. Key assumptions underlying this theory are;

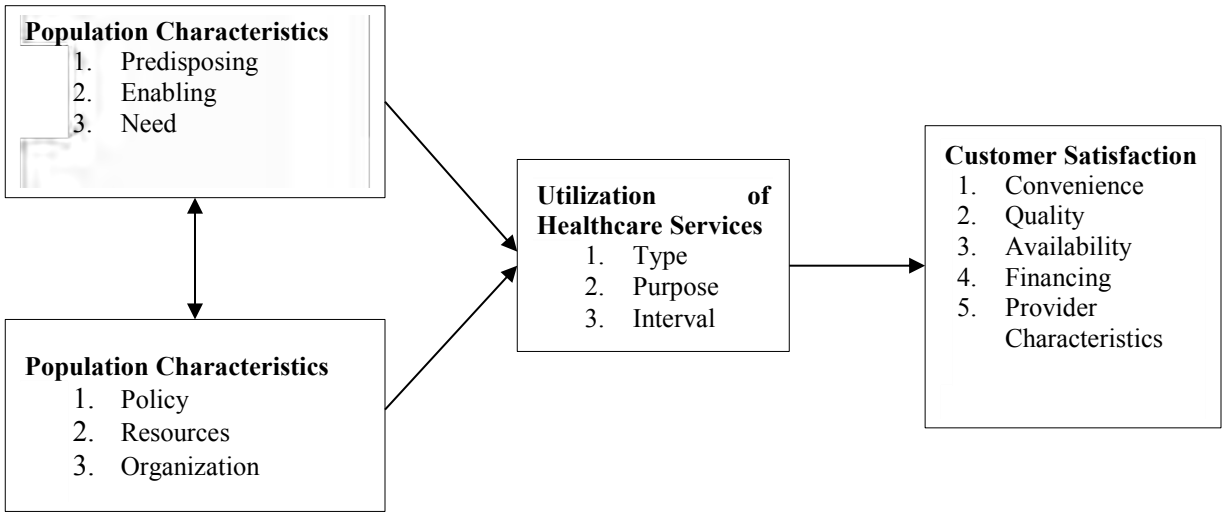
a) Individuals are rational and seek to maximize health utility
b) Utilization of healthcare service is a socio- behavioral issue

The Andersen model has found wide application (Hausmann-Muela et al., 2003) in developed countries to examine utilization of healthcare services in national level studies, though thinly applied in the context of developing nations. Nonetheless, key intuition from the model is the categorization of determinants of healthcare utilization into; 1) Predisposing factors 2) Enabling

factors and 3) Need factors which is fundamental in informing similar studies. This breakdown provides scholarly clarity in examining utilization of healthcare facilities as adopted by Jahangir, Irazola and Rubinstein (2012) in their study in Argentina where they found out that predisposing and need factors were associated with healthcare utilization.

Key shortcomings of the Andersen and Newman's model are in its aggregated view of enabling factors such as social capital given the diverse views in operationalizing the concept. In this study, social capital was analyzed using the personal social capital scale (Chen, 2009) which basically focuses on bridging and bonding social capital using 16 items scale. Previous scholars have looked at three key dimensions of social capital which are related to healthcare as follows. a) Neighborhood Support measured by 4 questions (based on Adopted Social Capital Assessment Scale and Social Capital Scale) which focus on neighborhood connections assistance in case of illness during emergence and previous year, b) Psychosocial Interconnectedness which measures level of trust in the community and c) Community Participation assesses group membership, level of participation (based on either group leader, regular member and inactive member) (Pronyk et al., 2008 & Perry et al 2008).

Fig 3.1: Revised Andersen Model of Healthcare Utilization (1995)

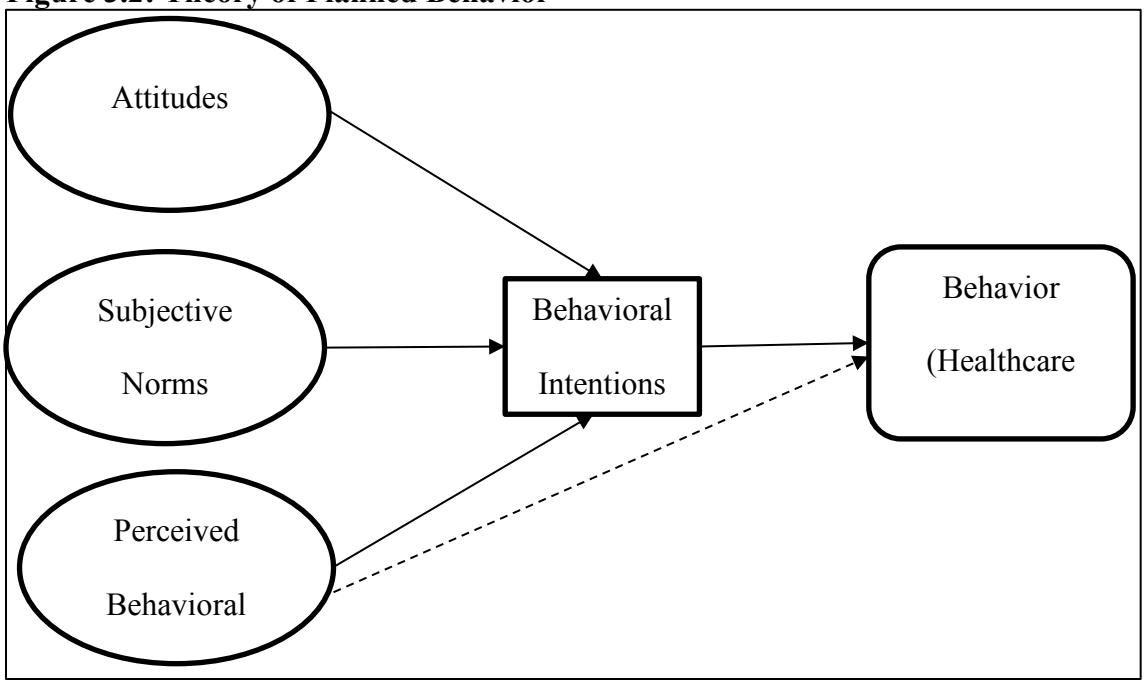


3.3 Theory of planned behavior (TPB)

Predicting human behavior is critical in predetermining success of interventions targeted at changing individual behavior, however it remains a daunting task for social scientists given the complexity of human behavior. Despite empirical shortcomings in exact prediction of human behavior, interdisciplinary scholars continue to take striking interest in developing theories aimed at explaining how humans behave in different settings and one such theory is the Theory of Planned Behavior (Ajzen, 2011). This theory is an extension of the Theory of Reasoned Action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). Theory of Planned Behavior is a widely referenced cognitive theory which seeks to measure how human actions are guided and to predict occurrence of particular behavior. In this context 'utilization of HIV/AIDS related health care' by rural PLHIV.

The Theory of Planned Behavior states that intentions to perform behaviors of different kinds can be predicted with high accuracy from attitudes towards the behavior, subjective norms, and perceived behavioral control; and these intentions, together with perceptions of behavioral control, account for considerable variance in actual behavior. The diagram below conceptualizes the TPB according to Ajzen (1991).

Figure 3.2: Theory of Planned Behavior



Source: Ajzen (2011)

In the Theory of Planned Behavior presented above, all the variables presented are psychological constructs. Behavior is defined around its target, action and time and intention is the assumed proxy measure of actual behavior (Ajzen, 2011).

Attitude towards behavior has two components, beliefs about consequences and outcome evaluations i.e. positive or negative outcomes of behavior and basically measures the individual's judgment or evaluations of how beneficial it is to utilize health care. In the current study the target is the person living with HIV, the action is utilization of HIV/AIDS related health care.

Subjective Norms examines the extent of social pressure for one to perform or not perform the expected behavior. Comprise belief about how other people within a person's network would like them to behave. This variable captures collective accountability based on social networks to which a person belongs.

Perceived Behavioral Control examines the extent to which a person feels able to perform and depends on how a person has control over the behavior and how confident a person feels about being able to perform or not perform expected behavior. The theory of Planned Behaviour has been applied in studying dietary behaviors (Povey, Conner, Sparks, James, & Shepherd, R. (2000) in general public sample and findings revealed that self-efficacy and perceived self-control were significant determinants.

Despite the robustness of the TPB, a key shortcoming is its oversimplification of human behavior and the assumption of direct linear linkages between the attitude, subjective norms and perceived control and behavioral intentions ignore the time lags or delays. There are other human actions or behaviors typically regarded as emergency and cannot be accurately framed in the Ajzen's model. The theory however provides useful basis and guidelines to understand human behaviour and beliefs (Bandura 1998) despite the complexity in understanding human behaviour in general.

3.4 The social capital theory

Social Capital is one of the common theories in the modern day social development and public health discourse though it has a long standing history as narrated below by Hanifan:

> *those tangible substances [that] count for most in the daily lives of people: namely good will, fellowship, sympathy, and social intercourse among the individuals and families who make up a social unit... If [an individual comes] into contact with his neighbor, and they with other neighbors, there will be an accumulation of social capital, which may immediately satisfy his*

social needs and which may bear a social potentiality sufficient to the substantial improvement of living conditions in the whole community, Hanifan (1916: 130)

Putman (1995:67) defined social capital as the "features of social organization, such as networks, norms and social trust that facilitate coordination and cooperation for mutual benefit". A number of empirical studies have a explored the multidimensional concept of social capital and proved its potential contribution in education, public health, microfinance and criminology (World Bank, 2010). Evidence to support usefulness of specific dimensions of social capital in utilization of HIV/AIDS related healthcare still remain thinly covered in scholarly literature in the developing world.

According to Putnam (1975) the theory of social capital is centered on the idea that networks and associated norms create value to citizens. Putman argued that social capital has multiple dimensions with varying degrees of complexity, formality and density but bringing diverse outcomes to society. Woolcock (1998) highlighted that there is a distinction between bonding and bridging social capital. All the existing views of social capital however point out to the undisputed value of social capital on the assumption that people have rational behaviour. A key notable limitation is however on the paucity of literature highlighting how social capital is created, reinforced and sustained in different contexts and to what extent is it beneficial to society. Other empirical questions which classical proponents of the social capital theory did not answer or clarify is on operationalizing social capital at the micro, meso and macro levels. Despite the highlighted

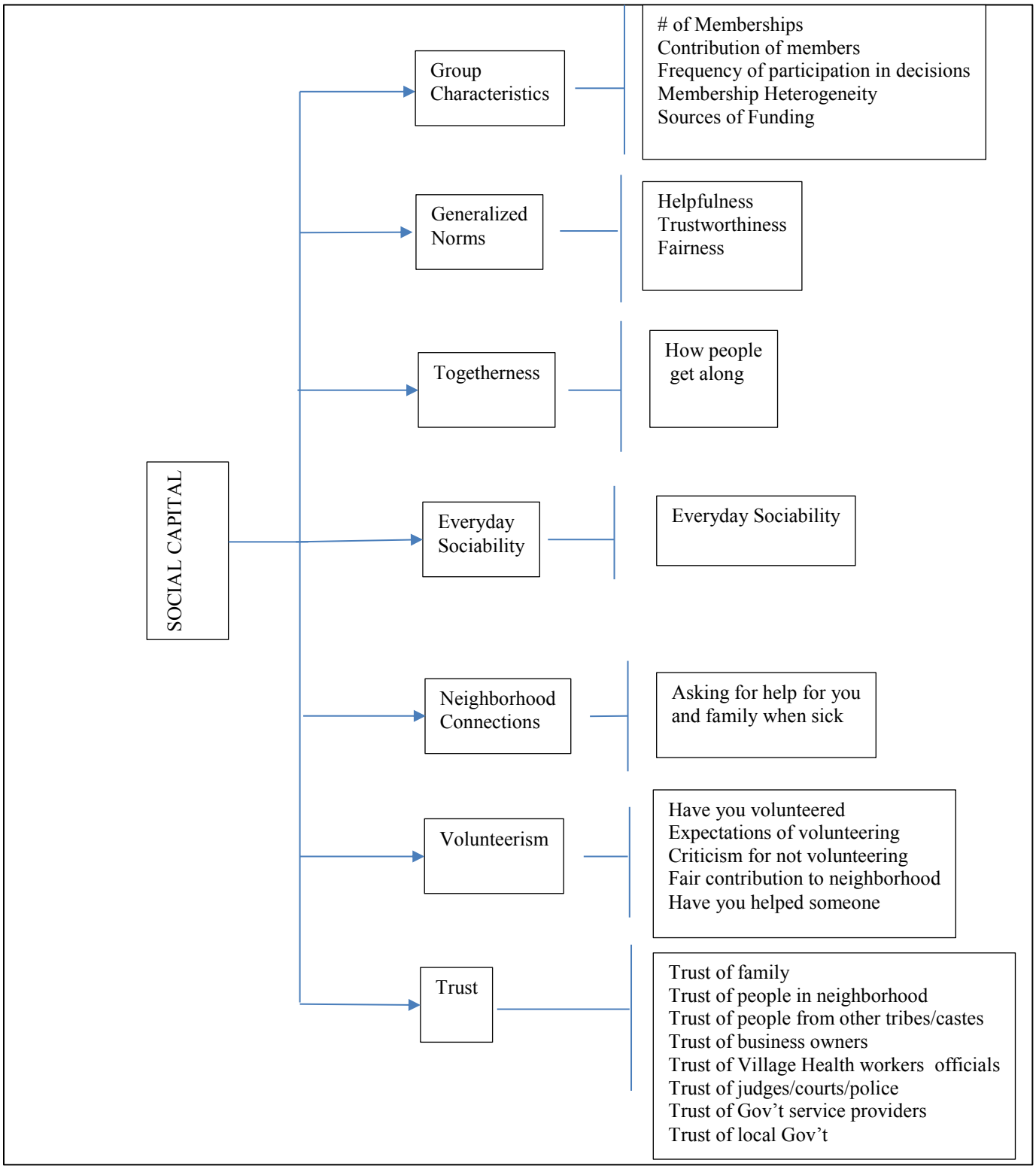
limitations the theory of social capital remains critical and very much in need of further interrogation through research.

In the health research discipline, social capital has mainly been viewed as horizontal, informal and strong social networks (Lynch et al., 2000 & McKenzie et al., 2002). There is a wide range of existing research supporting a positive association between local robust connectedness and self-reported wellbeing, especially mental health (e.g. Cobb, 1976; Berkman & Syme, 1979; House et al., 1988; Berkman et al., 2000). In their well-documented historical work, Brown and Harris (1978) pointed out that females with closer friends, i.e. established informal linkages, to turn to in times of disturbing life events were less likely to become suppressed and reported healthcare utilization. The conclusive remark is that dense easy going social networks are invariably good for health though such assertions remain to be validated in the developing world particularly resource poor rural areas for marginalized groups such as PLHIV. As Schuller (2007) maintains: ‘Strong ties with intimate friends may ensure chicken soup when you’re sick’.

The concept of social capital points to the ways in which social relationships or networks serve as a resource, allowing individuals and groups to cooperate in order to achieve goals that otherwise might have been attained only with difficulty, if at all (Kilpatrick, Field & Falk, 2003). Kilpatrick et al., (2003) argued that the value of social capital in social development can be viewed as threefold: as a set of resources within the community on which intervention may be based, as a 'public good' or goal in its own right, and also a resource that can contribute towards sustained autonomous development after the intervention is deemed complete.

Major limitations in the entire social capital discourse has been the lack of unanimous consensus on how to universally operationalize the concept and along this gap scholars and institutions such as the World Bank have added profound insights on measurement of Social Capital e.g., the Social Capital Assessment Tool (SCAT) (Krishna & Shrader, 1999). This study used PSCS-16 (Wang, Chen, Gong, & Jacques-Tiura, 2014) to measure social capital.

Figure 3.3 Measuring Social Capital in the Community Narayan and Cassidy 2001



3.5 Social cognitive theory

The social cognitive theory also known as the social learning theory was proposed by Bandura (1998). The intuition behind the Social Cognitive Theory is that human behavior is learned by observation, imitation and positive reinforcement. In the context of HIV/AIDS the assumption is the network of PLHIV provides the learning points for continued utilization of HIV/AIDS related healthcare. This theory recognizes the social nature of human beings and natural ability to replicate behavior provided there are desired benefits from performing such behavior. In the healthcare arena, utilization of medication is assumed to be a desired behavior linked to a positive health outcome which would attract other people to seek healthcare especially if there is a common disease challenge in accordance with Bandura (1998)'s assertions that people learn by observing the benefits that they observe in others. .

This theory support the cognitive dimension of the social capital theory and has been applied together with the Social Capital constructs in empirical research. Bandura (1998) assumed that behavior change is determined by environment, social, personal and behavioral elements. Six main concepts which underlie the Social Cognitive theory are;

a) Reciprocal Determinism which states that person, behavior and environment influence each other
b) Behavioral Capability- Knowledge and skill needed to perform certain behavior
c) Expectation- anticipated outcome of performing behavior
d) Self- Efficacy measures confidence in one's ability to take action.
e) Observational Learning – leaning by observing others' behavior
f) Positive Reinforcements responses to a behavior that increase or decrease the likelihood of reoccurrence (Glanz &Rimer, 2005)

The social cognitive theory has been widely used in health education and promotion programmes (Macdonald, 2000). Walker, Posner and Wise (2003) applied the Social Cognitive Theory in studying behavior of college students to do physical exercise and concluded that the likelihood of people to perform health related behavior can be increased by designing intermediate interventions which improve self-efficacy and awareness of positive outcomes associated with performing certain behavior. This research borrowed insights from the social cognitive theory to analyze utilization HIV/AIDS related healthcare by rural PLHIV.

CHAPTER 4

METHODOLOGY

4.1 Introduction

This study used a mixed method design (Cameron, 2009) to examine social capital and the utilization of HIV/AIDS- related healthcare in rural Matabeleland South Province of Zimbabwe. In this chapter, the researcher presents the study methodology encompassing qualitative and quantitative techniques used in data collection and analysis. In the last section, challenges encountered, ethical considerations and limitations of the study are discussed.

4.2 Research design

The study used a mixed methods design (Teddlie & Tashakkori, 2003). In mixed methods approach the researcher combines both qualitative and quantitative approaches in data collection and analysis (Tashakkori & Creswell, 2007) and builds knowledge based on a pragmatic worldview. The rationale for combining both quantitative and qualitative approaches for this study was mainly centered on the need to enhance; (1) additional rigor in data collection and analysis, (2) possibility of finding new unexpected insights beyond the scope of one technique, (3) potential for generalizability and reliability of findings (Creswell, 2004) and (4) need to triangulate given the sensitivity of HIV/AIDS. Qualitative approach entails exploring and understanding phenomena in order to generate new theories. The qualitative part of this study embraced a social constructivism worldview (Guba & Lincoln 1985) which hinges on new theory generation, deriving multiple meanings and understanding of concepts given the multidimensional issue of HIV/AIDS as a health, economic and social challenge. On the other hand quantitative approach involves testing theories deductively by examining relationships among variables (Creswell, 2007).The study also utilized

post positivist worldviews such as measurement of variables in assessing health related quality of life(HRQoL) and personal social capital scales.

According to Creswell, Plano Clark, Guttman and Hanson (2003) there are three key aspects to be considered in mixed method studies which are; priority, implementation and integration. Priority focusses on which approach, quantitative or qualitative, is more dominant than the other. This study was dominantly quantitative in line with the research questions and objectives to be addressed. Implementation refers to how the two approaches are utilized either sequentially or simultaneously (Cameron, 2009). Integration implies when both approaches are mixed or connected together during the research process (Creswell, 2002).

This study utilized sequential mixed method design (Cameron, 2009) which has two phases. The first phase covered qualitative interviews where forty (40) purposively selected key informants were interviewed. The purpose of the qualitative interviews was to get insights on barriers and challenges faced by PLHIV in utilization of HIV/AIDS- related healthcare and to further refine the quantitative questionnaire. Interviews with key informants were necessary in the beginning to create rapport in the community given the sensitivity of rural communities to ensure smooth reach to PLHIV (Borkan, 2004). Representatives of organization working with PLHIV in Matabeleland South Province were consulted. The shortlisted forty (40) key informants at provincial and district levels were reached during local meetings and appointments based on lists of existing registers for District and Provincial level AIDS Committees.

The second phase involved quantitative approach under which structured survey questionnaires were personally administered to a total 403 PLHIV. Time Location Sampling method was used whereby survey respondents were randomly recruited for interviews based on arrival time for scheduled local meetings organized by ZNNP+. The study leveraged on meetings for training

PLHIV on Income Generating and Savings Clubs in different districts of Matabeleland South. Participation in the study was voluntary and included two main stages; recruitment, consent form signing and actual interview. During recruitment, participants who randomly arrived at meeting venues at least 20 minutes before meeting were approached individually and asked if they would be willing to participate in the study. After initial acceptance to participate each respondent was given an informed consent form which was also explained. Actual interviews with each willing respondent would then be done after their scheduled meetings at agreed venue away from distractions and any interference. The objective of the quantitative questionnaire was to collect data on social capital, healthcare utilization and health related quality of life. Average time spent per respondent was 35 minutes after signing informed consent forms.

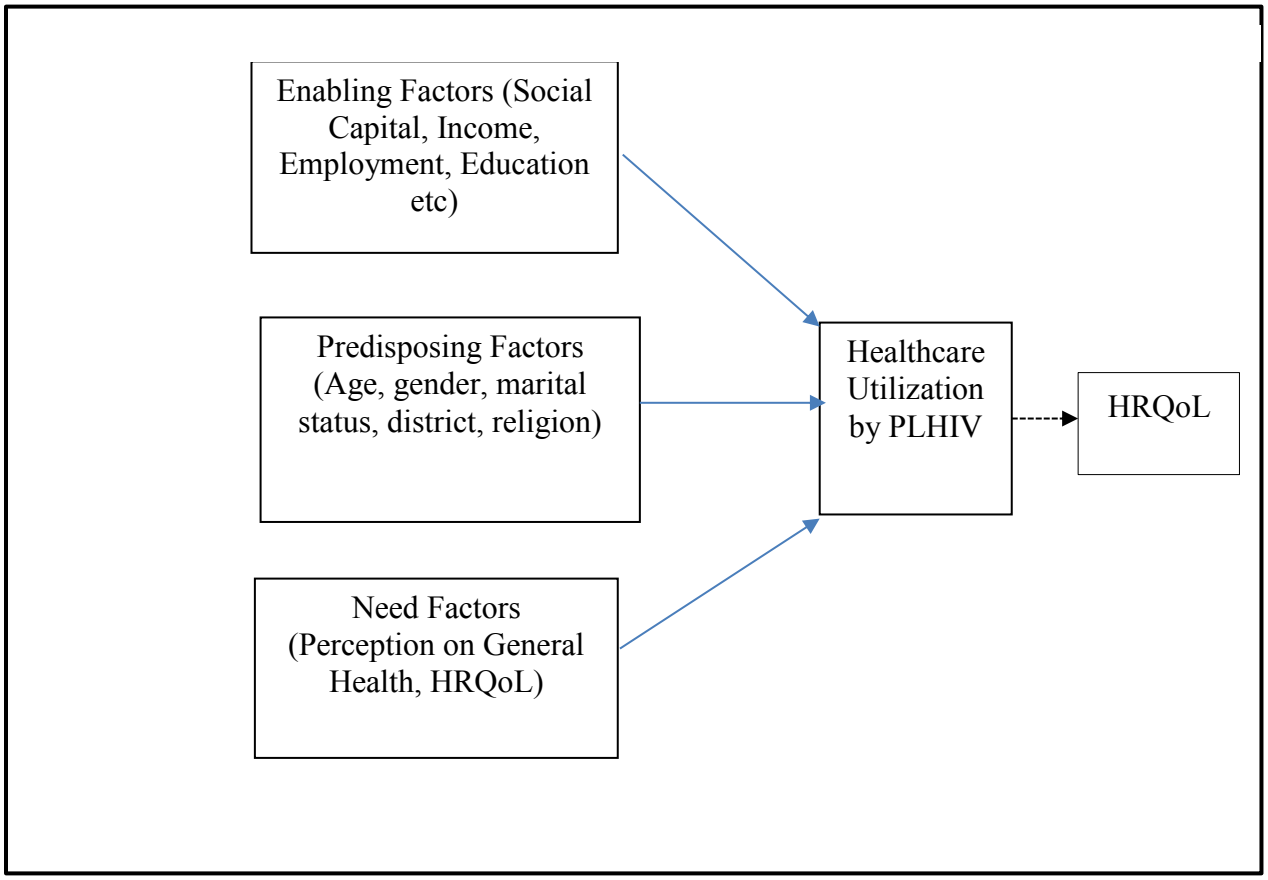
4.3 Research hypotheses

The utilization of health services can be generally viewed as individual behavior (Andersen & Newman, 2005) which is influenced by societal, individual and health system determinants. Based on the Andersen's Model (1995) of healthcare utilization, I hypothesize that among PLHIV:

I. Predisposing factors predict HIV/AIDS- related healthcare utilization
II. There is an association between Social capital and utilization of HIV/AIDS - related healthcare
III. There is an association between utilization of HV/AIDS- related healthcare and Health related quality of life

The hypothesized relationships between the central study variables are as illustrated in figure 4.1 below.

Figure 4.1: Hypothesized Model of central study variables: Adopted from Andersen & Newman Model



4.3.1 Central study variables

Independent variables

i. Predisposing factors

These are factors that are present prior to the onset of illness and have a bearing on utilization of healthcare (Bandason, 2008). Age, gender, marital status, level of education, history of previous chronic illness, household size (Number of people sharing same meal in the last month), religion, attitude towards health delivery system, individual history of healthcare utilization. These are categorical variables which have been widely used as determinants of individual behavior, (Creswell 2003). The structured questionnaire included all the predisposing factors as defined in the Andersen and Newman Model.

ii. Social capital

Refers to the intangible resources available to individuals through trust, formal and informal networks with others, (Ferlander, 2007). In this study social capital was measured using the 16 Item Personal Social Capital Scale (PSCS-16) (Chen, 2009).There is evidence to suggest that increased social capital is associated with higher outcomes for patients, (Norrish, Biller-Andorno, Ryan & Lee, 2013) In this study social capital was measured using the 16 item Personal Social Capital Scale. The scale was first translated to vernacular IsiNdebele using Back-Translation Approach and was reliable.

iii. Enabling Factors

Enabling conditions in the context of this study focus on the following factors; individual income, family income level, employment status, health insurance coverage, or other source of third-party payment, distance to healthcare facility, mode of transport (Andersen & Newman, 2005).

iv. Need Factors

These capture individual level perception and evaluation of illness (Bandason, 2008). Perception of general health (GH) based on a five point likert scale on the broader SF-36 was used as need factor in this study components (Andersen & Newman 2008).

Dependent Variable

v. *Healthcare Utilization*

Healthcare Utilization was measured based on frequency of visit to healthcare centre. The variable was dichotomized into low (0-4 recorded visits over six months) and high utilization (5 and above visits) using recommended guidelines of at least four times every six months for PLHIV

and confirmed using median split (Iacobacci, Posavac, Kardes, Schneider, & Popovich, 2015). The study findings revealed that 57% (n=378) had low utilization of HIV/AIDS- related healthcare. This is the dependent variable which is the outcome of interest for the study in line with both the Andersen Model and health seeking behavior approaches (Kroeger, 1983). Two aspects of interest were covered;

1) Type/Source of Healthcare Utilized (A-Traditional Healer, B-Faith Healer, C-Formal Health Practitioner, ABC, AC, AB, CB)
2) Frequency of visits. Visits to formal healthcare centre were be categorized as follows; low Utilization (Zero to four times in the last six months), High Utilization (4 times and above) These were benchmarked against the guidelines in Opportunistic Infections (OI) Clinics and general guidelines on PLHIV by WHO.

vi. Health Related Quality of Life (HRQoL)

The objective of including this variable was to examine perceptions on HRQoL in a rural setting and identify areas of interventions to enhance the livelihoods of PLHIV in rural areas. In related study on linkages between social capital and health, Poortinga (2006) argued that in developed countries, measures of social trust and civic participation were strongly correlated with self-rated health (David & Li, 2008). In this study HRQoL measurement was guided by the RAND SF-36 Health Survey tool.

4.3.2 Instrumentation

Measures

a) Personal social capital scale (PSCS-16)

The PSCS is a theory based tool with established reliability and validity (Wang, Chen, Gong and Tiura 2014). The instrument measures two basic aspects of social capital which are bonding and bridging using a set of 16 five-point likert scale questions. Bonding social capital refers to how well a person is immersed within their various inner circle networks of different types of people including family, friends, classmates and former colleagues and bridging social capital refers to how well a person is embedded within different types of organizations. The first eight questions measure bonding and the other eight questions assess bridging social capital. Psychometric assessment, including confirmative factor analysis (CFA), indicate that the PSCS had excellent reliability, clear structure validity, and adequate predictive validity (Chen et al. 2009). This study used the PSCS to measure social Capital. Factor Analysis was conducted on the scale using SPSS to explore the interrelationships between the variables and the scale. Procedure for factor analysis (Pallant, 2005) was followed which involed two key steps which are assessing the data and extracting factors and secondly determining how many underlying factors there are in the set of variables scale items. The Kaiser-Meyer-Olkin Measure of Saampling Adequacy (KMO), Bartlett's Test of Sphereicity and Varimza Rotation were done.

b) SF- 36 Health related quality of life measure (HRQoL)

The SF-36 is a short form (SF) comprising of 36 items was developed to measure health status during Medical Outcomes Surveys (Ware & Sherbourne, 1992). Development of the SF-36 questionnaire for assessing health related quality of life started in the 1970s with developments of generic indicators for use in health surveys leading to the emergence of SF-8 in 1984 and SF-20 in

1986. Further refinement of the preceding tools led to the development of the SF-36 by Ware (1996). Since then the SF-36 has been widely tested and applied in more than 41 countries with confirmed median Cronbach reliability coefficients for all scales exceeding 0.80. Construct validity for the SF-36 also confirmed consistence between what the scale measures and real health outcomes, (McDowell, 2006). The tool covered 8 dimensions of HRQoL assessment which are;

i. Physical functioning (10 3, 4, 5, 6, 7, 8, 9, 10, 11, 12),
ii. Role limitations due to physical health (4 13, 14, 15, 16)
iii. Role limitations due to emotional problems (3 17, 18, 19)
iv. Energy/ fatigue (4 23, 27, 29, 31)
v. Emotional well-being (5 24, 25, 26, 28, 30)
vi. Social functioning (2 20, 32)
vii. Pain (2 21, 22)
viii. General health (1, 33, 34, 35, 36)

The scale has been proven to be have consistent psychometric properties as follows Cronbach's alpha of 0.85, Bollen Incremental Fit Index (CFI) = 0.94, Comparative Fit Index (CFI) = 0.939, Bentler- Bonnet Normal Fit Index (NFI) = 0.933.

c) General Health Scale

Individual perceptions about their own health were measured using the general health scale which was a sub scale under the SF-36 (Health relate quality of life scale) with five likert scale questions which are items 1, 33,33,34,36 on the aggregate scale. The scale basically covers the individual's current health own rating, comparison with others and future anticipation

4.4 Translation of research instruments

Translation in the research context involves converting an instrument from its source language to a specific language with the purpose of effectively collecting data and is popularly used in cross-lingual survey researches (Harkness & Schoua-Glusberg 1998). Matabeleland South province is dominated by IsiNdebele speaking people and this made it imperative to use IsiNdebele language as the main vernacular during data collection hence survey instruments were translated. The referenced tools for this study were; 1) Questionnaire for research participants (PLHIV), 2) Consent forms, 3) Key Informant Interview guide. The researcher used back translation approach in converting field data collection tools from English versions to IsiNdebele. This a widely used and preferred effective translation technique as opposed to direct translation (Weidmer 1994). Back translation refer to translation of a 'translated questionnaire' back to source language (Harkness & Schoua-Glusberg 1998) in order to compare with the source text and by so doing the quality of the translation is assessed. The approach is also known as Forward-Backward translation. In back translation of the tools for this study the following steps were done;

1. The English versions (E1) of the survey tools were given to a trained translator (IsiNdebele Lecturer) and converted to IsiNdebele (V1)
2. The translated IsiNdebele Versions (V1) of the survey tools were then given to another Translator (Ndebele content Writer) who translated back to English (E2). The researcher ensured that the two processes were done by independent translators and the second translator had no prior knowledge of the original tool versions.
3. The original versions (E1) of the survey tools is compared to translated version (E2)
4. Based on how similar E1 is to E2, conclusions are drawn on the equivalence and accuracy of V1 (vernacular translated tools). The more similar E1 is to E2 the higher the accuracy of

the translated versions (V1) and the better for the survey to collect what is expected without language induced distortions.

Back translation is widely used in checking the accuracy of translated versions of survey tools (Douglas & Craig, 2007). The aim of translation is basically to convert a survey tool from original language to a vernacular equivalent for purposes of use in a local context where language of the original instrument is not understood but maintaining meaning of the original tool as highlighted by Brislin (1970). There are however notable flaws to back translation such as failure to address issues of conceptual equivalence and lack of emphasis on pretesting hence other studies advocate for collaborative, iterative approach in translations as additionally supported by Douglas and Craig (2007). In general the researcher found the approach simple and applicable for meeting intended purpose despite the multiple meanings and interpretations attached to vernacular words.

4.5 Psychometrics

The Personal Social Capital Scale (PSCS) and the Health Related Quality of Life (HRQL) Scales used in this study were tested for reliability using the widely used Cronbach's alpha. Cronbach's Alpha was developed by Lee Cronbach in 1951 to provide a measure of the internal consistency of a test or scale; it is expressed as a number between 0 and 1 (Tavakol and Dennick, 2011). Internal consistency is the extent to which all the items in a test measure the same concept or construct. The Cronbach's alpha test value of .70 and above for the IsiNdebele version of the Personal Social Capital Scale show that the scale is reliable.

A scale or test is reliable if estimations made under similar conditions are able to give the same results, expecting that no adjustments in the fundamental attributes being measured happen (Moser and Kalton, 1979). Along these lines, the reliability is higher when the level of repetition in an instrument is lower (Kumar, 2005). The investigation of reliability is particularly critical when there

are a few things that measure the same idea or construct (before building a list or scale) in order to minimize mistakes of single items (Kerlinger, 1986). The reliability part of unquestionable quality alludes to an examination of the same construct from time to time, i.e., test-retest (Moser and Kalton, 1979) and inward consistency, reflects homogeneity of the few things concerning a particular scale (Cronbach, 1951). In this study, Cronbach's alpha coefficient which is a measure of inner consistency was utilized to evaluate reliability of the personal social capital scale and health related quality of life scale. In spite of the fact that there is no set explanation regarding what is an adequate alpha value, Robinson, Shaver, and Wrightsman (1991) attest that, an alpha coefficient above 0.80 is "adequate", in the extent somewhere around 0.70 and 0.79 is "acceptable", while coefficients in the reach somewhere around 0.60 and 0.69 show a "moderate" level of inward consistency. In any case, Cronbach's alpha qualities are very responsive to the quantity of things in the scale. Specifically, it is normal to discover entirely low Cronbach values when the quantity of items is below ten (Pallant, 2005).

Table 4.2: Reliability tests: Personal social capital (PSCS) and health related quality of life (SF-36) scales

Scale	Cronbach's Alpha	N of Items
IsiNdebele version of Personal Social Capital Scale (PSCS)	.779	16
English PSCS	.549	16
IsiNdebele Health Related Quality of Life Scale (SF-36)	.710	36
English Health Related Quality of Life Scale (SF-36)	.612	36

Table 4.2 presents reliability measures for the PSCS and SF-36 scales used in the study. Both translated scales were found to be reliable using the Cronbach’s alpha measure of reliability whilst the English versions were below 0.70 benchmark for Cronbach’s alpha (Wang, Chen, Gong and Tiura 2009).

4.6 Tests for normality

Key study variables, Health Related Quality of Life Scores, Healthcare Utilization and Social Capital Scores were tested for normality using the Kolmogorov-Smirnov and Shapiro- Wilk tests in order to confirm applicable statistical tests to conduct. The results summarized below show that central study variables were significantly different from normal distribution hence the study used non- parametric tests.

Table 4.1: Kolmogorov-Smirnov and Shapiro-Wilk tests for normality

	Kolmogorov-Smirnov[a]			***Shapiro-Wilk***		
	Statistic	***df***	***Sig.***	***Statistic***	***df***	***Sig.***
HRQLScore	.111	344	.000	.972	344	.000
Personal Social Capital Scores	.091	344	.000	.973	344	.000
Healthcare Utilization	.130	344	.000	.944	344	.000

4.7 Study site

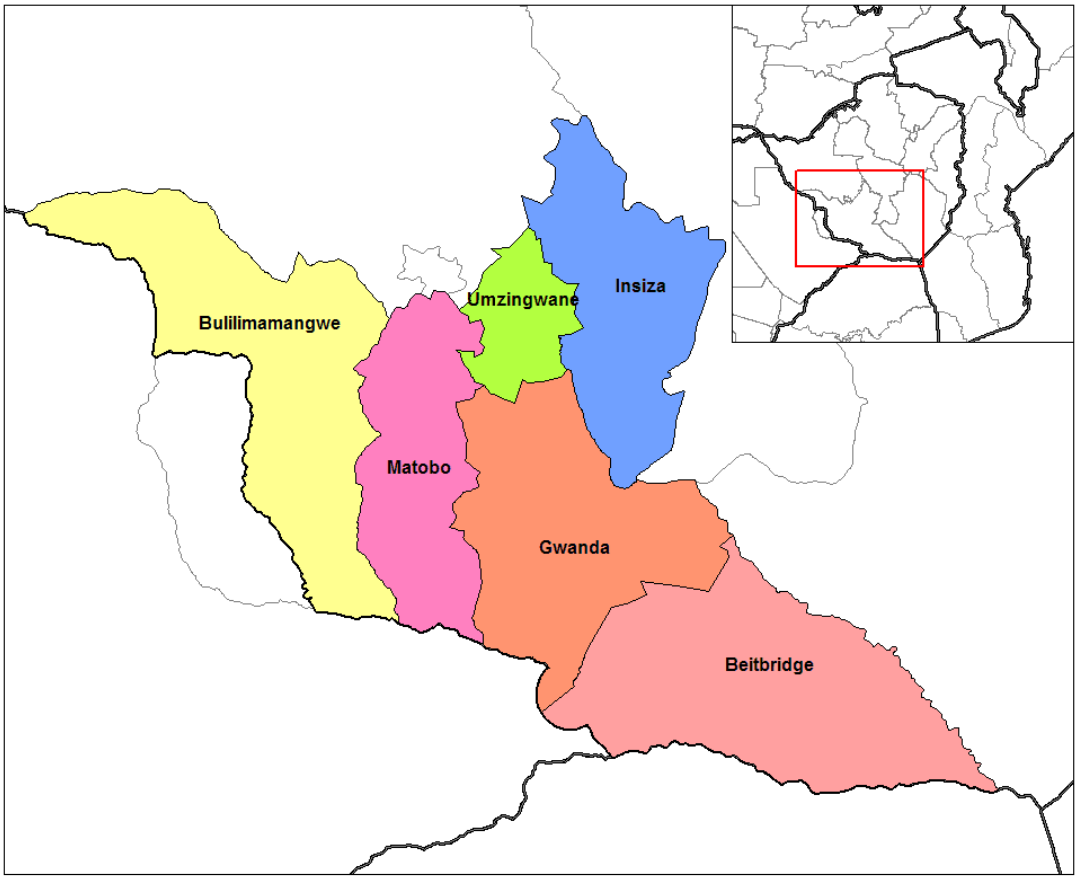
This study was conducted in Matabeleland South province of Zimbabwe situated in the South Western part of the country which boarders Botswana and South Africa. The province has a total population of 683,893 and the highest HIV/AIDS prevalence rate of 22% as compared to national average of 13% (ZIMSTAT 2012). The sampling frame for this study comprised all people living with HIV in Matabeleland South. The province has been chosen for the study due to its highest prevalence rate of HIV/AIDS according to ZIMSTAT (2012) national census report.

The most recent national census data show that the population in this province was mostly rural with only 12 percent of the total found in urban areas. Bulilima and Beitbridge rural are the only districts in the province that have no urban area. Approximately 36 percent of the population had never married. However, females seemed to have entered into such unions at much younger ages than the males. Around 48 percent of the population was currently married, while about 5 percent

were divorced/separated and 10 percent were widowed. The province is dominated by people of African origin with only 0.2% being non Africans.

Education and literacy analysis of the province show that it has 95% literacy rate though drop outs from school are substantially higher (ZIMSTAT). Agriculture is a dominant economic activity especially livestock rearing.

Fig 4.2: Provincial map of Matabeleland South, Zimbabwe.



Source: Maps of Zimbabwe (2016)

4.8 Population and sampling method

PLHIV are amongst 'Most At Risk Populations' (MARPs) and hard to reach groups (Vivier & Quaglia, 2010), as such there are no defined sampling frames and the sensitivity of HIV/AIDS limits the application of other sampling methods. This study used Time Location Sampling (TLS) method. This is a probability sampling method widely used in reaching out to sensitive respondents and has been applied in Zimbabwe on HIV/AIDS- related studies (Raymond et al., 2007) as a proxy for random cluster sampling.

Research work by Watters & Biernaki (1989) to identify and recruit respondents from marginalized groups based on meeting venues gave rise to Targeted Sampling. This was latter improved to include proportionate sampling and ethnographic understanding of priority population according to Carlson, Wang, Siegal, Falck, & Guo (1994). Time Location Sampling (TLS) was then built on these early foundations with inclusion of 'venue-day-time' based on random selection. Time-Location Sampling (also known as venue sampling) is a probabilistic method used to recruit members of a target population at specific times in set venues. The sampling framework consists of venue-day-time units (VDT) also known as time-location units - which represent the potential universe of venues, days and times (Gayet & Fernández-Cerdeño 2012). The sampling units are venue-day-time which are randomly selected to minimize bias and add substantial rigour. TLS was initially used for behavioral surveillance among Men who have Sex with Men in the United States of America in the early 1990's (Lemp., et. al., 1994; MacKellar et al., 1996). Since then, TLS sampling methodology has been applied throughout the world in diverse settings for sampling Hard to Reach Groups (Raymond et al, 2007). Currently TLS is the standard widely used method for ongoing HIV/AIDS and health behavioral surveys (MacKellar et al., 2007). TLS is also known as

Venue Day Time (VDT), Sampling Temporal Spatial Sampling (TSS) or Time Venue Sampling (TVS).

This study used TLS because of its statistical foundations as it approximates random cluster probability sampling which implies findings can be generalized to the wider population. Random selection of Venue-Date-Time ensures that each member has an equal non- zero chance of being selected. Advantages of TLS include representativeness, replicability and proven efficiency as a tested approach. Major notable shortcoming of this TLS method is that it ignores those who do not attend meetings which may limit statistical inference on findings (Raymond et al, 2007).

A formative assessment on local organizations providing non-medical support such as clothing, food, and training to PLHIV was conducted through provincial and local district authorities. The researcher selected organizations supporting PLHIV in the province and collected data on schedules for community visits to PLHIV in order to create a sampling frame of venue-date-time. The sampling units for this study were the meeting venues and time for PLHIV. Local representatives of the selected organizations were interviewed as key informants upon written approvals from their superiors and were used as gate keepers during interviews with PLHIV.

Sample size determination. In order to determine sample size for the study, the following aspects are taken into account according to (Miaoulis & Michener 1976).

i. Sampling error/ level of precision (alpha level) which is a range in which the true value of the population is estimated to be. This study uses an alpha level of 5%.

ii. Confidence level, based on the central limit theorem, the study used a 95% confidence level

iii. Assumed standard deviation of 0.5 (Smith, 2013)

The population size for PLHIV in Mast South is approximately 99,793 (Census Report, 2012). About 22% prevalence rate of HIV/AIDS is assumed and only adults are eligible as respondents for the study. About 55% of the population in Matabeleland South is below 18 years implying an adult population of 45%. The required sample size using time location sampling is assumed to be 385 based on the following formula and previous related studies on health related issues (Israel, 2013).

Sample Size (n) = (Z-score) ² * Std Dev*(1-StdDev) / (margin of error) ²

Required Sample Size (n) = $(1.96)^2 * 0.5(1-0.5) / (0.05)^2$
= (3.8416*.25)/0.0025
= 384.16
Minimum Sample size **= 385**

4.9 Data collection approaches

The study comprised of both quantitative and qualitative data in line with the objectives of the study and research design. Accurate, reliable and clean data is critical in ensuring objectivity in research (Pallant, 2005). The researcher implemented measures to ensure good quality of was obtained throughout the research process.

Quantitative Data. Quantitative data for this study was collected through one-on-one interviews with study participants using a structured questionnaire after pretesting. Data was collected at one point in time (Mann, 2003). Permission to access respondents was granted (see Appendix L) by Zimbabwe National Network of People Living with HIV (ZNNP+).The researcher and research assistant made use of gate keepers in respective local organizations working with PLHIV. ZNNP+ and local organizations working with PLHIV personnel assisted with meeting schedules and venues (primary sampling units) and in establishing rapport with participants given sensitivity of HIV/AIDS. The primary sampling unit was the meeting place, date and time. Respondents were first recruited for interview as they randomly arrived at the meeting venue within

the specified time slot e.g. 1100-1200 for meetings starting at 1200. Secondly, the actual one-on-one interviews were done at convenient times and place agreed with the respondent after signing individual consent forms and agreeing to participate in the study.

Research Assistant. A trained research assistant, fluent in IsiNdebele with psychology and social work background assisted the researcher with pretesting research tools, data collection, verification and field logistics to ensure smooth flow of the study. Strong understanding of key skills, expectations and procedures is critical in research (Leong, & Austin, (2005). The research assistant received five days of training prior to field work to ensure objective competency and alignment with thrust of the study. The training covered the following aspects

i) Study overview and expected outcomes

ii) Research skills and ethics (Including signing of consent form)

iii) Data collection tools,

iv) Data storage and management

v) Pretest planning

vi) Overall research implementation plan

Additional skills and guidance were shared with the research assistant during the entire research process. Data cleaning and analysis was covered separately hands on using SPSS Manual (Pallant, 2005). The critical aspects covered were template design, data capturing, outliers, data cleaning and preliminary analysis.

Pretesting. Involves a preliminary run of the field data collection in similar setting with respondents resembling intended participants (Hunt, Sparkman, & Wilcox, 1982). The main purpose of pretesting was to assess the data collection tools, questions and identify areas for adjustments. Duration, layout, sequencing or flow of questions, adequacy of writing space,

ambiguity of questions were assessed during the pretesting phase as guided by recommendations pointed out by Hunt, Sparkman, and Wilcox, (1982). The survey tools were pretested on a purposively selected sample of 30 participants. Permission for pretesting was granted by Zimbabwe National Network for PLHIV (ZNNP+) and participants for pretest were accessed and recruited at income generating project sites in Matabeleland South province. Each participant signed consent form and average duration of each interview was 45 minutes. During the one-on-one pretesting interviews, none verbal quos such as visible uneasiness, frequency of clarity questions from respondent were noted. Review of pretesting observations and findings effected the following adjustments;

- Inclusion of approximate duration on each questionnaire
- Increasing spaces between questions
- Revision of few ambiguous vernacular terms in consultation with translators and making use of participants responses

Study questionnaire. The main instrument for collection of data for this study was the one - on-one interview questionnaire administered to PLHIV. The questionnaire for this study was subdivided into sections according to main themes and informed by objectives and research questions to be addressed. Summary composition of each section was be as presented below. Basic guidelines for questionnaire design were used (Burgess, 2009) and pilot testing was done in the study site to sense check on time and quality of questions.

Section A- Socio- Demographic data- In Section A, relevant socio-demographic data on respondents was collected based on key predisposing and enabling parameters in the theoretical model (Andersen, 1995). Crafting of specific questions and response categories was based on standards of demographic and health in Zimbabwe. For privacy and anonymity, cases were

identified by questionnaire number. Key socio- demographic data covered sex, age range, marital status, level of education, period of stay in area, distance to health center, household size (measured by number of people sharing same meal in the last month), mode of transport to health centre, duration under medication.

Section B- Utilization of HIV/AIDS- related Health Care This section covered source of health care, level of satisfaction with service, frequency of visits, cost, perceived quality of service, type of healthcare according to the presented definition of HIV/AIDS related Healthcare (WHO, 2010), (Voluntary testing and counselling, Acquiring Anti-Retro Viral Drugs, tuberculosis screening and treatment, Prevention of Mother to Child Transmission PMTCT, antenatal maternal care, prescribed checkup and training related to PLHIV).

SECTION C Social Capital-This section covered membership to formal and informal groups, level participation (Measured by nature of membership – leadership position, regular attender, inactive) and neighborhood connections everyday sociability, family connections, trust and fairness norms, crime and safety, political engagement, confidence with health service, information and communication access (Narayan & Cassidy 2001)

SECTION D Health related Quality of Life (HRQoL)- Informed by the WHO-QL-26, this section covered four main Dimensions of HRQoL assessment which are; Physical Functioning, Psychological Functioning, Social Relationship and Environmental Functioning as well as Global Functioning (Hasanah, Naing & Rahman, 2002).

Qualitative Data collection-Qualitative data for the study was collected using interview schedules. A non-probabilistic purposively selected sample of 40 key informants were individually interviewed in their respective work stations. The key informants included local village health

workers, health professionals, community leaders (including church leaders) and member of community based organizations

Key Informant Interviews-Key informant interviews are in-depth qualitative data collection method which involve interviewing purposefully selected participants on the basis of their firsthand knowledge on an issue of interest (Palinkas, Horwitz, Green, Wisdom, Duan & Hoagwood, 2013). The major advantage of interviewing key informants was the in-depth data collected from respondents which was used to confirm and validate quantitative interviews findings with PLHIV. However it is generally noted that findings from key informants cannot be generalized to the wider population (Kumar, 1989).

Key informant interviews are widely used to deeply engage with people knowledgeable about a particular issue of interest in the community (Kumar, 1989). In this study, forty key informants comprising village health workers, health service experts, community leaders and representatives of various organizations working on HIV/AIDS initiatives were interviewed face to face for at least 45 minutes each after initial appointment booking and consent to participate in the study. These community experts, with their particular knowledge and understanding, provided useful insights and explanations on the challenges and barriers to HIV/AIDS- related Healthcare Utilization. A concern with key informants is in the subjectivity of opinions presented as respondents have the liberty to explore issue according to their own perceptions which may be totally divergent with reality or documented evidence (Campbell et al., 2013). The approach used in conducting key informant interviews was face-to-face though proposals were made for telephone interviews for selected participants for busy participants.

Reasons for key informant interviews in this study- The sensitivity of HIV/AIDS research makes it imperative to ensure possible triangulation is done to validate collected information and capture

any emerging issues which quantitative questionnaire might omit. The forty key informants interviewed provided the research with an opportunity to get in-depth findings on the barriers and challenges to utilization of HIV/AIDS- related healthcare utilization as well as exploring community participation by PLHIV and stigma and discrimination. Below are the summary reasons for key informant interviews;

1) To understand the views and opinions of selected key informants on barriers and challenges to HIV/AIDS-related healthcare utilization.

2) To get information from people with diverse backgrounds and opinions and be able to ask in-depth and probe questions HIV/AIDS-related healthcare in Matabeleland South Province.

3) To discuss sensitive topics, get respondents' candid discussion on the research focus. Individual or small group discussions (two to three people maximum) create a comfortable environment where individuals can have a frank and open in-depth discussion.

4) To get more candid or in-depth answers supported by records especially from currently practicing healthcare workers who also showed the research data trends on HIV/AIDS prevalence and aggregated figures on hospital visits.

Planning the key informant interviews- There are several key steps which were taken in planning and implementing key informant interviews for this study as outlined below;

Gathering and review existing data -Collection and review of existing research data and reports was done before determining what additional information needed to be collected from key informants, as such published records and data from diverse sources and previous research was analyzed and synthesized. Sources such as the country's last census report, 2015 demographic and health survey report and provincial and district hospital visits records were reviewed. This was critical to ensure that questions on already known issues could be discussed based on actual facts.

Determining what information was needed - The first step in preparation was to identify the information the researcher wanted to gather. In this study, information on barriers and challenges to healthcare utilization amongst PLHIV was of central importance in line with one of the key objectives of the research. Details of required information is critical in informing who is to be purposively selected as a key informant.

Determining target population and brainstorm about possible key informants - Before selecting key informants it is important to map out your population of interest, or target population. For the purpose of this study the target population comprised local community leaders, village health workers, healthcare workers and provincial level authorities. A list of all possible participants was prepared using records from district and provincial level offices. Such data was obtained from existing provincial and district AIDS committees' records.

Choosing key informants- Key informants must have first-hand knowledge about the community, its residents, and issues or problems under study. The pool lists of key informants included a wide range of people, including agency representatives, community residents, community leaders, or local business owners. The first step in the selection process was to identify and create a short list of potential key informant individuals or groups I needed for the study. In creating this list the researcher optimized diversity of representatives with different backgrounds and from different groups or sectors. This diversity provided a broad range of perspectives during the interviews in relation to HIV/AIDS healthcare utilization. The list was then narrowed down to forty individuals. However, keeping in mind that final group should have a diverse mix of key informants in order to ensure a variety of perspectives. Key informant diversity proved important during this study as other aspects around stigma and discrimination and mobile healthcare were discussed in detail.

Choosing type of interview- Face to face interviews were done as opposed to telephone interviews as majority of the shortlisted participants were within reach for the research. The main advantage of face-to-face interview is the in the ability to get nonverbal expressions and maximum attention as opposed to telephone conversation.

Developing the interview tool - The interview tool typically contains an outlined script and a list of open ended questions relevant to the topic you would like to discuss. In this study a set of open ended questions aligned to objectives of the study was prepared covering mainly barriers and challenges to HIV/AIDS- related healthcare utilization, prevalent patterns perceptions, stigma and discrimination and participation of PLHIV in community level initiatives. Most factual and easy-to-answer questions were presented first. An introductory section was part of the schedule and written consent document was prepared for use prior to actual interviews.

Determining documentation method - There are primarily two methods which can be used to record the interview responses which are writing notes and digital recording (Creswell & Miller, 2000). No digital recording was done during key informant interviews. Questions schedule had writing spaces in between which were used for capturing responses during the interviews.

Selection designated interviewer and conducting the interview- The researcher conducted all the interviews with key informants at their convenient times and places. Appointments were made by phone where applicable but majority of respondents were visited at their respective offices or after AIDS committee meetings. In bigger research teams it is recommended that a few designated individuals conduct the informant interviews especially those knowledgeable of the research topic for consistence in note tacking, probing and handling of the entire process to ensure confidentiality and validity of findings. All participants were advised of voluntary participation and freedom to terminate the interview at any given time in line with ethical guidelines. In concluding

each interview the researcher enquired on any questions and comments to ensure that all key issues are addressed.

Compiling and organizing key informant interview data for analysis - Data management is critical in research to ensure privacy and confidentiality are upheld. The researcher ensured that each key informant guide with respondent data was kept under lock and key and all the data for the 40 key informants was properly filed and analyzed together using content analysis.

In conclusion, this study used key informant interviews for two reasons; 1) to solicit sector wide views on PLHIV, social capital and utilization of HIV/AIDS related healthcare and 2) to triangulate data collected from individual respondents. The target key informants interviewed are presented below;

Table 4.3: Key Informants summary

Key Informant Category	Number interviewed
Provincial Hospital Superintendent	*1*
Medical Staff (Opportunistic Infections Local Clinics Staff)	*8*
NGOs Supporting Local PLHIV Representatives	*10*
CBOs and Support group Leaders for PLHIV	*6*
Local District Authorities (District Administrator, Chiefs, Ward Councilors, Kraal Heads, Village Heads)	*7*
Village Health Workers	*8*
Total Key Informants Reached	40

4.10 Data management and analysis

Qualitative data analysis - All of the key informant interview scripts were transcribed and analyzed according to categories and themes that emerged. Thematic analysis approach was used to identify common categories on the different individual scripts (Rubin & Babbie, 2011). For

consistence and alignment with existing guidelines, Tesch (1990)'s eight steps for analyzing qualitative data were used as follows;

1. The researcher got a sense of all the data collected by reading carefully through all the transcriptions and jotting down ideas.
2. The researcher selected any individual transcript and went through it thoroughly exploring underlying meanings, highlighting and taking short thematic notes on margins.
3. Once the researcher had completed this task for several transcripts, a list of all the topics was made, and similar topics were clustered and formed into columns so they could be arranged into major topics, unique topics, and leftovers.
4. The researcher took the list and returned to the data. The topics were abbreviated as codes and the codes written next to the appropriate segments of the text. The researcher tried out this preliminary organizing scheme to see whether new categories and codes emerged.
5. The researcher found the most descriptive wording for the topics and then turned them into categories. The total list of categories was reduced by grouping related topics. Lines were drawn between the categories to show interrelationships.
6. A final decision on the abbreviation for each category was made and the codes were arranged in alphabetical order.
7. The data material belonging to each category was assembled in one place and a preliminary analysis performed.
8. Synthesis and writing up the analysis.

In summary the key steps followed in qualitative data analysis involved preliminary exploration of the data by reading through interview schedules and scripts, labelling text, coding, constructing narratives and connecting interrelated themes (Creswell, 2002). Word cloud technique as

popularized in qualitative research by McNaught and Lam (2010) was also applied in exploring key emerging common thematic areas from the multiple responses given by key informants especially on barriers and challenges to healthcare utilization in line with the objectives of the study.

Establishing trustworthiness in qualitative data- In qualitative study, the researcher seeks believability, based on coherence, insight and instrumental utility (Eisner, 1991) and trustworthiness (Lincoln & Guba, 1985) through the process of verification unlike reliability measures in quantitative data. To establish data credibility triangulation was applied. This involved converging different sources of information to verify what has been collected as well as cross checking any inconsistences with key informants through probing during interviews and data cleaning (Creswell, 2002). Four constructs as laid out by Lincoln and Guba (1985) were critically incorporated in order to increase trustworthiness:

a) Credibility refers to establishing consistency between participants' realities and those attributed to them (Babbie & Mouton, 2007). This was achieved in this study by repeatedly defining and describing purpose of the study to minimize social desirability bias.

b) Transferability was taken into account by clearly stating the theoretical parameters of the study and the extent to which the findings could be used in other settings and with other participants (Babbie & Mouton, 2007). In order to help achieve this, in-depth descriptions and outline of procedures followed was done.

c) Dependability refers to whether the study's findings would remain the same (or similar) if it were repeated (Babbie & Mouton, 2007). The researcher used thorough probing and triangulation to verify and validate responses.

d) Confirmability implies that the findings of the study can be confirmed by another independently (De Vos et al., 2005). The researcher ensured background diversity of participants, optimal neutrality and objectivity during interviews based his professional experience in research work to minimize chances of researcher induced biases.

Quantitative data analysis-The survey data was captured in SPSS version 22. Preliminary analysis for data cleaning, identification of outliers and missing data was done in SPSS. Cleaning data is the process of preparing data for analysis (Field, 2013) and it is done prior to any rigorous analysis of the data. Frequency tables showing key summaries statistics such as mean, minimum and maximum values were used to identify outliers and missing values. Case summaries were also done during data cleaning. The field quality checking exercises done by the researcher and assistant ensured very negligible outliers were noted during data cleaning. Series mean (Field, 2013) technique was used to replace few cases of missing values. The data was screened on the univariate, bivariate and multivariate levels. Univariate analysis involves descriptive analysis of the data to summarize and describe observed patterns, and case summaries (Pallant, 2005). Data screening involves descriptive statistics for all variables including missing data and tests for normality through analyzing skewness, kurtosis and plotting distribution curves. Data screening helped to identify potential multicollinearity, homoscedasticity, singularity in the data and identify outliers which may affect goodness of fit of the model (Tabachnick & Fidell, 2000).

An additional step done prior to data analysis was transformation of selected variables (Field, 2013). Variable age was transformed into a categorical variable for analysis using standard categories (WHO, 2013). Median split median split (Iacobucci, Posavac, Kardes, Schneider, & Popovich, 2015) was used to dichotomize social capital scores into low and high. The same

approach was used in transforming number of visits to healthcare centres over past six months into dichotomized healthcare utilization dependent variable.

Scale scoring- The Personal Social Capital Scale (PSCS-16) used 5-point Likert-type scales for item scoring as follows 1 (a few), 2 (less than average), 3 (average), 4 (more than average), and 5 (a lot). The response scale for questions assessing participants' perception of ''how many network members'' was: 1 (none), 2 (a few), 3 (some), 4 (most), and 5 (all). Mean scores were calculated to give each individual PSCS score (Wang, Chen, Gong and Tiura 2009). Guidelines by Ware and Gandek (1998) were used in scoring the SF-36 Health related quality of life scale. The following two steps guided the procedure;

Step 1) Recoding items and reverse scoring so that high scores indicate favorable health and low scores unfavorable health. Specific guideline and allocated scores were verified (Ware & Gandek, 1998).

Step 2) Items under ach subscales were then average to give score for each of the eight sub scale of the HRQoL scale which are Physical functioning (10 3, 4, 5, 6, 7, 8, 9, 10, 11, 12), Role limitations due to physical health (4 13, 14, 15, 16), Role limitations due to emotional problems (3 17, 18, 19) Energy/ fatigue (4 23, 27, 29, 31) Emotional well-being (5 24, 25, 26, 28, 30) Social functioning (2 20, 32) Pain (2 21, 22) and General health (1, 33, 34, 35, 36).

Factor Anlysis -Exploratory Factor Analysis was done on the Personal Social Capital Scale (PSCS-16) using SPSS to identiy key dimensions of social capital amoungst the 16 scale items. The key assumptions which underpin the procedure which are sample size, factorability of the correlation matrix, linearity and elimination of outliers were all considered accordingly (Pallant, 2005).

Binary Logistic Regression Model Specification- Binary logistic regression is non parametric data analysis approach. Cramer (2002) highlighted that the logistic function was first invented in the 19th century for the description of populations and the course of autocatalytic chemical reactions. Muchabaiwa (2013) pointed out that Verhulst published three papers between 1838 and 1847 showing how logistic models agreed very well with the course of the populations of France, Belgium, Essex, and Russia for periods up to 1833. The logistic function was rediscovered in 1920 by Pearl and Reed in modelling the population of the United States for the period 1790 to 1910 (Cramer, 2002). Existing records pint out that Pearl and Reed's publications and application of logistic regression was not premised or connected to previous work done by Verhulst. Globally, logistic regression is widely applied in research in almost every field containing population or categorical response variables such as social sciences, commerce, wildlife, fishing, ecology, epidemiology, plant biology, and public health (Liu, 2009). As with other analytical methods, logistic regression has its advantages and disadvantages.

The study used binary logistic regression to examine factors influencing HIV and AIDS related healthcare utilization. Binary logistic regression is typically used when the dependent variable is dichotomous and the independent variables are either continuous or categorical (Park, 2013). In this case the dependent variable Healthcare Utilization was dichotomized into low and high.

Binary logistic regression does not assume a linear relationship between the dependent and independent variables, variables do not need to follow normal distribution, there is no homogeneity of variances assumption, in other words, the variances do not have to be the same within categories,

normally distributed error terms are not assumed and the independent variables do not have to be interval or unbounded (Wright, 1995).

According to Gujarati and Porter (2009), the logistic regression model is specified as:

$$\boldsymbol{Yi = \alpha_0 + B_1 X_1 + B_2 X_2 + \cdots + \mu_K}$$

Where

Yi is a binary variable Healthcare Utilization (0=Low, 1=High) as earlier defined;

Xk measures the independent variables

Bk is the measure of change in the measure of probability;

$\boldsymbol{\mu_K}$ is the independently distributed random error term

Key Assumptions of Binary Logistic Regression

i. Dependent variable should be measured on a dichotomous scale. In this case Healthcare Utilization is dichotomized into Low and High based recorded visits to healthcare center by PLHIV.

ii. Independent variables, which can be either continuous (interval or ratio variable) or categorical (ordinal or nominal variable). Age, Gender, Level of Education, Religion, Marital Status, Number of years in the area, Personal Social Capital Score, Discrimination, Perceived health and Health Insurance membership comprise the set of independent variables

iii. Independence of observations and the dependent variable should have mutually exclusive and exhaustive categories.

iv. Linear relationship between any continuous independent variables and the logit transformation of the dependent variable.

R-Square (R^2) for logistic regression - In Logistic Regression unlike when using linear regression models where the r-square measures the amount of variation in the dependent variable

that is explained by the independent variables, in logistic regression there is controversy regarding the relevance of r-square measures in assessing the predictive power of a logistic model (Steyerberg, Harrell, Borsboom, Eijkemans, Vergouwe, & Habbema, 2001). The Logistic regression $\boldsymbol{R^2}$ is estimated by the Cox and Snell $\boldsymbol{R^2}$ whose value cannot reach 1. The Nagelkerke $\boldsymbol{R^2}$ improved it to reach 1 (Hosmer and Lemeshow, 2000). This implies that Cox ad Snell $\boldsymbol{R^2}$ is always smaller than corresponding Nagelkerke $\boldsymbol{R^2}$.

According to Hosmer and Lemeshow (2000), unlike in linear regression the $\boldsymbol{R^2}$ for logistic regression is only used to compare competing models that are used for the same data. A value of 1 is an indication of a perfect fit whilst a value of zero is an indication that there is no relationship. The higher the value the better fit the model.

The Likelihood Test Ratio- The Likelihood ratio tests the significance of all the variables included in logistic regression model. The full model will be having all the parameters of interest and the simple model has one variable dropped (Hosmer and Lemeshow, 2000). The likelihood ratio tests the hypothesis that the dropped variables are not significant in predicting the dependant variable. According to Pallant (2005) the likelihood-ratio test is chi-square distributed and if test is significant then the dropped variable will be a significant predictor in the equation whilst on the other hand if the test is not significant then the variable is considered to be unimportant and thus will be excluded from the model.

Omnibus Test of Model Coefficients and Hosmer-Lemeshow Test - Like the likelihood ratio test statistic, this test statistic is a measure of the overall model fit. It tests the hypothesis that all the coefficients of independent variables are equal to zero. There is at least one coefficient of an independent variable that is not equal to zero. The omnibus test statistic is equivalent to the F-test in linear regression (Meyers, Lawrence, Gamst, Glenn & Guarino, 2006). The null hypothesis is

rejected when the p-value of the omnibus test statistic of less than 0.05 (significance level). A significant test statistic implies that the logistic regression can be used to model the data.

Hosmer – Lemeshow Goodness of fit test is another test used to assess the model fit. The test compares the predicted values against the actual values of the dependent variable. The method is similar to the chi-square goodness of fit. The Hosmer-Lemeshow test involves grouping the sample into groups based on the percentiles of estimated probability (Hosmer and Lemeshow, 2000). The method uses groups where the first group contains subjects with the lowest probabilities and the last group made up of subjects with the largest probabilities. The statistic follows a chi-square distribution with degrees of freedom (Hosmer and Lemeshow, 2000). A good fit model will have a small Hosmer-Lemeshow test statistic and a p-value that is greater than 0.05 (the significance level).

Classification tables and Akaike Information Criterion- A Classification table measures the predictive accuracy of a multivariate logistic regression model. The method involves cross classifying the dependent variable with the categorical variable emanating from the fitted logistic probabilities (Muchabaiwa, 2013). The percentage of successes that have been correctly classified as success is called sensitivity of the model, whilst the percentage of failures that have been correctly classified is called specificity of the model. The failures that are incorrectly classified as success are referred to as false positive and the success that are incorrectly classified as failures are referred to as false negatives (Sharma, 1996).

Higher specificity and sensitivity are an indication of a good fit of the model. The classification table can be used for data validation. According to Kutner, Nachtsheim, Neter, and Li (2005) if a model fitting sample produces the same prediction error rate as the validation sample then the fitted model will be reliable. Akaike's Information Criterion (AIC) Akaike's Information

Criterion (AIC) measures the relative value of a statistical model for a given set of data. The AIC can be used to select the best model. AIC is useless when it is used in isolation as it does not test any hypothesis but can only compare different models. A model with the lowest AIC value will be the most preferable model.

Wald Test - The Wald statistic is another test that can be used to assess the significance of individual logistic regression coefficients. The squared value of the Wald statistics is chi-square distributed with one degree of freedom (Rana, Midi, and Sarkar, 2010). Wald Statistic tests the hypotheses that independent variables are not significant in the model. The null hypothesis is rejected if the p-value of the test is less than 0.05 (significance level). A coefficient with a p-value of the Wald statistic less than 0.05 implies that the variable is important in the model.

4.11 Non-parametric statistics

The study used non parametric analysis based on the results of normality tests conducted using the Kolmogorov–Smirnov test which showed that central study variables were not normally distributed (Cleophas, & Zwinderman, 2011). Two key assumptions were satisfied prior to use of non-parametric tests which are; 1) Randomness of sample and 2) Independent observations (Pallant, 2005).

Chi-Square test - Chi-square test was used in bivariate analysis where relationships between two categorical variables were explored. In this study, relationships between the dependent variable, healthcare utilization (dichotomized) into low and high utilization and categorical variables under predisposing and enabling factors were examined using Chi-square tests in SPSS. The following study hypotheses were tested using Chi-square;

1. There is an association between Social capital and utilization of HIV/AIDS - related healthcare

2. There is an association between utilization of HV/AIDS- related healthcare and gender

Mann Whitney U test - The Mann Whitney test is used to test differences between two independent groups on a continuous measure (Pallant, 2005). Basic requirement to conduct Mann-Whitney U test are; 1) one categorical variable with two groups e.g. sex and 2) a continuous variable e.g. health related quality of life scores. In this study health related quality of life scores were on a continuous scale, in examining whether males and females differed in their Health Related quality of life scores, Mann Whitney test was used. The specific study hypothesis tested using Mann Whitney is; 'There is an association between utilization of HV/AIDS- related healthcare and Health related quality of life'.

Kruskal Wallis test - The Kruskal Wallis test is similar to Mann Whitney U test except that it permits for more than two categories on the independent variable. It is the direct alternative to one way analysis of variance in parametric tests and allows for comparison of a continuous variable for three or more groups of the categorical independent variable (Pallant, 2005). In examining whether different age groups of people living with HIV differed in health related quality of life, Kruskal Wallis test was used.

4.12 Ethical considerations

The World Health Organization in 2002 pointed out that 'the ethical justification of research involving human subjects is the prospect of discovering new ways of benefiting people's health, such research can be ethically justifiable only if it is carried out in ways that respect and protect, and are fair to the subjects of that research and are morally acceptable within the communities in which the research is carried out'. Ethical approval for this study was done in three stages as follows:

a) UCT Ethics Committee review. This was done by the Ethics Committee Social Development Department at University of Cape Town, Faculty Level Dean for Postgraduate Research (See Appendix C). A written ethical approval was granted by the Doctoral Degrees Board (DDB) which also confirmed PhD candidature for the researcher.

b) Review of research proposal in Zimbabwe by Dr Mukamuri- Centre for Applied Social Sciences (CASS) University of Zimbabwe and National Healthcare Trust of Zimbabwe. This was done in line with prescribed requirements by the Medical Research Council of Zimbabwe (MRCZ) which makes it mandatory for additional independent reviews of the study locally i.e. in Zimbabwe.

c) Review and Ethical Approval by the Medical Research Council of Zimbabwe (MRCZ). The MRCZ is the governing body under Ministry of Health and Child Care which reviews and authorizes all health related studies involving human beings in Zimbabwe. This research was granted ethical approval by the Medical Research Council of Zimbabwe (See Appendix C) Detailed guidelines are attached as an Appendix O.

Permission of entry into the study area was granted by the local government authorities in Matabeleland South Province of Zimbabwe. In line with the global guidelines on research ethics for studies involving human participants, informed consent forms were given to each respondent prior to interviews.

The following specific ethical issues were addressed accordingly during the study in line with generic research guidelines from University of Cape Town and Medical Research Council of Zimbabwe;

I. Human Participants Protection

The researcher ensured participants were protected from physical and psychological harm throughout the research process. The entire research was explained to each participant prior to signing consent forms. Potential psychological harm through evoking memories of HIV/AIDS illness was well handled through creating rapport with respondents from the onset and the researcher ensured each participant fully understood why they were chosen, objectives of the study, duration of interview and consent to participate.

II. Informed Consent and Voluntary participation

Written informed consent forms in vernacular were given to each respective recruited participant after explaining the objectives of the study and expectations from each respective respondent. Participants were given liberty to withdraw from the survey voluntarily at any stage. A key observation was the high voluntary willingness to participate in the research study shown by over 90% of recruited respondents.

III. Anonymity

The identity of participants was protected by avoiding use of exact names during the study. Responses were kept confidential and numerical codes were used instead of real names. Given the sensitive nature of HIV/AIDS no audio recordings or pictures were taken for this study and participants remained anonymous. The researcher clearly outlined to participants that no recordings were to be done by either party.

IV. Confidentiality

Collected data was kept secure under lock and key only accessed by the researcher throughout the study. Specifically research lockable container was used to store all field documentation. Questionnaires would be destroyed after 5 years from the completion of the study. All scripts and

records from the field for the study are kept under strict security and in accordance with ethical guidelines for handling health related information.

V. Privacy

Participants' privacy was assured by having one on one interview away from interference of other people and in consent with the respondent. After recruitment participants were given the right not to disclose any information they felt uncomfortable to disclose. Personal interviews were done in more natural setting with optimal privacy during the interview process.

VI. Debriefing

Each participant was given enough time for any clarifications and questions after the interviews were done. The researcher took time to respond to all questions posed during and after the study. All participants asked questions freely but the researcher could give conclusive responses to issues pertaining to the study whilst other relevant questions outside the scope of the study were dealt with through referrals to various sources of help such as hospital, police and local gate keepers accordingly.

VII. Risks and Benefits to Participants

HIV/AIDS remains a sensitive issue in communities despite awareness campaigns against stigma as such there are potential psychological, social and ethical risks associated with this study. Rural areas in particular Matabeleland South are usually marginalized in terms of research focus, the benefits to participants from this study was firstly an 'invited space' to participate, give feedback, opinions and recommendations on how to enhance utilization of HIV/AIDS –Related Healthcare. Such feedback is valuable to policy makers and service providers for interventions targeting rural PLHIV nationwide. There were also educational benefits to participants through sharing advice on enhancing social capital, health related quality of life and adherence to proper

medication for HIV/AIDS -Related Healthcare and how they can leverage on social capital as an endogenous resource. The table below summarizes the risks which were anticipated and how the researcher mitigated them:

Table 4.4: Anticipated risks and mitigation plan

Risk Type	Specific Risk	Mitigation Measure
Psychological	▪ Provoking memories on HIV/AIDS ▪ Stress and depression	Created rapport with respondents and had Trained Research assistant. Also worked with ZNNP+ trained provincial staff.
Social	▪ Opportunity cost of Time consumed during interview	Recruited Participants were asked for convenient time and place for interview to ensure that they did not miss on their important activities.
Ethical	▪ Disclosure of sensitive information during interviews	No names were recorded on questionnaire and no pictures, audio and videos recordings were done

4.13 Limitations of the study

Limitations provides valuable insights for future studies and are inevitable in empirical research, however the critical aspect is how each limitation is addressed by the researcher (Singleton, Straits, Straits, &McAllister, 1988). Sensitive subjects such as HIV/AIDS- related healthcare have always presented challenges to researchers especially on issues pertaining to utilization, disclosure and general stigma attached to the deadly epidemic (WHO, 2000). The researcher established rapport with ZNNP+, the mother body for PLHIV in Zimbabwe and other local organizations supporting PLHIV to ensure participants were free and comfortable in responding to survey instruments. A limitation noted is that findings cannot be generalized to other provinces or inferred to the whole country as focus was only on Matabeleland South province and translated scales are generally context specific. Given the sensitivity of HIV/AIDS in rural areas, the researcher used time location

sampling method (proxy probability sampling approach) and support from gate keepers to recruit and interview participants (PLHIV). A potential limitation of could be the effect of social desirability bias (Rubin & Babbie, 2011) whereby participants can give more favorable or desirable answers to please the interviewer. The experience of the researcher in working with rural communities as well as deliberate disclosure of the need for objectivity were repeatedly emphasized throughout field data collection to minimize such biases. Despite advantages of non-parametric tests, they tend to be less sensitive than parametric tests (Pallant, 2005) hence may fail to detect some differences in data and this may be a potential limitation. The cross sectional nature of the study and sample size may also be possible sources of limitations for the study. Despite highlighted possible limitations, all planned guidelines for the study were implemented and future studies in similar settings can be well informed by this research.

CHAPTER 5

STUDY FINDINGS

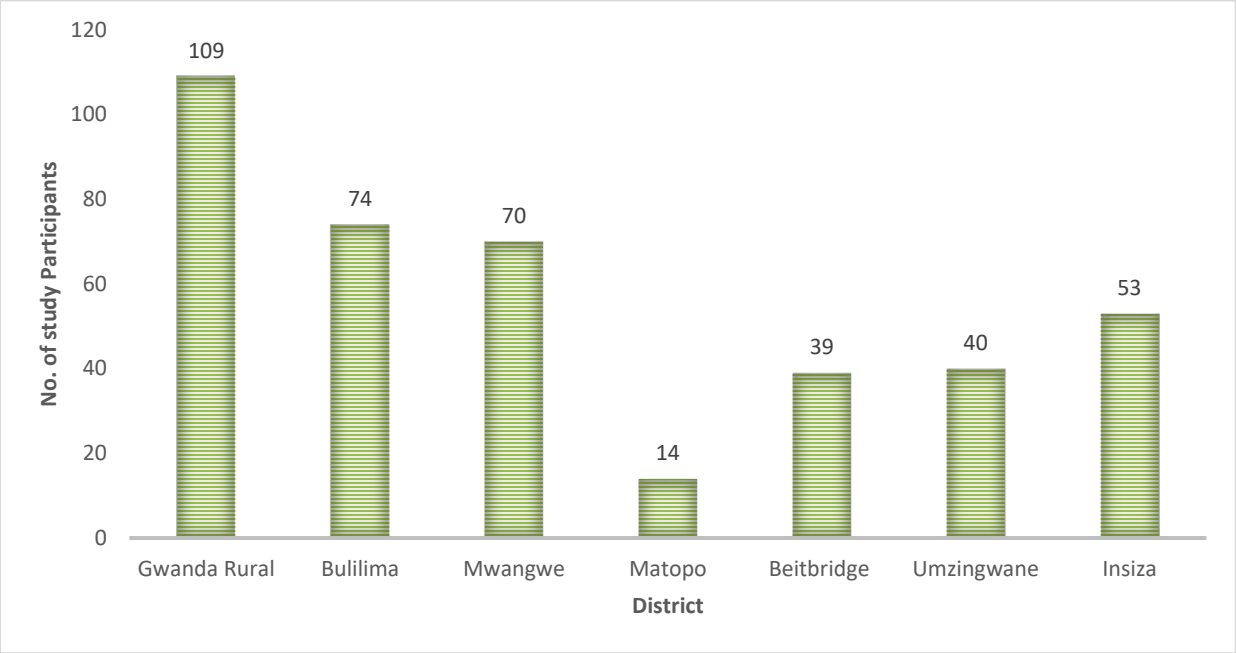
This chapter presents findings of the study. The main aim of the research was to examine the relationship between social capital and utilization of HIV/AIDS- related healthcare among PLHIV. The chapter begins by presenting descriptive analysis section which focusses on key socio demographic characteristics of the study participants such as gender, level of education, marital status, district and employment status. The second section presents bivariate analysis in which correlations between central study variables are outlined in line with the key objectives of this study. The third section of this chapter focusses on multivariate analysis in which findings from binary logistic regression are presented. Tables, graphs and statistics are extensively used throughout the chapter to capture the key findings of the study. Normality tests conducted using Kolmogorov-Smirnov and Shapiro- Wilk tests showed that key study variables were not normally distributed hence non-parametric analyses were used. In the concluding section, the researcher wraps up the chapter by presenting qualitative findings to answer key research questions on barriers and challenges to healthcare utilization based on key informant interview findings.

5.1 DESCRIPTIVE FINDINGS

Participants Socio-Demographic characteristics

Majority of the study participants (73.4%, n=399) were females. Research participants preferred to be interviewed in the local IsiNdebele language (86.2%, n=399).The major percentage (27.32%; n=399) of respondents were from Gwanda rural and least from Matobo at (3.5%, n-399) as shown in Fig 4.1 which shows the distribution of study participants by district.

Fig 5.1: Distribution of study participants by district (n=399)



Education levels of study participants is as shown in table 4.1. Five distinct categories are presented. The study found out that 47.1% (n=399) of the participants attained primary school education and the least proportion of 1% attained postgraduate level of education. Approximately 3.3% have never been to formal school.

Marital status is a key socio-economic variable which widens household safety net options for livelihood and social networks (Shapiro & Keyes, 2008). Highest number of respondents (38%, n=399) reported single marital status whilst 24% said that they were married. Divorced and undisclosed marital status were equal at 4.3% (n=399) as shown in Table 4.1.

As presented in Table 4.1 the study found out that majority of participants were not formally employed (58.1%, n=399) and the least percentage of 6.5% (n=399) were employed fulltime reflective of the high unemployment challenge facing the country at large. Short term employment which include informal businesses constituted 8.5% (n=399). A significant 26.8% (n=399) did not

disclose their employment status. A huge proportion of the study participants (92%, n=399) however indicated that they were somehow involved in small scale farming during the rain season.

Christianity was found to be the dominant religion amongst the study population constituting 90.2% (n=399) whilst least proportion of 2% were Muslims as summarized in Table 4.1. These statistics are reflective of the national level data which show dominance of Christianity on Zimbabwe (ZIMSTAT). Religion plays a key role in influencing healthcare practices including healthcare utilization (Campbell et al., 2013). The religious beliefs of people result in many healthcare beliefs and practices which are significantly different based on the persons religious inclination. Religion also influences social networks and decisions to utilize healthcare services (Rumun, 2014).

The mean age of participants was 42 years (SD=12.4), minimum age of participants was 18 years whilst the maximum was 66 years. Average years living in the area was 26 years (SD= 17.3). Age was collected as a continuous variable and transformed into a categorical variable using standardized WHO survey classification for age groups and the highest percentage, 28.1% (n=399) of participants were in the 35-44 years category. The smallest percentage of participants in the study population was in the over 64 years category which had 1.3% (n=399). About 81% of the study participants were below the age of 55 years implying that the majority of respondents were in the standard reproductive age group range of 18-49 years.

Table 5.1: Socio-demographic characteristics of the study participants

Sample Characteristics		(n)	(%)
Gender	Male	26.6	106
	Female	73.4	293
Religious Affiliation	Muslim	2.0	8
	Traditionalist	2.3	9
	Christian	90.2	360
	None	3.5	14
Marital Status	Divorced	4.3	17
	Separated	10.0	40
	Widow	21.1	84
	Married	24.1	96
	Not Married	36.3	145
	Not Disclosed	4.3	17
Employment Status	Full time Employed	6.5	26
	Short Term Employed	8.5	34
	Unemployed	58.1	232
	Not disclosed	26.8	107
Education Level	Postgraduate	1.0	4
	Vocational/Technical	8.3	33
	Training	40.4	161
	Secondary	47.1	188
	Primary	3.3	13
	No Formal Education		
Source of Healthcare	Nearest Public Clinic	78.9	315
	Nearest Private Clinic	4.8	19
	Religious Leader	1	4
	Traditional Healer	5	20
	None	1	4
Socio-Economic Status perception	Rich	2.3	9
	Average	28.8	115
	Below Average	37.8	151
	Poor	22.6	90
	Very Poor	7.3	29
	Undisclosed	1.3	5

Social Capital - Social capital was measured using a 16 items Personal Social Capital Scale (PSCS 16).The translated IsiNdebele version of the scale was reliable with cronbach alpha coefficient (α= .78) which is greater than .70 reference value for reliability (Tavakol and Dennick,

2011). The study found out that the mean social capital score the Personal Social Capital Scale was 42.91, standard deviation 13.037, (n) = 394.

Factor Analysis of the Personal Social Capital Scale (PSCS)

The 16 items of the PSCS were subjected to principal compoments analysis (PCA) using SPSS version 23. Prior to performing PCA, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. The Kaiser-Meyer-Olkin (KMO) value of sampling adequacy was 0.645, exceeding the recommended value of .6 (Kaiser 1970, 1974) and Bartletts's Test of Spehericity (Bartlett 1954) reached statistical significance ($\chi 2$ (120) = 128, $p < .001$), supporting the factorability of the correlation matrix.

Principal component analysis revealed the presence of two components with eigen values exceeding 1, explaining a cumulative 39.7% of the variance. An inspection of the scree plot revealed a clear break after the second component, confirming the retention of two factors. (See Figure 5.1.1). The two component solution explained a total of 39.7% of the variance, with Component 1 contributing 21.9 % and Component 2 contributing 17.8 % of the variance. Oblimin rottion was peformed to aid in the interpretation of these two coponents. The rotation solution revealed a two component structure with each component showing eight strong loadings (Table 5.1.2). This result of the factor analysis is consistent with previous research on the PSCS, with eight bridging capital capital items loading strongly on Comonent 1 and the other eight bonding social caital items loading strongly on Component 2. Correlation between the two factors was moderately strong (r=.585). The results of this analysis supports use of the bonding social capital and bridging social capital items as separate scales as suggested by the author (Chen, 2009).

Table 5.1.1 Factor Anlysis Rotated Component Matrix

	Component	
	Bridging Social Capital	Bonding Social Capital
SC14 How many of these governmental, political, economic and social groups/organizations represent your interests?	.767	
SC10 How do you rate the number of governmental, political, economic and social organizations in your community?	.733	
SC15 How many of these governmental, political, economic and social groups/organizations will help you upon request?	.732	
SC11 How many of these groups or organizations possess broad social connections?	.686	
SC13 How many of the cultural, recreational and leisure groups represent your interests?	.675	
SC16 How many of these cultural, recreational and leisure groups will help you upon request?	.627	
SC12 How many of these groups or association possess great social influence?	.381	
SC9 How do you rate the number of cultural, recreational and leisure groups/orgnizations in your community?	.347	
SC8 How many of your friends will definitely help you upon request?		.746
SC7 How many of coworkers/fellows would definitely help upon your request?		.670
SC5 Among your relatives, neighbors, friends,co-workers and old classmates how many have broad network connections with others?		.605
SC6 Among your relatives, neighbors, friends,co-workers and old classmates how many have professional jobs?		.572
SC3 Among your coworkers/fellows, how many can you trust?		.533
SC4 Among your relatives how many can you trust?	.	.493
SC2 How would you rate the number of your country fellows/old classmates?		.474
SC1 How would you rate the number of your Friends?		.454
Percentage of Variance Explained	**21.86%**	**17.84%**

Figure 5.2.1 Scree Plot

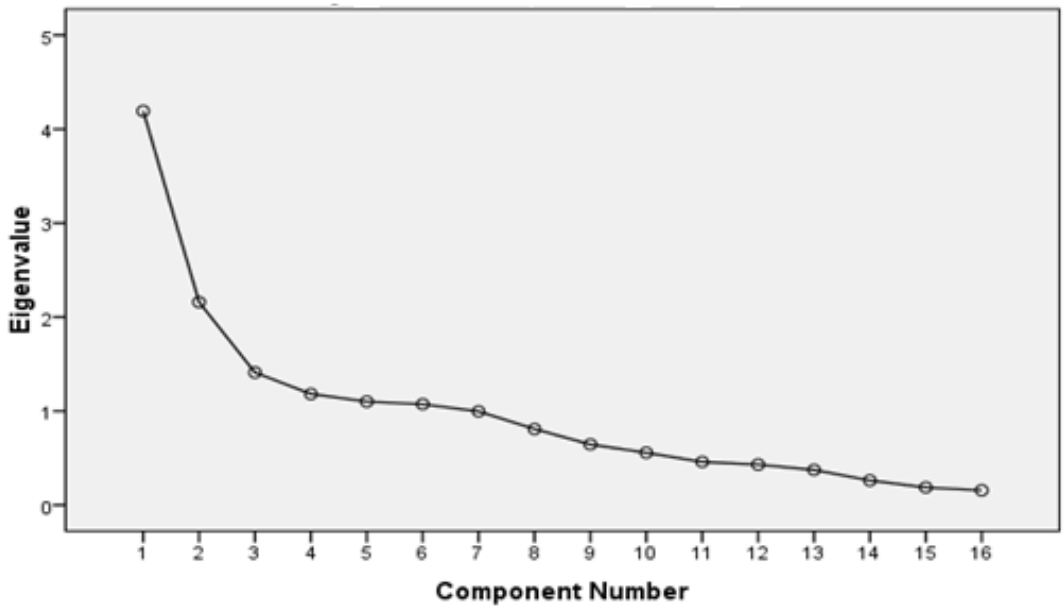


Table 5.2: Summary statistics of continuous study variables

	(n)	*Range*	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*
Age of Respondent	396	48.00	18.00	66.00	42.0833	12.42560
HRQLScore	363	76.81	19.12	95.94	57.3682	19.05673
Personal Social Capital Score	394	83.00	5.00	88.00	42.9162	13.03765
Healthcare visits in the past 6 months	376	7.00	1.00	8.00	4.4761	1.62955
Number of Years in this Area	387	65.00	1.00	66.00	26.5039	17.37477

Sources of Income of participants

Family support was the major source of income for 26.3% (n=399) of the study participants whilst only 2% reported that NGOs were their major source of income. Table 4.3 show that self-business was also reported as a major source of income for 26.1% of the respondents. A significant 9% reported that their main source of income were relatives from the diaspora indicative of the high

migration to neighboring South Africa & Botswana in the province. Average household size was 5.4 (SD=2.3) and maximum size was 14.

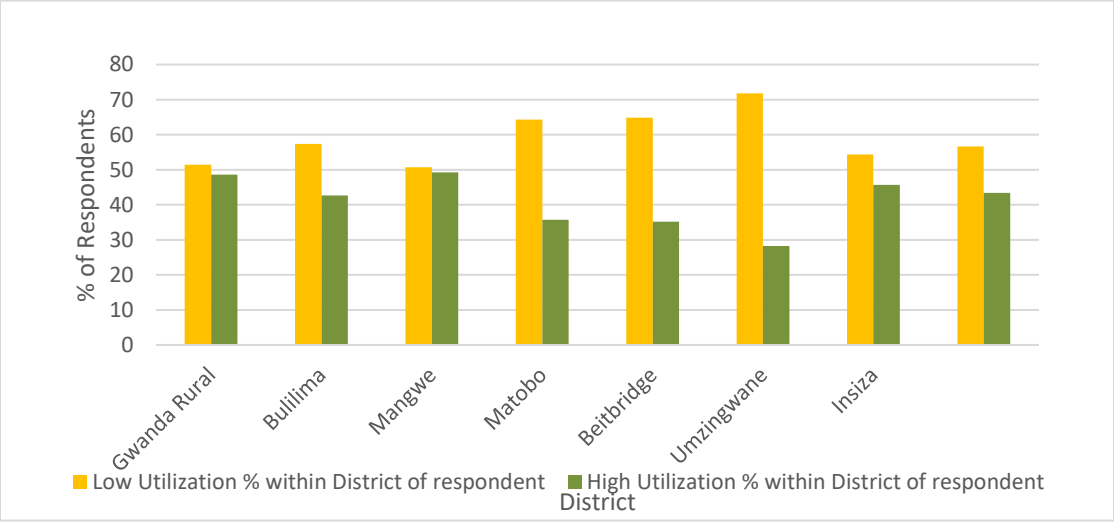
Table 5.3 Participants Sources of Income

Source of Income	(n)	Percent (%)
My Job	48	12.0
Family Support	105	26.3
Relatives in Diaspora	36	9.0
NGOs	8	2.0
Self-Business	104	26.1
Other	12	3.0

Healthcare Utilization

Healthcare utilization was dichotomized into low and high utilization and participants were analyzed according to level of utilization and district in order to find out any spatial variations. All districts had below 50% proportions of people with high level of HIV/AIDS-related utilization. Mangwe district had the highest proportion of 49.2% of people utilizing HIV/AIDS-related healthcare and Umzingwane district had the least proportion of 28.2%. The chart below presents comparatives for all respective districts.

Fig 5.2 District of respondent and level of HIV/AIDS-related healthcare utilization



Stigma and Discrimination

Univariate analysis conducted for stigma and discrimination on the study population showed that 42% (n=399) felt they were discriminated and 32.8% (n=399) felt they experienced stigma during the past six months. Although stigma and discrimination was not the central focus of this study the significance of these two concepts in the context of HIV/AIDS in Zimbabwe warranted consideration hence Chi-square analysis to test whether same proportions of males and females face stigma and discrimination were done and showed that there were no statistically significant differences by gender in terms of stigma and discrimination.

5.2 BIVARIATE FINDINGS

This section presents findings on analysis of two variables for the purpose of determining and interpreting empirical relationships. This is in line with proposed hypotheses of this study. In the methodology section, tests for normality presented confirmed that key study variables were not normally distributed hence non-parametric tests namely Chi-square, Kruskal Wallis and Mann-Whitney U tests (Pallant, 2005) was be used in examining hypothesised relationships between study variables.

Healthcare utilization perceived household socio economic status -A Chi-square test conducted showed a significant relationship between healthcare utilization and perceived socio-economic status of the household χ^2 (4, n=399) =21.32, $p < .000$. The contingency coefficient value of .233 showed a moderate positive correlation.

Table 5.4 Chi-square test of the association between healthcare utilization and socio-economic status

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.323[a]	4	.000
Likelihood Ratio	26.205	4	.000
Linear-by-Linear Association	.071	1	.790
N of Valid Cases	373		

a. 0 cells have expected count less than 5. The minimum expected count is 9.96.

Social Capital and Age-The Kruskal-Wallis test conducted showed that social capital scores are significantly different by age category χ^2 (5, n=394) =13.388, p =.020. Age standardized categories (WHO, 2002) were used as the grouping variable and continuous scores of social capital in line with prerequisites for Kruskal Wallis test. The 35- 44 age group had the highest social capital scores with the >64 age group reporting the lowest (See last column in Table 4.5).

Table 5.5 Participants age and social capital scores

Age Category	(n)	Percent (%)	MEAN RANK (PSCS) *Kruskal-Wallis Test*
18-24	46	11.5	195.15
25-34	63	15.8	199.69
35-44	112	28.1	210.40
45-54	103	25.8	193.53
55-64	70	17.5	194.90
>64	5	1.3	23.00

Healthcare Utilization and Social Capital -Pearson's Chi-Square tests conducted showed a significant relationship x^2 (1, n = 378) = 77.2, p =<0.001 between social capital. HIV and AIDS Healthcare Utilization, Social capital was dichotomized into low and high categories using median split according to, Iacobucci, Posavac, Kardes, Schneider, & Popovich, (2015). The summary statistics are presented in the table 4.6

Table 5.6 Relationship between Personal Social Capital and Healthcare Utilization

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	77.216[a]	1	.000		
Continuity Correction[b]	75.390	1	.000		
Likelihood Ratio	81.595	1	.000		
Fisher's Exact Test				.000	.000
N of Valid Cases	378				

HIV/AIDS- related Healthcare Utilization and Health Insurance - Medical insurance is an enabling factor in terms of enhancing access to medical facilities (Campbell et al., 2013). In this study the relationship between membership to medical aid and healthcare utilization was found to be nonsignificant using Pearson's Chi-Square test, x^2 (1, n = 378) = 1.598, p =0.206. This means that the proportion of study participants with high healthcare utilization was not statistically different amongst those with and those without medical insurance.

Gender and Healthcare Utilization

Chi-square test conducted to test association between healthcare utilization and gender showed that the relationship was not significant χ^2 (1, n= 378) =1.23, p =.267. This means that the percentage of males with high utilization were not significantly different from females with high utilization.

Health Related Quality of Life (HRQoL) and Gender

The relationship between gender and health related quality of life scores measured using the SF-36 was analyzed using Mann-Whitney U Test. The results presented in table 4.6 showed a statistically significant z= -2.88 (p=0.004) difference in Health Related Quality of Life scores between males and females.

Table 5.7 Mann Whitney U test for gender and health related quality of life

	HRQLScore
Mann-Whitney U	10650.000
Wilcoxon W	45103.000
Z	-2.881
Asymp. Sig. (2-tailed)	.004
a. Grouping Variable: Gender of Respondent	

Table 4.7.1 below presents mean rank comparisons of the health related quality of life Scores by gender. The results showed that males had higher mean rank (207.55) than females implying that males reported better health than females in the study population.

Table 5.8 Mean Rank HRQoL Scores by Gender (Mann-Whitney test)

	Gender of Respondent	N	Mean Rank	Sum of Ranks
HRQLScore	Male	101	207.55	20963.00
	Female	262	172.15	45103.00
	Total	363		

Discrimination and Healthcare Utilization

Pearson Chi square tests conducted showed a significant relationship between healthcare utilization and discrimination, x^2 (1, n = 378) = 13.26, p =<0.001. The means that in terms of healthcare utilization, proportions differed according to whether a person felt they were discriminated or not.

Table 5.9: Chi-Square Tests for Relationship between Healthcare Utilization and being Discriminated

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	13.263[a]	1	.000		
Continuity Correction[b]	12.371	1	.000		
Likelihood Ratio	13.320	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	13.213	1	.000		
McNemar Test[b]				.[c]	
N of Valid Cases	267				

Healthcare utilization and perception of healthcare worker attitude

Utilization of HIV/AIDS- related healthcare by PLHIV can be affected by how this particular group are treated or perceive health workers given the sensitivity of HIV/AID (Campbell et al., 2013). A Pearson's Chi-Square test conducted to examine relationship between healthcare utilization and healthcare worker attitude measured on a five point likert scale indicated a significant relationship, x^2 (5, n = 378) = 20.46, p =<0.001. Research participant with better perceptions about healthcare attitude had high utilization of HIV/AIDS-related healthcare.

Sources of health- related information and social capital

Non-Governmental Organizations were found to be the major source of health related information by 36% of the respondents. Only 1.3% of the respondents got health related information from friends. Kruskal –Wallis Tests showed that there is a significant (x^2 (5, n = 378) = 41.68, p =<0.001 difference between social capital scores across participants based on grouping them on according to sources of health related information. Table below show that participants who sourced

HIV/AIDS- related healthcare information from the internet had highest mean rank scores on personal social capital highlighting significance of internet penetration in rural communities.

Table 5.10 Source of health related information and Social Capital Score mean rank

Source of HIV/AIDS-related healthcare related	N	Mean Rank
NGOs	139	173.69
Support Group	51	189.40
Family network	30	165.08
Mobile Phone	13	87.62
Internet	8	330.50
Radio/TV	99	188.23
Church	9	171.28
Friends	5	24.00
Total	354	

Religion and healthcare utilization

Pearson's Chi- square tests conducted revealed a significant relationship between religion and HIV/AIDS- related healthcare utilization, x^2 (3, n = 378) = 16,32 p =<0.001. This implies that religion influences healthcare utilization which is consistent with findings by Benjamins (2006) who also underscored the need to integrate religion and socio-cultural issues into the healthcare utilization nexus.

5.3 MULTIVARIATE FINDINGS

Logistic regression results- A logistic regression was performed to examine the effects of predisposing, enabling and need factors on healthcare utilization. Park (2013) defined logistic regression as a multivariable method for modeling the relationship between multiple independent variables and a categorical binary dependent variable. The logistic regression model was statistically significant, χ^2 (31) =129.36, $p < .05$. The model explained 59.3% (Nagelkerke R^2) of

the variance in Healthcare Utilization and correctly classified 80.2% of cases as shown in the summary tables below. Increasing Personal Social Capital was associated with an increased likelihood of healthcare utilization. Females were 3.12 times more likely to utilize healthcare than males. Household heads were 4.3 times more likely to utilize HIV and AIDS- related healthcare. Feeling discriminated increased the odds of healthcare utilization by 7.73 times.

Logistic regression model summary

The Cox and Snell R Square and adjusted Nagelkerke R Square measures were used as coefficients of determination for the model to provide an indication of the amount of variation in the dependent variable explained by the model and range between 0 and 1 (Pallant, 2005). Table 5.11 show 59.2% of the variance as explained by the model.

Table 5.11 Binary logistic model goodness of fit summary

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Overall percentage correct predicted
173.767[a]	44.2%	59.3%	80.2%

The model classification table shown in table 5.12 shows well the model is able to correctly predict category of healthcare utilization (low/high utilization) for each case. The results displayed indicates that the model correctly classified 80.2% of the cases.

Table 5.12: Model classification

Observed	Predicted		
	Category HIV& AIDS Related-Healthcare Utilization		% Correct
	Low Utilization	High Utilization	
Low Utilization	104	23	81.9
High Utilization	21	74	77.9
Overall Percentage			80.2

Logistic regression model summary

The Table 5.13 presents multivariate analysis results based on binary logistic regression conducted to examine the determinants of HIV and AIDS -related healthcare utilization. The table shows that personal social capital, gender, household headship and being discriminated significantly influence healthcare utilization.

Table 5.13 Determinants of HIV AIDS- related healthcare utilization

	B	S.E.	Wald	Df	Sig.	Exp(B)
Medical Insurance	.143	1.144	.016	1	.901	1.153
Personal Social Capital	4.092	1.001	16.713	1	.000	59.841
Gender	.336	.886	.144	1	.005	3.421
Age	.054	.036	2.254	1	.133	1.056
Years in the area	.021	.027	.633	1	.426	1.021
MaritalStatus			5.622	1	.229	
Household Headship	1.459	.629	5.377	1	.020	4.300
Household size	.0201	.134	.023	1	.878	1.021
Education Level	-.331	.451	.540	1	.463	.718
Discrimination	2.046	.614	11.104	1	.001	7.734
Stigma	-.820	.593	1.908	1	.167	.441
Sense of Belonging			4.550	1	.337	
Constant	11.277	2.010	.000	1	1.000	7.898

HIV/AIDS- related healthcare utilization and Health Related Quality of Life (HRQoL)

A Mann- Whitney U Test was conducted to test whether there is significant difference in HRQoL scores between low and high utilization categories of PLHIV. The findings show that there is a statistically significant (p=.029) difference in Health Related Quality of Life scores between those in low and high healthcare utilization categories.

Table 5.14 Health Related Quality of Life and HIV/AIDS-Related Healthcare Utilization Mann-Whitney U-Test Statistics

	HRQL Score
Mann-Whitney U	12661.500
Wilcoxon W	23836.500
Z	-2.187
Asymp. Sig. (2-tailed)	.029
a. Grouping Variable: Category Healthcare Utilization	

5.4 Findings from key informant interviews

One of the key objectives of this study was to find out barriers to HIV/AIDS- related healthcare utilization. In-depth qualitative interviews were conducted with 40 purposively selected key informants including healthcare workers, HIV/AIDS service providers and community leaders. One of the key observations made was despite the ravaging impact of HIV/AIDS in the province, key informants were more than willing and open to participate in the study with 90% of the scheduled interviews held successfully. This section presents findings from key informants based on main themes which emerged during content analysis covering the following; barriers and challenges to HIV/AIDS-related healthcare utilization, prevalence of HIV/AIDS in the province, level of stigma and discrimination, participation of PLHIV in local activities and health related quality of life.

Profiles of key informants

The average age of key informants interviewed was 42 years. 45% (n=40) of the respondents were males whilst 55% were female indicative of fair gender parity and more females were willing to be interviewed than their male counterparts. Average number of years in the province for the key

informants was 3.5 years. In terms of education level, all the respondents had at least secondary qualification with the highly qualified being post graduate qualification holder. The educational profiles are indicative of the high literacy level in Zimbabwe and significance in holding leadership position. 32.5% of the respondents were fulltime employees of the government and other respondents worked for local NGOs and community based organizations as well as community volunteering.

Table 5.15 Summary profiles of Key Informants

Respondent Category	Male	Females	Age Range	Min.Education Level	Employer
Health professionals	1	5	30	Nursing Diploma	Government
Local leaders	6	1	47	Primary	Community
Religious leader	2	-	45	Secondary	Community
Community Based Organization Leader	-	3	36	Diploma	CBO
Village Health Worker	1	9	35	Secondary	Community
Councilor	4	1	40	Diploma	Government
PLHIV Representative	3	4	28	Secondary	CBO
Total	17	23			

5.5 Barriers to HIV/AIDS-related healthcare utilization

The key informants highlighted a number of factors hindering optimal utilization of HIV/AIDS- related healthcare in Matabeleland South Province despite availability of medical facilities and free medication in rural clinics. Amongst the key highlighted factors are socio-cultural beliefs, poor road networks, use of herbal medicines, stigma and discrimination. A local chief interviewed during the study lamented shortage of food as a key challenge and had this to say;

> Shortage of food is widespread in this province, PLHIV are then forced to prioritize search for food through attending food for work programmes and

> seeking hired jobs to get food at the expense of visiting clinics for periodic checkups and treatment *– Local Chief, Male, 60 years in the area*

A local councilor in the province pointed out that;

> In some districts poor road networks affect mobility to medical centers resulting in reduced frequency of visits to clinics- (Local Councilor, Male)
> We still have isolated cases of fear of stigma and discrimination which results in some people not wanting to disclose their status and hence do not utilize available healthcare and resort to cultural practices such as traditional medicine and faith healing- (Provincial Healthcare Officer)
> There is growing widespread misconception on herbal medicines which are imported and sold locally and some people discontinue their medical regimes in favor of the so called herbs- (Village Health Worker)

Fig 5.3: Conceptual Framework of Barriers and Challenges to HIV/AID-Related Healthcare Utilization

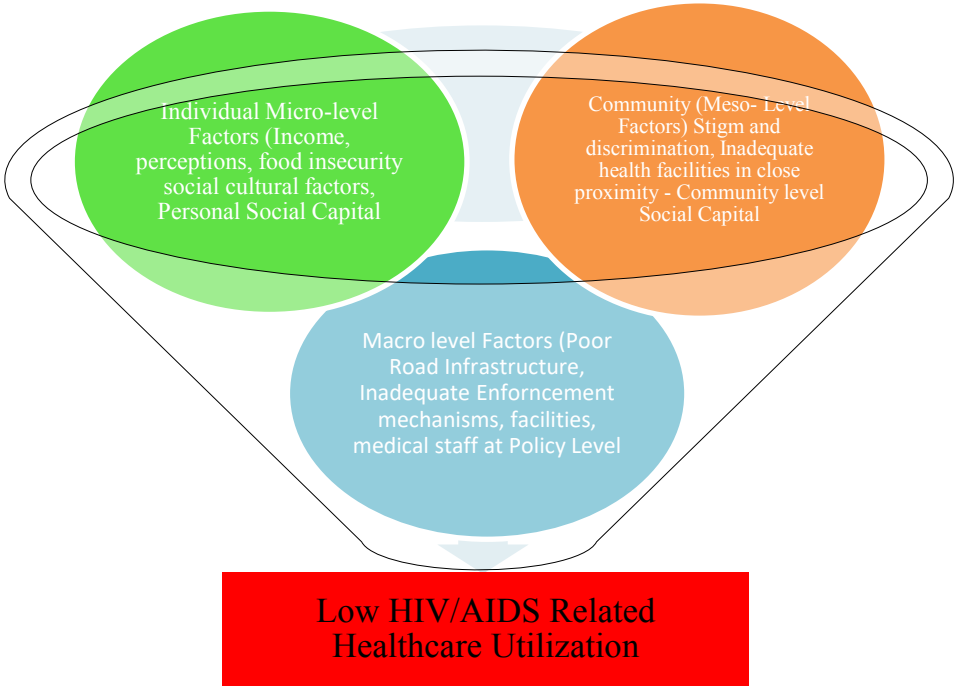


Fig 4.1 shows that key informants categorized barriers to HIV/AIDS-related healthcare utilization into three clusters depending on respective views as follows; Individual (Micro level

factors), Community meso-level factors and macro-level factors. Word cloud analysis (McNaught & Lam (2010) done on the transcripts of responses on 'barriers and challenges' highlighted food insecurity as a major barrier to healthcare utilization in the province as shown in Fig 4.2.

Figure 5.4: Word cloud on barriers and challenges to utilization of HIV/AIDS- related healthcare

5.6 Perceptions on prevalence of HIV/AIDS in Matabeleland South

The key informants had mixed views on the observed trends in HIV/AIDS prevalence in Matabeleland South province based on records and their expert knowledge. Medical staff noted moderate decline in new hospital visits at Opportunistic Infections Clinic whilst local leaders cited high prevalence of the pandemic at local level. One local community leader affirmed that;

> I think HIV/AIDS prevalence is still high in the province despite having organizations working with the Ministry of Health to educate people on behavioral issues and safer sex. – *Local Community Village Head, Male, 20 years in the area*

Another key informant had an opposing view of the trend based on recorded evidence she claimed that;

> Many people now know about HIV/AIDS and overally the trend on new recorded cases is going down from high figures recorded during the previous years- (Gwanda Hospital, Medical Staff, Female)

5.7 Stigma and discrimination of PLHIV

About significant majority of key informants interviewed highlighted very minimal to zero stigma and discrimination of PLHIV in Matabeleland South Province as local people are now knowledgeable about the epidemic. About a quarter indicated that there is low to moderate stigma and discrimination prevalent in the province. A representative of a local Non-Governmental organization argued that;

> I would say the battle with stigma and discrimination of PLHIV is over in this area as people are united to fight the pandemic and every week we receive health education on how we can achieve Zero New Infections- *Representative of local NGO, Male*

In agreement to the views of the NGO representative, a local nurse claimed the following;

> There are few cases where PLHIV are discriminated especially relating to hiring of workers for local community work by some organizations where they specify need for physically fit people but those are the minimal cases- *Local Clinic Nurse*

A village health worker confidently dismissed existence of stigma and discrimination in her area and made the following profound remarks;

> We live together, eat and drink together with PLHIV so I would say there is no stigma and discrimination in my area. -*Village health worker, Female*

5.8 Community participation amongst PLHIV

Community participation focus on involvement of all stakeholders, at all stages of development; on outcomes; on empowerment; and on the important role of disadvantaged groups particularly women and the poor (Claridge, 2004). Findings by Ndekha, Hansen, Mølgaard, Woelk, and Furu (2003) provided good holistic starting points for defining participation: 'a social process whereby specific groups with shared needs living in a defined geographic area actively pursue identification of their needs, take decisions and establish mechanisms to meet these needs. Key informants highlighted moderate to high level participation of PLHIV through their representatives in local level initiatives such as income generation, development projects and health and nutrition initiatives such as nutrition gardens. It was noted that PLHIV hold leadership positions in diverse initiatives. A local village health worker claimed that;

> We have a number of NGOs and government supported initiatives in this district and support groups for PLHIV are actively involved in all such projects- *Village Health Worker, Male*

An active member of local support group actively argued that;

> I am a leader of our cooperative nutrition garden project which is benefiting many families in my area, I lead and coordinate all activities to ensure that there is maximum production- *Community Based Organization Leader*

5.9 Healthcare utilization and quality of life

It was noted that about 90% of all key informants interviewed pointed out the need to improve health related quality of life for PLHIV in Matabeleland South Province. Food shortage and limited safety nets for other social needs were amongst the major challenges affecting PLHIV. Hunger and poverty prevalence limited frequency of visit to healthcare centers. One village health work with over 10 years in the area was quick to flag out that;

> Hunger is our major challenge since this is a semi-arid province and many PLHIV are adversely affected as they require sufficient nutrition to improve drug efficacy'- *Village Health Worker*

Medical superintendent at one of the visited hospitals highlighted that;

> 'There is severe food insecurity which actually affect healthcare utilization and wellbeing of PLHIV in this area- *Provincial Medical Superintendent*

The interviewed key informants unanimously highlighted the need for livelihood support as a driver to improving health related quality of life amongst PLHIV in the province.

CHAPTER 6

DISCUSSION

Optimizing healthcare utilization is the ultimate goal of any healthcare system in any country especially in the face of the ravaging impact of HIV and AIDS (National Aids Council, 2014). Several scholars have explored different dimensions in the healthcare nexus but limited focus has been devoted to social capital and HIV/AIDS-related healthcare utilization amongst people living with HIV especially in developing countries such as Zimbabwe. Despite commendable progress by the government of Zimbabwe in the battle against HIV and AIDS through provision of healthcare centers and subsidies on treatment, prevalence remain worryingly high especially in Matabeleland South province (ZNASP, 2015) and suboptimal levels of HIV/AIDS- related healthcare utilization are recorded (UNAIDS,2015). The overall purpose of this study was to examine social capital and utilization of HIV/AIDS-related healthcare amongst PLHIV in rural Zimbabwe. The study also explored barriers to healthcare utilization in rural context and linkages between health related quality of life and social capital in order to bring out insights relevant for review and strengthening existing frameworks around HIV/AIDS -related healthcare utilization amongst PLHIV. The whole chapter discusses the key findings of this study highlighting significance, link to existing literature and putting forward the researcher's arguments.

In examining the nature and extent of healthcare utilization amongst PLHIV, results showed that majority of participants used nearest public clinic as source of healthcare service whilst a limited number who could afford private clinics used them. Matabeleland south is generally a resource poor province (Zimbabwe Poverty Atlas, 2015) and cost of medical care is highly subsidized in the province but overally findings show that 43% of research participants were in the high utilization category in terms of HIV/AIDS-related healthcare. Smith, et al., (2000) had similar

findings on low healthcare utilization amongst poorly housed PLHIV which support findings from this study given dominance of average to poor housing conditions in rural areas such as Matabeleland South. This points out greater need to attend to people's welfare in order to ensure optimal utilization of formal healthcare services and combat the battle against HIV and AIDS though there is possibility that some research participants may not have provided accurate information regarding source of healthcare service as some benefit through village health workers and mobile clinics which may not be directly labelled as healthcare centers.

Majority of the study participants were females and had high willingness to participate in the study consistent with findings from other scholars who pointed out better health seeking behaviour amongst females than man (Galdas, Cheater, & Marshall, 2005). The significance of this is the need for healthcare providers to devise strategies to capture men and ensure equal level of awareness and willingness is achieved as with the opposite sex. A notable observation made during the study was high response rate of 91% implying that nine in every ten recruited respondents were willing to be interviewed and signed consent forms. The observed response rate was very high possibly due to use of gate keepers from local organizations working with PLHIV in establishing rapport and the timing of the study which coincided with off-farming season. Though documented limitations exist on use of gate keepers in social research (Broadhead & Rist, 1976), reaching out to hard to reach participants such as people living with HIV was made effective during the study through gate keepers. There was optimal debriefing of the intentions of the study which also aided in achieving high response rate. Participants were very open to discuss issues relating to the study giving evidence of high level of awareness on HIV/AIDS in the province which confirms the intensity of HIV/AIDS-related interventions in the province.

Analysis of socio-economic status of participant's households showed that only a very small percentage of participants who perceived themselves as rich and such participants were employed fully and had relatives in the diaspora supporting their livelihood needs. The majority of participants were in the below average and very poor categories in line with low national ranking of the province in terms of poverty level according to the Zimbabwe Poverty Atlas, (2015). A study by Menamo (2012) on household food security and adherence to antiretroviral therapy showed that food secure people are more likely to adhere to medication therefore there is need for holistic analysis HIV/AIDS- related healthcare utilization to also identify measures to support livelihoods and improve food security especially in resource poor rural communities such as Matabeleland South Province. Piwoz & Preble (2000) noted that food and nutrition play a critical role in complementing medication given the weakened immune system for PLHIV. Healthcare service providers, welfare organizations, donor communities and local leaders need to collaborate in establishing robust mechanisms which incentivize healthcare utilization through livelihood support programmes and strengthening of social capital.

Previous studies have shown that education is positively correlated with healthcare utilization. Individuals with high educational attainment were found to be more likely to have high utilization of healthcare facilities (Alguwaihes and Shah, 2009). This study confirmed this assertion as participants with higher education levels had higher social capital scores and also high healthcare utilization which underscores the importance of education in health. A high percentage of the study participants had primary school education only (47%, n=399) pointing out a need for the government to consider intensive investment in secondary school education in the province. An exploratory study in rural Zimbabwe (Gregson, Terceira, Mushati, Nyamukapa, & Campbell, 2004) confirmed the positive role of social capital in promoting safer behaviour amongst young women.

The role of Social capital as a critical factor in social development initiatives such as credit clubs and income generating cooperatives has received worldwide recognition over the years and many communities today leverage on this local resource in championing development programmes (Grootaert & Van Bastelaer, 2002). Findings from this study revealed that high social capital scale scores were associated with high healthcare utilization amongst the study population. This resonates with findings by Campbell et al., (2013) who concluded that community linkages promoted health and wellbeing and were crucial in fighting stigma in Zimbabwe. HIV/AIDS prevalence negatively affects social capital as agued by David and Li (2008) hence the need to strengthen the social fabric. Modie-Moroka (2009) pointed out that social capital role must be considered especially in resource poor communities. Social capital and HIV/AIDS –related healthcare utilization is thinly documented especially in rural contexts and this study sought to examine the hypothesis that there is an association between social capital and utilization of HIV/AIDS - related healthcare.

Poortinga, (2006) made same conclusion on the positive link between social capital and self -rated health. Kruskal Wallis tests showed that the 35-44 age group had the highest social capital scores. There is need to promote social cohesion by age groups especially to fight stigma and discrimination and to sustain healthcare utilization. Marginalized groups such as PLHIV and the elderly are often neglected in community level initiatives and there is greater need for targeted investments in nurturing social capital. Caution must however be taken in educating communities on the specific goals and expected outcomes in social cohesion enhancing programmes as some detrimental effects of strong social bonds have been documented where harmful outcomes such as drug dealings and abuse were recorded in well networked societies (Wakefield & Poland, 2005).

An additional interesting finding of the study is the reliability of the IsiNdebele version of the Personal Social Capital Scale which makes substantial contribution for future studies of social

capital in the Ndebele context as such finding has not been documented in previous studies. There is however strong need for Shona translation of the Personal Social Capital Scale in order to replicate the study to the wider population.

Health related quality of life (HRQoL) concept has been widely documented in middle to high income countries (Sabbah, Drouby, Sabbah, Retel-Rude, & Mercier, 2003) but thinly covered in developing countries despite shared universal goals of promoting health and wellbeing across the world as echoed in such global frameworks such as Sustainable Development Goals. This research examined the association between Health Related Quality of Life (HRQoL) and utilization of HIV/AIDS- related healthcare in the rural context. High scores on Health Related Quality of Life were however associated with low healthcare utilization, contrary to the findings by other scholars and though accepting the hypothesis that a significant relationship exists. The contradicting association might imply that high utilization of Healthcare brings out side effects such as lethargy, headaches and burden of frequent healthcare centre visits which disrupts normal wellbeing of individuals hence report low scores on the HRQoL scale. The other issue could be need to customize the operationalizing of HRQoL so that construct is reflective of local context. Similar study by Yadav (2010) supported the positive role of social capital in improving health related quality of life amongst people living with HIV.

Predicting individual health behaviour is one of the widely studied areas as scholars sought to understand the determinants of health seeking behavior and in turn inform policy. Despite this widespread attention on predictors of healthcare utilization, attention to marginalized groups such as PLHIV remain worryingly limited especially in developing countries given resource constraints and competing national priorities. In this study predictors of HIV/AIDS-related healthcare utilization were examined using binary logistic regression. Key findings pointed that social capital,

gender, household headship and discrimination were significant predictors of healthcare utilization amongst PLHIV in rural Matabeleland South Province. The significance of social capital aligns with conclusions by Eriksson (2011) who emphasized the critical role of social capital in health promotion and is critical in fighting stigma amongst individuals. The social nature of man in general makes social fabric a critical factor in ensuring health and wellness though many interventions tend to focus on supply side aspects such as ensuring physical availability of health services, subsidies, improved transport mechanisms, training and other incentives. This study therefore underscores the need to strengthen the social fabric and integrate social capital in improving utilization of HIV/AIDS-related healthcare.

Gender mainstreaming is one of the popularized concepts in community development and need to device gender sensitive interventions is well documented, this study supports views of previous scholars with regards to gender. Improving utilization of HIV/AIDS- related healthcare need to be tackled with gender lenses and emphasizing inclusion of men whose health seeking behavior lags behind. A research conducted by ZNNP+ in 2015 on the stigma index in Zimbabwe revealed that 65.5% of the study respondents reported that they had experienced one or more forms of HIV-related stigma and discrimination. In essence, the study postulated that majority of HIV interventions Zimbabwe have focused on HIV Prevention, Treatment Care and Support but there is significant attention gap with regards to HIV and AIDS related stigma and discrimination. According to the report, people living with HIV still experience different forms of stigma and discrimination which include being gossiped about, exclusion from social, religious and family activities, verbal and physical abuse among other things in the workplace, educational institutions, and also in the health institutions. Despite documented successes in raising awareness through diverse educational programmes and anti-stigma campaigns in Zimbabwe there is need for

continued efforts in eliminating stigma and discrimination especially in rural areas where information asymmetry is also a huge barrier.

What are barriers and challenges related to utilization of HIV/AIDS- related healthcare in rural areas? In line with a key objective to examine the barriers and challenges to healthcare utilization amongst people living with HIV this study also sought answers to the posed research question through in depth key informant interviews consisting of health experts, village health workers and local leaders. The key informants interviewed highlighted a number of factors hindering optimal utilization of HIV/AIDS- related healthcare amongst PLHIV in Matabeleland South Province namely food insecurity, socio-cultural beliefs, poor road networks, use of herbal medicines, low education levels, stigma and discrimination. Similar finding on low educational attainment as a barrier to healthcare utilization was also confirmed by Titaley, Dibley & Roberts (2010) who concluded that underutilization of antenatal services can be addressed through educational programmes for mothers. Poverty and food insecurity has been widely regarded as factor behind high prevalence of HIV in the province given the low potential for agriculture due to the semi-arid agro-ecological conditions existing and this support the need for livelihood interventions to improve food security status in the province. The timing of the field data collection coincided with the dry season and limited food relief programmes, this could also have led to overwhelming view of food insecurity as major challenge though previous studies have also cemented need for food safety nets in the province. There is need for completing interventions to ensure that PLHIV are included in livelihood interventions as this will go a long way in improving utilization of healthcare.

The influence of socio-cultural beliefs such as early marriages, polygamy and other sexual ritual myths were selectively pointed out as factors hindering optimal utilization of HIV/AIDS-

related healthcare. The material influence of such factors on direct utilization of healthcare however warrants further scholarly research given the high levels of awareness on HIV/AIDS as there is limited affirmation from previous findings. A glaring issue pointed out as hindering utilization of HIV/AIDS- related healthcare is use of herbal medicines, a significant 30% of interviewed key informants highlighted that PLHIV who use herbal medicines do not use formal healthcare services. A study in Kwazulu Natal on use of herbal medicines revealed that 51.1% of PLHIV used herbal medicines and had very low visits to formal healthcare centers (Peltzer, Friend-du Preez, Ramlagan, & Fomundam, 2008). The same study highlighted widespread use of herbs especially in rural areas by outpatients which can be same scenario though people are not keen to disclose use of non-formal healthcare sources. This brings out the need to educate communities on recommended medical practices as use of adhoc medical care can be detrimental to health and wellbeing (Farah, Edwards, Lindquist, Leon & Shaw, 2000) and have potential to affect the efficacy of approved medication which may lead to drug resistant infections arising. This is a potential threat to healthcare system which may require community collaboration, herbal medicine providers and legislatures to work together.

CHAPTER 7

CONCLUSIONS

This chapter presents conclusions and recommendations of the study. It points out various conclusions and present empirically grounded recommendations on understanding social capital and HIV/AIDS-related healthcare utilization amongst people living with HIV in the rural context. The conclusions and recommendations presented are in line with the main objectives of the study. The chapter also highlights key implications for social development policy and practice and share possible areas to be pursued by future research.

One of the main the objectives of this study was to examine the nature and extent of utilization of HIV/AIDS- related healthcare amongst people living with HIV. The magnitude and pattern of healthcare utilization in the study population was to a greater extent influenced by social capital as an enabling factor and predisposing factors such as age and gender. This call for a need to consider age specific and gender sensitive approaches to promote optimal HIV/AIDS-related healthcare utilization in rural communities. Levels of social capital were also significantly different across age groups with least rank recorded for the over 64 years category and this point out to the need for reinforcing age specific social networks such as local groups to improve networking amongst the aged populations. Government through local authorities need to promote such local clubs as weaving, peanut butter processing, poultry and small livestock production to improve livelihoods and also build social cohesion.

The study also examined predictors of HIV/AIDS- related healthcare utilization in rural Zimbabwe. There is need to ensure targeted interventions in promoting healthcare utilization especially integrating gender and age based on their significance as predictors of healthcare

utilization. It is therefore imperative to ensure more robust initiatives to improve HIV/AIDS-related healthcare utilization in rural communities.

The significant relationship between social capital and healthcare utilization underscores the need to mainstream social capital in community development initiatives which aim to improve healthcare utilization. Local community networks and clubs which promote strengthening of the social fabric must be supported to ensure strong and sustainable social capital development which in turn yield such positive outcomes including improved healthcare utilization.

High scores in health related quality of life were associated with high utilization of HIV/AIDS-related healthcare which highlights the need for health authorities to promote understanding of health related quality of life as a yardstick to gauge efficacy of local interventions on target populations such as PLHIV. Besides generic education on adherence to HIV/AIDS medication, marginalized groups such as PLHIV require periodic self-assessments of their Health Related Quality of Life (HRQoL) which is a traditionally ignored parameter especially in developing countries (Weeks et.al, 2004). Healthcare centers are therefore recommended to make deliberate efforts to educate people about health related quality of life.

Critical views raised by key informants regarding barriers and challenges to utilization of HIV/AIDS-related healthcare emphasized the need to enhance collaborative multidisciplinary approach in improving healthcare utilization such as livelihood and nutrition security, strengthening social capital, improved transport infrastructure and sustained fight against stigma and discrimination. These views resonates with current Zimbabwe Agenda for Sustainable Socio-Economic Transformation (Zim Asset 2013-2018) which among other pillars of priority seek to enhance social services and eradicate poverty through social protection for vulnerable groups such as PLWHIV (Bonga, 2014).

7.1 Implications for social development policy and practice

Provision of adequate Healthcare remains a key priority across the global village especially amongst marginalized and vulnerable rural communities given that average of 70% of developing countries population resides in rural areas. This underscores the need for empirical evidence to shape and restructure existing policies and practice around HIV/AIDS- related healthcare utilization. Key highlights from this study emphasized the need to;

i. Integrate Social Capital in designing HIV/AIDS –related healthcare interventions in marginalized rural communities.

ii. Need to ensure adequate structural grass root support for local community based organizations supporting marginalized groups such as networks for PLHIV. Health authorities must scale up interventions leveraging such local conduits to ensure sustainability in HIV/AIDS-related healthcare utilization.

iii. Continued HIV/AIDS education and empowerment of communities through age specific and gender sensitive livelihood support initiatives will go a long way in totally eliminating stigma and discrimination as well as strengthening social capital.

iv. Promote role of faith-based organizations, community organizations and NGOs in strengthening social the social fabric as a driver for improved healthcare utilization

7.2 Areas for future research

This study examined the relationship between social capital and utilization of HIV/AIDS-related healthcare amongst people living with HIV in rural Matabeleland South province of Zimbabwe and also explored barriers to optimal HIV/AIDS-related healthcare utilization among this marginalized rural population. Widespread literature gaps were noted, there is strong need to unpack different dimensions of social capital and possibly widen the scope of the study to national

level study in order to bridge noted literature gaps and infer findings to wider population. The following specific areas are proposed for further scholarly research consideration;

- HIV/AIDS– related healthcare utilization and social capital dynamics amongst other marginalized groups such as disabled people, elderly, drug dealers, immigrants and homosexuals
- Stigma and discrimination characterization to unpack pattern and nature amongst rural people living with HIV and identify pragmatic remedies for elimination.
- Broadening geographic scope to cover other countries and regions for comparative analysis and strategic positioning of findings to inform and influence global development frameworks such as Sustainable Development Goals and Africa 2063 agenda.
- Given the conclusion of this study that social capital is vital as a predictor in healthcare utilization and its association with health related quality of life, the research proposes that further empirical studies on implications of current technological trends especially social media on social capital.
- Psychometric assessment of the Shona version of the Personal Social Capital Scale and SF-36 Health Related Quality of Life Scale as well as incorporating influence of other factors such drug use, alcohol and smoking.

The researcher is of the view that intended objectives of this study were met. The need for further research in HIV/AIDS-related healthcare utilization cannot be overemphasized, the researcher underscores the need for government of Zimbabwe to promote all-inclusive gender sensitive healthcare utilization research and social capital enhancement programmes in order to ensure a robust outcome driven national healthcare system.

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APPPENDIX A: Means, standard deviations and item correlations for personal social capital scale (PSCS)

Item by subscale (PSCS-16)	*Mean*	*Std. Deviation*	*Corrected Item-Total Correlation*	*Squared Multiple Correlation*	*Cronbach's Alpha if Item Deleted*
SC1 How would you rate the number of your Friends?	2.579	1.444	0.205	0.228	0.781
SC2 How would you rate the number of your country fellows/old classmates?	3.088	1.499	0.348	0.389	0.770
SC3 Among your coworkers/fellows, how many can you trust?	2.917	1.353	0.371	0.324	0.768
SC4 Among your relatives how many can you trust?	2.899	1.315	0.466	0.557	0.761
SC5 Among your relatives, neighbors, friends,co-workers and old classmates how many have broad network connections with others?	2.557	1.203	0.289	0.358	0.774
SC6 Among your relatives, neighbors, friends,co-workers and old classmates how many have professional jobs?	3.202	1.339	0.204	0.345	0.780
SC7 How many of coworkers/fellows would definitely help upon your request?	3.061	1.343	0.513	0.628	0.757
SC8 How many of your friends will definitely help you upon request?	2.930	1.278	0.444	0.602	0.763
SC9 How do you rate the number of cultural, recreational and leisure groups/orgnizations in your community?	2.750	1.538	0.192	0.371	0.783
SC10 How do you rate the number of governmental, political, economic and social organizations in yoru community?	2.671	1.408	0.433	0.578	0.763
SC11 How many of these groups or organizations possess broad social connections?	2.566	1.277	0.501	0.497	0.759
SC12 How many of these groups or association possess great social influence?	2.939	2.321	0.293	0.203	0.785
SC13 How many of the cultural, recreational and leisure groups represent your interests?	2.750	1.185	0.450	0.469	0.763
SC14 How many of these governmnetal, political, economic and social groups/organizations represent your interests?	3.044	1.259	0.406	0.632	0.766
SC15 How many of these governmnetal, political, economic and social groups/organizations will help you upon request?	3.053	1.171	0.558	0.646	0.756
SC16 How many of these cultural, recreational and leisure groups will help you upon request?	3.039	1.302	0.557	0.638	0.754

APPENDIX B: Means, standard deviations and item correlations for Health Related Quality of Life Scale (HRQoL)

Item Subscale (Health Related Quality of Life SF-36)	*Mean*	*Std. Deviation*	*Corrected Item-Total Correlation*	*Cronbach's Alpha if Item Deleted*
HRQL1 How would you rate your physical health?	2.828	1.351	0.229	0.710
HRQL2 In general how would you rate your physical health compared to a year ago?	2.104	1.137	0.257	0.705
HRQL3 Does your health now limit high energy such as running activities?	2.231	0.736	0.455	0.623
HRQL4 Does your health now limit you in moderate energy activities eg washing?	2.104	0.794	0.506	0.615
HRQL5Does your health now limit you in lifting groceries?	2.072	0.811	0.437	0.621
HRQL6Does your health now limit you in climbing uphill?	2.186	0.835	0.378	0.627
HRQL7Does your health now limit you in climbing steep hill?	2.249	0.846	0.250	0.640
HRQL8Does your health now limit you in stooping bending or kneeling?	1.932	0.869	0.561	0.604
HRQL9Does your health limit you in walking a mile?	1.923	0.814	0.429	0.622
HRQL10Does your health limit you in walking several miles visit neighbours?	1.991	0.894	0.488	0.611
HRQL11Does your health limit you in walking nearby place?	1.887	0.895	0.594	0.598
HRQL12Does your health limit you in bathing or dressing yourself?	1.864	0.909	0.588	0.597
HRQL13In the past 4 weeks have you reduced the amount of time you spent on work or other activities?	1.466	0.500	0.397	0.640
HRQL14In the past 4 weeks have you achieved less work than you would like?	1.430	0.496	0.385	0.641
HRQL15In the past 4 weeks have you been limited in the kind of work or other activities?	1.579	0.495	0.160	0.655
HRQL16In the past 4 weeks had difficulty performing work or other activities?	1.493	0.501	0.310	0.645
HRQL17In the past 4 weeks I reduced amount of time spent on work because of depression/ anxiety	1.452	0.499	0.331	0.644
HRQL18In the past 4 weeks I finished less work than I would because of depression/ anxiety	1.462	0.500	0.285	0.647
HRQL19In the past 4 weeks I failed to finish work as carefully as usual because of depression/ anxiety	1.493	0.501	0.157	0.655
HRQL20In the past four week has your health affected your normal social interaction with family, friends, neighbors and groups?	2.403	1.285	-0.267	0.713
HRQL21How much Bodily pain have you had in the past 4 weeks?	3.190	1.776	-0.370	0.755
HRQL22In the past four weeks how much did pain interfere with your normal work?	2.855	1.525	-0.428	0.751
HRQL23How much of the time in the past 4 weeks did you feel full of Energy?	2.955	1.519	-0.009	0.677
HRQL24How much of the time in the past 4 weeks have you been very nervous person?	4.425	1.706	0.359	0.597

HRQL25How much of the time in the past 4 weeks have you felt so down nothing could cheer you up?	4.299	1.655	0.197	0.635
HRQL26How much of the time in the past 4 weeks did feel you have a lot of energy?	3.362	1.672	0.011	0.675
HRQL27How much of the time in the past 4 weeks did have you felt calm and peaceful?	3.253	1.516	0.192	0.638
HRQL28How much of the time in the past 4 weeks did you fell low and depressed?	4.394	1.669	0.120	0.652
HRQL29How much of the time in the past 4 weeks did have you feel worn out?	3.783	1.721	-0.011	0.681
HRQL30Have you been a happy person in the past four weeks?	3.050	1.493	-0.072	0.688
HRQL31Did you feel tired in the past four weeks?	4.005	1.650	0.143	0.647
HRQL32During the past four weeks how much of the time has your physical or emotional health interfered with your social activities?	3.376	1.404	0.044	0.666
HRQL33How true or false is the following statement for you: I seem to get sick much easier than other people?	3.339	1.549	0.276	0.620
HRQL34How true or false is the following statement for you: I am health as anybody I know?	1.982	1.276	-0.160	0.697
HRQL35How true or false is the following statement for you: I expect my health to get worse?	3.484	1.271	0.087	0.658
HRQL36How true or false is the following statement for you: My health is excellent	2.348	1.496	-0.139	0.700

APPENDIX C: ETHICAL APPROVAL LETTERS

Telephone: 791792/791193
Telefax: (263) - 4 - 790215
E-mail: mrcz@mrcz.org.zw
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Medical Research Council of Zimbabwe
Josiah Tongogara / Mazoe Street
P. O. Box CY 573
Causeway
Harare

APPROVAL

REF: MRCZ/A/1949

07 July 2015

Tolbert Mucheri
University of Cape Town
Department of Social Development
Upper Campus, 5th Floor
Rondebosch
Cape Town
South Africa

RE: Social Capital and Utilization of HIV/AIDS-Related healthcare in Rural Zimbabwe

Thank you for the application for review of Research Activity that you submitted to the Medical Research Council of Zimbabwe (MRCZ). Please be advised that the Medical Research Council of Zimbabwe has **reviewed** and **approved** your application to conduct the above titled study.

This approval is based on the review and approval of the following documents that were submitted to MRCZ for review:-

a) Protocol
b) Informed Consent Forms Version 2 dated 08 June, 2015 (English and Ndebele)
c) Questionnaire (English and Shona)

- **APPROVAL NUMBER** : **MRCZ/A/1949**

This number should be used on all correspondence, consent forms and documents as appropriate.

- **TYPE OF MEETING** : **Full Board**
- **EFFECTIVE APPROVAL DATE** : **07 July 2015**
- **EXPIRATION DATE** : **06 July 2016**

After this date, this project may only continue upon renewal. For purposes of renewal, a progress report on a standard form obtainable from the MRCZ Offices should be submitted three months before the expiration date for continuing review.

- ***SERIOUS ADVERSE EVENT REPORTING***: All serious problems having to do with subject safety must be reported to the Institutional Ethical Review Committee (IERC) as well as the MRCZ within 3 working days using standard forms obtainable from the MRCZ Offices or website.
- ***MODIFICATIONS***: Prior MRCZ and IERC approval using standard forms obtainable from the MRCZ Offices is required before implementing any changes in the Protocol (including changes in the consent documents).
- ***TERMINATION OF STUDY***: On termination of a study, a report has to be submitted to the MRCZ using standard forms obtainable from the MRCZ Offices or website.
- ***QUESTIONS***: Please contact the MRCZ on Telephone No. (04) 791792, 791193 or by e-mail on mrcz@mrcz.org.zw

Other

- Please be reminded to send in copies of your research results for our records as well as for Health Research Database.
- You're also encouraged to submit electronic copies of your publications in peer-reviewed journals that may emana from this study.

Yours Faithfully

Signed

MRCZ SECRETARIAT
FOR CHAIRPERSON
MEDICAL RESEARCH COUNCIL OF ZIMBABWE

MEDICAL RESEARCH COUNCIL OF ZIMBABWE
2015 -07- 07
APPROVED
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PROMOTING THE ETHICAL CONDUCT OF HEALTH RESEARCH

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THE ZIMBABWE LOCAL ETHICS RESEARCH COUNCIL

17 June 2015

Dear Sir/Madam

RE: TOLBERT MUCHERI (MCHTOL001) PHD CANDIDATE

The aforementioned doctoral candidate is registered in the Department of Social Development and is being supervised by Dr Johannes John-Langba to whom all further queries may be directed. The ethics linked to his proposed research: "**Social capital and the utilization of HIV/AIDS related healthcare in rural Matabeleland South Province in Zimbabwe**" has been approved. I can vouch that the Department's Ethics Committee **has given this study ethical clearance** after careful deliberation. An Ethics Committee meeting was convened comprising of the Head of Department as well as two other academics.The candidate has considered all the ethical implications of this proposed research and will be carefully supervised at every phase to ensure ethical integrity throughout the process.

Yours sincerely

Signed

Dr Connie O'Brien

[Postgraduate Research Convenor]

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Signed

Supervisor: Dr Johannes John-Langba

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APPENDIX D: Transcript of key informant interview with Village Health Worker.

Researcher: *What is your occupation?*

Participant: Village Health Worker for four Wards

Researcher: *How long have been working as a Village Health Worker?*

Participant: Twenty one years

Researcher: *What do you think about the trend of HIV in your area?*

Participant: I can say, it has been going down during the past five years though we still have a lot of new cases in the area.

Researcher: *What factors could be contributing to the downward trend?*

Participant: There is overall risk behaviour change through HIV/AIDS educational programmes and support groups which are being done by local organizations in the area

Researcher: *What else can be done to ensure the downward trend is sustained?*

Participant: There is need for continued awareness campaigns, free HIV testing and support for people living with HIV.

Researcher: *What challenges do people living with HIV face in terms of healthcare utilization?*

Participant: Healthcare centers are still inadequate because some have to travel very long distances to get medication and with time such people are likely to discontinue medication. The other major challenge is food insecurity as you can see this is a dry province we receive very minimal rainfall and crop production is very poor.

Researcher: *What do you think should be done to address the challenges you highlighted above?*

Participant: I think we may need mobile clinics and further decentralization of HIV/AIDS-related healthcare service and more livelihood and nutrition support programmes.

Researcher: *Do you think stigma and discrimination are a challenge in this province and if so to what extent?*

Participant: Well, yes, I think we still have isolated cases but communities have generally accepted and are more knowledgeable about HIV/AIDS. Family support is also generally positive in the communities I work as people have extended family support for the sick. Sometimes self -stigma is a challenge but I would say we have very minimal HIV/AIDS- related stigma.

Thank you very much for your time

APPENDIX E: Transcript of key informant interview with a Healthcare Centre Nurse who works at Opportunistic Infections Clinic

Researcher: *What is your occupation?*

Participant: Registered Nurse

Researcher: *How long have been working as a Nurse?*

Participant: 10 years

Researcher: *What does your work entail at the OI Clinic?*

Participant: Well I am in charge of outpatients' services for People Living with HIV as well as new cases relating to HIV/AIDS. We support all patients on HIV/AIDS-related medication and keep records of patients on a daily basis. We do checkup and have weekly days for collection of pills and medication. We also do counselling and testing as well as educational support programmes to the community and here through workshops. OI is quite a busy place especially Mondays and month-ends oh we attend to many people.

Researcher: *What do you think about the trend of HIV in your area?*

Participant: I would say our figures show no much change when we compare to last year. It appears the numbers are remaining constant though nationally key statistics are declining but in this province figures have somehow remained same.

Researcher: *Is none change ok with you as medical staff? What factors could be contributing to that?*

Participant: Obviously not ok because given the national level efforts being put in place to curb HIV/AIDS and to promote risk behaviour change we would expect decline in prevalence. think there some people still ignorant about HIV/AIDS or it could be just a matter of time until a sharp drop.

Researcher: *What else can be done to ensure there is a downward trend in prevalence?*

Participant: There is strong need for continued awareness campaigns, free HIV testing and support for people living with HIV. The government should put in place strong enforcement measures to promote behaviour change especially amongst youths.

Researcher: *What challenges do people living with HIV face in terms of healthcare utilization?*

Participant: Sometimes we have inadequate supplies of medication in stock, then comes issue of distance to walk here some people come from as far as 20km on foot to this clinic so imagine such strenuous walk.

Researcher: *What do you think should be done to address the challenges you highlighted above?*

Participant: May be mobile clinics may work but again need funding from the Government.

Researcher: *Do you think stigma and discrimination are a challenge in this province and if so to what extent?*

Participant: Not at all, I don't think so

Thank you very much for your time

APPENDIX F: Example of a transcript of key informant interview with local traditional chief

Researcher: *What is your occupation?*

Participant: traditional chief

Researcher: *How long have been a chief in this arear?*

Participant: This is my 4th year

Researcher: *What do you think about the trend of HIV in your area?*

Participant: It is still a major challenge though we are fighting to eliminate new infections

Researcher: *What factors could be contributing to what you said?*

Participant: We still have a lot of risky behaviour around especially amongst reproductive age groups due to shortage of jobs and some cannot afford to further their education.

Researcher: *What can be done to ensure the downward trend is sustained?*

Participant: People need to unite in the fight against HIV, more educational programmes and free counselling and testing

Researcher: *What challenges do people living with HIV face in terms of healthcare utilization?*

Participant: Long distances, high transport cost and stigmatization in clinics food shortage as well

Researcher: *What do you think should be done to address the challenges you highlighted above?*

Participant: we need proper enforcement structures to stop stigma and more donor support to provide mobile clinics

Researcher: As a chief d*o you think stigma and discrimination are a challenge in this province and if so to what extent?*

Participant: Average yes because we still see some cases.

Researcher: Thank very much Chief for your time

APPENDIX G: KEY INFORMANT INTERVIEW GUIDE

SECTION A

Date of Interview:			**District:**	Questionnair Number
Gender of Respondent:	Male ☐	Female ☐	**Position of Respondent:**	
Time of Interview:			Starting	Ending

Please complete the following questions by placing X below appropriate response box where applicable. Where there are no response options please write responses clearly in space provided.

SECTION B GENRAL INFORMATION ABOUT PLHIV
1. In which year did you start holding your current position in this District?
2. What do you think about HIV and Aids prevalence in Matabeleland South province?
3. What should be done to achieve Zero New Infections?
4. What is your comment on the general quality of life for PLHIV in this district?
5. What is your comment on participation of PLHIV in local events and associations in your district?

6. What major services or support do PLHIV receive in your district? Specify service and local organization respectively.
7. Where do PLHIV usually meet to receive any services above in your district? *Name specific local venues*
8. What days and time do these meetings usually take place? (give time range)
9. What is your comment on level of stigma and discrimination against PLHIV in this district?
10. Give reasons/explain/ recommendation to your answer to **Question 9** Above.
11. Comment on the health care support for PLHIV by putting an X in appropriate box.
SECTION B Barriers to Health Care Utilization for PLHIV and in General
12. What livelihood challenges do you think are faced by PLHIV in this province?
13. What are the barriers to healthcare utilization in general in this district?
14. What solutions/ recommendations do you think can address the above challenges (questions 12 & 13)?
15. Any other Remarks

Thank you for your Time

APPENDIX H: MAIN QUESTIONNAIRE FOR PLHIV

Social Capital and Utilization of HIV and AIDS-Related Healthcare STUDY

Name of Interviewer:	District:	Questionnaire Number
Date of Interview: Start Time of Interview:_____ End Time of Interview:_____	Venue of Interview: _____ Venue ID(Code)_____	

SECTION A SOCIO-ECONOMIC AND DEMOGRAPHIC DATA

In this section I will be asking you questions relating to social aspects at personal and household levels

1. Sex of Respondent Male Female

2. What was your age on your last birthday? _____

3. How many years have you been staying in this area? _____

4. Did you relocate to this area from an urban area? Yes_____ No_____

5. What is your religion?

Christian	Muslim	Traditionalist	None	Other Specify
☐	☐	☐	☐	

6. What is your Marital Status?

Never Married	Married	Widowed	Divorced	Separated	other
☐	☐	☐	☐	☐	☐

7. Are you the Household Head? Yes_____ No_____

8. If No, what is your relationship to the household head?
   _____

9. How many people are you currently staying with in your household _____

10. What is your highest level of education?

No formal schooling	Primary	Secondary	Vocational/Technical Training	Undergraduate	Post Graduate
☐	☐	☐	☐	☐	☐

11. What is your current employment status?

Full- Time Employed	Self Employed	Part-Time Employment	Unemployed
☐	☐	☐	☐

12. If employed, or in part time employment, please indicate your employment sector

Farming	Civil/ Public service	Private Sector	NGOs	Self-informal sector	Other
☐	☐	☐	☐	☐	

13. What is your major source of personal income?

My Job	Family Support	Relatives in Diaspora	NGOs	Self-business	Other specify
☐	☐	☐	☐	☐	

14. On average how much is your monthly household expenditure? $_____

15. In which category would you classify your household according to local wealth status in your community? (Based on asset ownership e.g. cattle, nature of buildings, scotch cart, own house in town, food security)

Rich	Average	Below average	Poor	Poorest
☐	☐	☐	☐	☐

16. How many meals do you typically have per day in your household?

More than three meals per day	Three meals per day	Two meals per day	One meal per day
☐	☐	☐	☐

SECTION B- UTILIZATION OF HEALTHCARE

In this section I am going to be asking you questions relating to health services in your area and how you are utilizing them.

17. Are you currently on ART? Yes____No_____

18. If yes what drugs are you currently taking? _____

19. What is the main healthcare source that you utilize?

Nearest public Clinic/Hospital	Nearest private Clinic/Hospital	Traditional Healer	Religious Leader	None	Other Specify
☐	☐	☐	☐	☐	

20. What is the distance to the service you have indicated above from your home? _____KM

21. What is the main factor you usually take into consideration when choosing a health service provider?

Cost	Distance	Quality of Service	Others opinion	Previous visit	Other Specify
☐	☐	☐	☐	☐	

22. What are the costs per visit to your healthcare service?

	Transport/ visit	Health Service/visit
Total Cost USD	$_____	$_____

23. How do you pay for your healthcare costs?

Health Insurance (Medical Aid)	Pay Cash	Do not pay (free)	Other Specify
☐	☐	☐	

24. What is your average expenditure on healthcare per month? $_____

25. What is the distance (KM) is the nearest healthcare facility/centre from your home? _____

26. How do you travel to the healthcare centre?

Walking	Cycling	Public Transport	Scotch cart	Private car
☐	☐	☐	☐	☐

27. How many times have you visited this healthcare centre in the last six months?

Never	Once	Twice	Three times	Four Times	More than 4 times	Don't know
☐	☐	☐	☐	☐	☐	☐

28. Who influence your decision to visit healthcare centre?

Self	Religious leader	Community leader	Partner/Spouse	Friends	Neighbors	Extended family members	Support Group Member
☐	☐	☐	☐	☐	☐	☐	☐

29. How do you usually obtain healthcare related information/communication?

NGOs	Support group	Family network	Mobile Phone	Internet	Radio/ Television	Religious leaders	Community leaders	Friends
☐	☐	☐	☐	☐	☐	☐	☐	☐

30. Which of the following healthcare services have you received in the last six months?

PMTCT	TB Screening & Treatment	Viral Load Testing	Antiretroviral Therapy	Voluntary Counselling & Testing	HIV/AIDS-related Health Education	Cancer & Other Chronic diseases	CD4 Cell Count	Full Blood Count (FBC)
☐	☐	☐	☐	☐	☐	☐	☐	☐

31. How would you rate the overall quality of healthcare worker attitude at your nearest healthcare centre?

Excellent	Very good	Good	Average	Below Average	Poor
☐	☐	☐	☐	☐	

32. Are you comfortable in disclosing your HIV status to any of the following? (tick were applicable)

Excellent	Very good	Good	Average	Below Average	Poor
☐	☐	☐	☐	☐	

Spouse	Immediate family	Extended family	friends	Support Group Members	Others(specify)
☐	☐	☐	☐	☐	☐

33. Do you feel discriminated? Yes_____No_____

34. Do you feel stigmatized? Yes_____No_____

35. How would you rate the overall healthcare system in this district?: (Tick one Option)

SECTION D SENSE OF BELONGING, TRUST AND COMMUNITY NETWORKS (SOCIAL CAPITAL)

In this section I will be asking you questions relating to your social relations, your networks, trust and reciprocity. Feel free to express your thoughts.

36. Indicate your sense of belonging (feeling at home) to this community in the following table

Very committed	Good	Average	Below average	Would prefer transfer
☐	☐	☐	☐	☐

	A Lot	More Than Average	Average	Less than Average	A few
37. How would you rate the amount of friends you have?	☐	☐	☐	☐	☐
38. How do you rate the number of your country fellows/old classmates?	☐	☐	☐	☐	☐
	All	Most	Some	A few	None
39. Among your coworkers/fellows, how many do you think you can trust?	☐	☐	☐	☐	☐
40. Among your relatives, how many do your think you can rust?	☐	☐	☐	☐	☐

41. Among all your relatives, neighbors, friends, co-workers, and classmates, how many have broad connections with others?	☐	☐	☐	☐	☐
42. Among all your family members, relatives, neighbors, friends, co-workers, and old classmates, how many have a professional job?	☐	☐	☐	☐	☐
43. How many of your coworkers/fellows will definitely help you upon your request?	☐	☐	☐	☐	☐
44. How many of your friends will definitely help you upon your request?	☐	☐	☐	☐	☐
	A Lot	More Than Averag	Averag e	Less than	A few
45. How do you rate the number of cultural, recreational and leisure groups/organizations in your community?	☐	☐	☐	☐	☐
46. How do you rate the number of governmental, political, economic and social groups/organizations in your community?	☐	☐	☐	☐	☐
	All	Most	Some	A few	None
47. How many of these groups and organizations possess broad social connections?	☐	☐	☐	☐	☐
48. How many of these groups and organizations possess great social influence?	☐	☐	☐	☐	☐
49. How many of the cultural, recreational and leisure groups/organizations represent your interests?	☐	☐	☐	☐	☐
50. How many of the governmental, political, economic and social groups/organizations represent your interests?	☐	☐	☐	☐	☐
51. How many of the governmental, political, economic and social groups/organizations will help you upon your request?	☐	☐	☐	☐	☐
52. How many of the cultural, recreational and leisure groups/organizations will help you upon your request?	☐	☐	☐	☐	☐

SECTION E GENERAL WELLNESS QUESTIONS

This section focusses on your general wellbeing in your day to day life. Feel free to ask any questions you may have and choose appropriate response.

1. In general, how would you rate your physical health: **(Circle One Number)**

Excellent	1
Very good	2
Good	3
Fair	4
Poor	5

2. **Compared to one year ago**, how would you rate your health in general **now**?

(Circle One Number)

Much better now than one year ago	1
Somewhat better now than one year ago	2
About the same	3
Somewhat worse now than one year ago	4
Much worse now than one year ago	5

The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?
(Circle One Number on Each Line)

		Yes, Limited a Lot	Yes, Limited a Little	No, Not Limited at All
3.	High Energy activities, such as running, lifting heavy objects, participating in strenuous sports	1	2	3
4.	Moderate energy activities, such as moving a table, Pushing, washing, walking to shops etc.	1	2	3
5.	Lifting or carrying groceries	1	2	3
6.	Climbing uphill	1	2	3
7.	Climbing up very steep hill	1	2	3
8.	Bending, kneeling, or stooping	1	2	3
9.	Walking more than a mile	1	2	3
10.	Walking several to visit neighbors	1	2	3
11.	Walking to nearby place	1	2	3
12.	Bathing or dressing yourself	1	2	3

The following section focusses on the past four weeks. Have you had any of the following problems with your work or other regular daily activities as a result of your physical health?
(Circle One Number on Each Line)

		Yes	No
13.	Reduced the amount of time you spent on work or other activities	1	2
14.	**Achieved less work** than you would like	1	2
15.	Been limited in the **kind** of work or other activities	1	2
16.	Had **difficulty** performing the work or other activities (for example, it took extra effort)	1	2

During the **past 4 weeks,** have you had any of the following problems with your work or other regular daily activities **as a result of any emotional problems** (such as feeling depressed or anxious)?

(Circle One Number on Each Line)

		Yes	No
17.	Reduced the **amount of time** you spent on work or other activities	1	2
18.	**Finished less** work than you would like	1	2
19.	Failed to do work or other activities as **carefully** as usual	1	2

20. In **past 4 weeks,** to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?

(Circle One Number)

Not at all 1
Slightly 2
Moderately 3
Quite a bit 4
Extremely 5

21. How much **bodily** pain have you had during the **past 4 weeks**?

(Circle One Number)

None 1
Very mild 2
Mild 3
Moderate 4

Severe..... 5
Very severe 6

22. During the **past 4 weeks,** how much did **pain** interfere with your normal work (including both work outside the home and housework)?

(Circle One Number)

Not at all..... 1
A little bit 2
Moderately 3
Quite a bit..... 4
Extremely..... 5

These questions are about how you feel and how things have been with you **during the past 4 weeks**. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the **past 4 weeks**. . .
(Circle One Number on Each Line)

		All of the Time	Most of the Time	A Good Bit of the Time	Some of the Time	A Little of the Time	None of the Time
23.	Did you feel full of pep (energy)?.....	1	2	3	4	5	6
24.	Have you been a very nervous person?.	1	2	3	4	5	6
25.	Have you felt so down in the dump that nothing could cheer you up?.....	1	2	3	4	5	6
26.	Have you have a lot of energy for all activities?	1	2	3	4	5	6
27.	Have you felt calm and peaceful?.....	1	2	3	4	5	6
28.	Have you felt low and depressed?	1	2	3	4	5	6
29.	Did you feel worn out?	1	2	3	4	5	6
30.	Have you been a happy person?.....	1	2	3	4	5	6
31.	Did you feel tired?	1	2	3	4	5	6

32. During the **past 4 weeks,** how much of the time has your **physical health or emotional problems** interfered with your social activities (like visiting with friends, relatives, etc.)?

(Circle One Number)

All of the time 1
Most of the time..... 2

Some of the time 3
A little of the time 4
None of the time..... 5

How TRUE or FALSE is <u>each</u> of the following statements for you.

(Circle One Number on Each Line)

		Definitely True	Mostly True	Don't Know	Mostly False	Definitely False
33.	I seem to get sick a little easier than other people.....	1	2	3	4	5
34.	I am as healthy as anybody I know.	1	2	3	4	5
35.	I expect my health to get worse.	1	2	3	4	5
36.	My health is excellent.	1	2	3	4	5

Do you have any additional comments?

_____

_____

_____Thank you very much for taking your time for this study_____

Igama likamabuza:	Isigaba:	Questionnaire Number
Ilanga lokubuzwa: Isikhathi sokubuzwa:_____ End Time of Interview:_____	Indawo yokubuzelwa: _____ Venue ID(Code)_____	

SECTION A INFORMATION ABOUT YOU AND YOUR LIVELIHOOD (SOCIO- ECONOMIC AND DEMOGRAPHIC DATA)

Kulesisigaba ngizabuza imibuzoo ephathelanengempilo nje kanye lokunye okungabe kungaziwa ngumuntu wonke jikelele okungabe kuyimfihlo kumbe kugoqela impilo yangekhaya.

1. Sex of Respondent

Owesilisa	Owesifazana

2. Iminyaka yokuzalwa_____

3. Ungabe usuleminyaka emingaki uhlala kulindawo?_____

4. Usiza lapha wawuvela edolobheni na? Yebo_____ Hatshi_____

5. Ukholwa kukuphi kokulandelayo

Ungumkristu	UngumuMuslim	Kwabelapha isintu	Akula	Kokunye tshonoukuthi kuphi
☐	☐	☐	☐	

6. Tshono ukuthi uminjani

Awutshadanga	Utshadile	Ungumfelokazi	Wayalana lomkakho	Lehlukana nje	okunye
☐	☐	☐	☐	☐	☐

7. Ungumninimuzi na? Yebo_____ Hatshi_____

8. Nxa impendula yakho ibinguHatshi tshono ukuthi lazana njani lomninimuzi?
_____

9. Lihlala libangaki endlini? _____

10. Wacina ngaphi kwezemfundo?

No formal Education	Primary	Secondary	Vocational/Technical Training	Undergraduate	Post Graduate
☐	☐	☐	☐	☐	☐

11. Ungabe uminjani kwezomsebenzi?

Uqhatsiwe okwesikhathi eside	Uqhatshwe okwesikhatsana	awuqhatshwanga
☐	☐	☐

12. Kulokho okukhethileyo embuzweni odluleyo tshono ukuba ungabe ungena ngaphi kokulandelayo

uyalima	Usebenzela uhulumende	Usebenzela abanye osomabhizimisi	Usebenzela inkampani ezingaphathelanilohulumende	uyazisebenza	okunye
☐	☐	☐	☐	☐	

13. Imali yakho enengi uyithola ngaphi?

Emsebenzini	kwabangekhaya	Ezihlobeni ezidabulamazwe	Kunkambani zangaphandle	Kubhizimusi lakho	Okunye tshono
☐	☐	☐	☐	☐	

14. Ngenyanga yinye ngayinye usebenzisa imali enganani? $_____

15. Tshono ukuthi wena lemuli yakho liminjani ngezenotho esigabeni senu. (Lapha singakhangela inotho enjengenkomo, izindlu, inqola kanye lokudla)

unothile	ungcono	Khonokho nje	uyadubeka	Udubeka kakhulu
☐	☐	☐	☐	☐

16. Ungathini ngokudla elikutholayo emzini wenu?

Kunengi kakhulu kusala okunye	Lidla okwaneleyo	Kwesinye isikhathi kuyaswelakala	Kuhlala kungeneli
☐	☐	☐	☐

ISIGABA B UKUSETSHENZISWA KWEZEMPILAKAHLE

Kulesisisgaba ngizabuza imibuzo ephathelane lezempilakahle njalo lokuthi uzisebenzisa njani.

17. Yibaphi abezempilakahle ohamba kibo kahulu?

Iklinika loba isibhedlela seduze sikahulumende	Iklinika /Isibhedlela esingasiso sikahulumende	Inyanga	Abakhokheli bebandla	Akula	Tshono abanye
☐	☐	☐	☐	☐	☐

18. Uhamba umango onganani ukuze uyefika lapho? _____KM

19. Yiziphi izinto ozikhangelayo nxa usiyabona abezempilakahle (Tshengisa ngaphansi konke okukhangelayo)

Intengo	Umango	Uhlonzi	Ukuthi abanye bathini	Uze ucine ukuya khona	Tshono okunye
☐	☐	☐	☐	☐	

20. Usebenzisa malini sikhathi sinye nxa usiyavakatshela abezempilakahle?

	Intengo zokuhamba	Intengo zokwelatshwa
Intengo yakhona yonke USD	$_____	$_____

21. Uzibhadala njani intongo zakhona zokwelatshwa?

Uyancediswa (Medical Aid)	Ubhadala kanye	Awubhadali	Okunye
☐	☐	☐	

22. Usebenzia malini kwezempilakahle ngenyanga? $_____

23. Bakhatshana okunganani abezempilakahle kulalapho ohlala khona? _____

24. Uhamba ngani usiyavakatshela abezempilakahle?

Ngenyawo	Ngebhayisikili	Ngemota	Ngenqola	Tshono okunye
☐	☐	☐	☐	

25. Enyangeni eziyisithupha ezidlulileyo, usuhambe kangaki ukuyavakatshela abezempilakahle?

Angikaze	Kanye	Kabili	Kathathu	Kane	Kane kusiyaphambili	Angisakwazi

☐	☐	☐	☐	☐	☐	☐

26. Ngubani okwenza ufune ukuyavakatshela abezempilakahle?

Yimi	Abemuli	Ngabangane	Ngomakhelwane	Tshono abanye
☐	☐	☐	☐	

27. Indaba eziphathelane lezempilakahle uzizwa ngaphi?

Esigabeni	Komakhelwane	Kwabemulini	Kumabonakude/ Emsakazweni	Tshono okunye
☐	☐	☐	☐	

28. Yikuphi kokulandelayo osuke wakuthola enyangeni eziyisithupha ezedluleyo?

PMTCT	TB Screening & Treatment	Viral Load Testing	Antiretroviral Therapy	Voluntary Counselling & Testing	HIV/AIDS Related Health Education	Cancer & Other Chronic diseases	Other Specify
☐	☐	☐	☐	☐	☐	☐	

29. Ungathi izisebenzi ezitholakala kwabezempilakahle abaseduze lawe zilesiphatho esinjani?

Esincomekayo	Esihle kakhulu	Esihle	Khonokho nje	Esibi	Esibi kakhulu
☐	☐	☐	☐	☐	

30. Ungathi

Bayancomeka	Balesiphatho esihle kakhulu	Balesiphatho	Khonokho nje	Babi	Babi kakhulu
☐	☐	☐	☐	☐	

abezempilakahle esigabeni sakho banjani (Khetha okukodwa)

SECTION D SENSE OF BELONGING, TRUST AND COMMUNITY NETWORKS (SOCIAL CAPITAL)

Kulesisigaba ngizabuza okuphathelane lempilo nje jikelele okugoqela indlela ophilisana ngayo labanye esigabeni, labo okhulumisana labo, ithemba lakho ebantwini kanye lendlela oziphatha ngayo ebantwini.
Khululeka ukutsho lokho okuyabe kusemqondweni wakho.

31. Tshengisa indlela ozibona ngayo njengomunye walabo abakulesisigaba kulokhu okulandelayo

Uzimisele kakhulu	Uzimisele	Khonokho nje	Awulakuzimisela	Ungaze usuke kuyafana kuwe
☐	☐	☐	☐	☐

	Amanengi	Inengi lawo	Amanye nje	Ayabalwa	Amalutshwane sibili
32. Inanai labangane olabo linjani?	☐	☐	☐	☐	☐
33. Labo owake wafunda labo ke?	☐	☐	☐	☐	☐
	Wonke	Inengi Lawo	Amanye	Amalutsh	Akula
34. Kulabo osebenza labo loba abangane uthemba abanganani?	☐	☐	☐	☐	☐
35. Uthemba izihlobo ezingaki?	☐	☐	☐	☐	☐
36. Kulabo osebenza labo, ofunda labo lohlalisane labo bangaki abalobudlelwano labantu abanengi?	☐	☐	☐	☐	☐
37. Ezihlobeni zakho,abangane, labo osebenza labo lalabo owafunda labo bangaki abalomsebenzi abawufundelayo?	☐	☐	☐	☐	☐
38. Bangaki osebenza labo loba abangane bakho abangakunceda nxa ufuna usizo loba nini?	☐	☐	☐	☐	☐
39. Bangaki aabangane bakho ababgakuncedisa?	☐	☐	☐	☐	☐
	Amanengi	Inengi lawo	Amanye nje	Ayabalwa	Amalutshwane sibili
40. Kulamaqembu amangaki esigabeni ssakini awezemidlalo, isintu loba okunye nje?	☐	☐	☐	☐	☐
41. Mangaki amaqembu awezenotho, ezombangazwe loba yini okuhlanganisa abantu esigabeni senu?	☐	☐	☐	☐	☐
	Wonke	Inengi lawo	Amanye	Amaluts	Akula
42. Mangaki kulamaqembu alabantu abalobudlelwano obunengi labanye?	☐	☐	☐	☐	☐
43. Mangaki kulawo maqembu athi angatsho ulutho uzulu alalele?	☐	☐	☐	☐	☐
44. Kulawo maqembu mangaki agoqela izinto lawe ozithakazelelayo empilweni?	☐	☐	☐	☐	☐

45. Mangaki amaqembu azimele wodwa owathandayo?	☐	☐	☐	☐	☐
46. Mangaki njalo kulawo maqembu angakumela lapho ufuna usizo?	☐	☐	☐	☐	☐
47. Mangaki amaqembu azimele wodwa owathandayo abangakuncedisa?	☐	☐	☐	☐	☐

SECTION E GENERAL WELLNESS QUESTIONS

Lesisisgaba sikhangela impilakahle yakho jikelele. Khululeka ukubuza imibuzo ongabe ulayo njalo ukhethe impendulo efaneleyo.

1. Yikuphi ongakutsho ngempilakahle yakho jikekeke: **(Gombolozela okuyikho)**

Iyancomeka 1
Inhle kakhulu 2
Uphilile 3
Akufani 4
Ayimanga kuhle 5

2. Sesikhangela umyaka owodwa owedlule, ungathini ngempilakahle yakho khathesi?

(Gombolozela okukodwa)

Ingcono kakhulu kulomnyaka odlule 1
Ingcono nje kulanyakenye 2
Kuphosa kufane nje 3
Nyakenye bengingconywana kulakhathesi 4
Isimo sesisibi khathesi kulanyakenye 5

Okulandelayo kugoqela izinto ongazenza nje phakathi kwelanga lakho. Ingabe impilakahle yakho isikwalela ukuba uqhubeke usenza lezizinto. Nxa impendulo usithi Yebo tshono ukuthi
(Gombolozela impendulo eyodwa ngamzila ngamzila)

Yebo, Kakhulu	Yes, Kancane	Hatshi, Akula Mehluko

3. **Imisebenzi enzima,** njengokugijima

	lokuphakamisa into ezisindayo……	1	2	3
4.	**Imisebenzi elingeneyo**, njengokuwatsha, Lokuphakamisa amatafula.	1	2	3
6.	Ukukwela intaba	1	2	3
7.	Ukukwela intaba eqansileyo	1	2	3
8.	Ukukhothama loba ukuqutha	1	2	3
9.	Ukuhamba umango omude	1	2	3
10.	Ukuya komakhelwane	1	2	3
11.	Ukuya endaweni eseduze	1	2	3
12.	Ukuzigezela lokuzigqokisa impahla	1	2	3

Kokulandelayo sikhangela amaviki amane adlulieyo. Usuke wahlangana lenhlupho ezilandelayo ensukwini ezidluleyo kulamaviki ngenxa yokugula kwakho?

(Gombolozela okukodwa emzileni munye ngamunye)

		Yes	No
13.	Ukusebenza isikhathi esincani kulaleso esijayelekileyo.....	1	2
14.	**Ukuthola isivuno esincane kulenjayelo**	1	2
15.	Ukwehluleka ukwenza okujayeleyo	1	2
16.	Ukuzwa ubunzima nxa uthi wenza lokho ojayele ukukwenza mihla ngemihla	1	2

Emavikini amane adluleyo uke wahlangana lenhlupho eziphathelane lomsebenzi loba nje lokho ojayele ukukwenza mihla ngemihla ngenxa yemizwa yakho mhlawumbe ubudanile loba ungajabuli usizwa umoya wakho udangele?

(Gombolozela okukodwa)

		Yes	No
17.	Ubusuthatha isikhathi esincane kulenjayelo Ukuthi wenze umsebenzi loba okunye	1	2
18.	**Wenze umsebenzi omncane kulenjayelo**.....	1	2
19.	Wehlulekile ukwenz lokho oyake ukwenze.....	1	2

20. Emavikini amane adluleyo, inhlupho obhekane lazo mayelana lempilakahle yakho loba indlela oyabe usizwa ngayo (imizwa) ngalesosikhathi kuphambanise kanganani impilo yakho lemuli, abangane loba labo ohlalisane labo kumbe osebenza labo?

(Gombolozela okukodwa)

Ngitsho lakancane..... 1
Kancane 2
Khonokho nje..... 3
Kanenganyana..... 4
Okuzwayo 5

21. Emavikini amane adlulileyo umzimba ububuhlungu okunganani?

(Gombolozela okukodwa)

Angizwanga ngitsho ubuhlungu 1
Bengibuzwela khatshana..... 2
Kancane..... 3
Khonokho nje..... 4
Umzimba ububuhlungu..... 5
Bekubuhlungu kakhulu 6

22. Kumaviki amane edlule, ubuhlungu obubuzwa bebephambanisa indlela osebenza ngayo na? Kungaba semsebenzini loba lokho okwenza nsuku zonke)

(Circle One Number)

Ngitsho 1
Kancane 2
Okulingeneyo 3
Khonokho nje 4
Kakhuku 5

Imbuzo elandelayo igoqela ukuthi uzwa njani lokuthi impilo ibinjani kuwe emavikini amane la asedlule. Nika impendulo yinye ngamunye umbuzo oyabe ubona ifanele indlela obusizwa ngayo.

Ubusizwa njani mayelana ngombuzo **emavivini amane** edlule. . .

(Gombolozela okukodwa emzileni)

		Sikhathi sonke	Isikhathi esinengi	Kancane	Kwesinye isikhathi	Okwesikhathana	Ngitsho
23.	Ubuzizwa ulamandla kakhulu?	1	2	3	4	5	6
24.	Ubuzizwa usesaba na?	1	2	3	4	5	6
25.	Ubusizwa umoya wakho udanile Angathi akula okungaletha injabulo na?		1	2	3	4	5 6
26.	Ubuzizwa ulokuthula na?	1	2	3	4	5	6
27.	Ubuzizwa ulamandla na?	1	2	3	4	5	6
28.	Ubuzizwa udanile na?	1	2	3	4	5	6
29.	Ubuzizwa ukhathele na?	1	2	3	4	5	6
30.	Ubuzizwa ujabulile na?	1	2	3	4	5	6
31.	Ubudiniwe yini?	1	2	3	4	5	6

32. Emavikini amane adlule, implilakahle yakho loba imizwa yakho iphambanise kanganani indlela ophilisana ngayo labanye? Njengokuvakatshela izihlobo labangane

(Gombolozela okukodwa)

Sikhathi sonke 1
Esikhathini esinengi 2

Kwesinye isikhathi..... 3

Esikhathini esincane..... 4

Ngitsho lanini..... 5

Okulandelayo kungabe kuqiniseke okunganani ngawe?

(Gombolozela okukodwa emzileni)

		Liqiniso Ngempela	Okunengi Liqiniso	Angazi	Inengi Ngamanga	Ngamanga Wodwa
33.	Kukhanya mina ngandise ukugulagula Ukwedlula abanye.....	1	2	3	4	5
34.	Ngiphilile njengenengi engilaziyo.	1	2	3	4	5
35.	Ngibona angani ngizagula ukwedlula la.	1	2	3	4	5
36.	Ngiphilile kakhulu.	1	2	3	4	5

_____Siyabonga isikhathi sakho_____

APPENDIX I: SF-Items and scores guide

1. In general, would you say your health is:

(Circle One Number)

Excellent	1
Very good	2
Good	3
Fair	4
Poor	5

2. **Compared to one year ago**, how would you rate your health in general **now**?

(Circle One Number)

Much better now than one year ago	1
Somewhat better now than one year ago	2
About the same	3
Somewhat worse now than one year ago	4
Much worse now than one year ago	5

The following items are about activities you might do during a typical day. Does **your health now limit you** in these activities? If so, how much?
(Circle One Number on Each Line)

		Yes, Limited a Lot	Yes, Limited a Little	No, Not Limited at All
3.	**Vigorous activities,** such as running, lifting heavy objects, participating in strenuous sports	1	2	3
4.	**Moderate activities**, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	1	2	3
5.	Lifting or carrying groceries	1	2	3
6.	Climbing **several** flights of stairs	1	2	3
7.	Climbing **one** flight of stairs	1	2	3
8.	Bending, kneeling, or stooping	1	2	3
9.	Walking **more than a mile**	1	2	3
10.	Walking **several blocks**	1	2	3
11.	Walking **one block**	1	2	3
12.	Bathing or dressing yourself	1	2	3

During the **past 4 weeks**, have you had any of the following problems with your work or other regular daily activities **as a result of your physical health**?
(Circle One Number on Each Line)

		Yes	No
13.	Cut down the **amount of time** you spent on work or other activities	1	2
14.	**Accomplished less** than you would like	1	2
15.	Were limited in the **kind** of work or other activities	1	2
16.	Had **difficulty** performing the work or other activities (for example, it took extra effort)	1	2

During the **past 4 weeks,** have you had any of the following problems with your work or other regular daily activities **as a result of any emotional problems** (such as feeling depressed or anxious)?

(Circle One Number on Each Line)

		Yes	No
17.	Cut down the **amount of time** you spent on work or other activities	1	2
18.	**Accomplished less** than you would like	1	2
19.	Didn't do work or other activities as **carefully** as usual	1	2

20. During the **past 4 weeks,** to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?

(Circle One Number)

Not at all	1
Slightly	2
Moderately	3
Quite a bit	4
Extremely	5

21. How much **bodily** pain have you had during the **past 4 weeks**?

(Circle One Number)

None	1
Very mild	2
Mild	3
Moderate	4
Severe	5
Very severe	6

22. During the **past 4 weeks,** how much did **pain** interfere with your normal work (including both work outside the home and housework)?

(Circle One Number)

Not at all	1
A little bit	2
Moderately	3
Quite a bit	4
Extremely	5

These questions are about how you feel and how things have been with you **during the past 4 weeks**. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the **past 4 weeks** . . .
(Circle One Number on Each Line)

		All of the Time	Most of the Time	A Good Bit of the Time	Some of the Time	A Little of the Time	None of the Time
23.	Did you feel full of pep (energy)?	1	23	4	5	6	
24.	Have you been a very nervous person?	1	2	3	4	5	6
25.	Have you felt so down in the dumps that nothing could cheer you up?	1	2	3	4	5	6
26.	Have you felt calm and peaceful?	1	2	3	4	5	6
27.	Did you have a lot of energy?	1	2	3	4	5	6
28.	Have you felt downhearted and blue?	1	2	3	4	5	6
29.	Did you feel worn out?	1	2	3	4	5	6
30.	Have you been a happy person?	1	2	3	4	5	6
31.	Did you feel tired?	1	2	3	4	5	6

32. During the **past 4 weeks,** how much of the time has your **physical health or emotional problems** interfered with your social activities (like visiting with friends, relatives, etc.)?

(Circle One Number)

All of the time	1
Most of the time	2
Some of the time	3
A little of the time	4
None of the time	5

How TRUE or FALSE is <u>each</u> of the following statements for you.

(Circle One Number on Each Line)

		Definitely True	Mostly True	Don't Know	Mostly False	Definitely False
33.	I seem to get sick a little easier than other people.....	1	2	3	4	5
34.	I am as healthy as anybody I know.	1	2	3	4	5
35.	I expect my health to get worse.....	1	2	3	4	5
36.	My health is excellent.	1	2	3	4	5

SCORING GUIDE

SF 36 SCORING GUIDE **Item number**	**Original response category**	**Recoded Value used for Scoring**
1, 2, 20,22,34,36	1	100
	2	75
	3	50
	4	25
	5	0
3, 4,5,6,7,8,9,10,11,12	1	0
	2	50
	3	100
13,14,15,16,17,18,19	1	0
	2	100
21,23,26,27,30	1	100
	2	80
	3	60
	4	40
	5	40
	6	20
24,25,28,29,31	1	0
	2	20
	3	40
	4	60
	5	80
	6	100
32,33,35	1	0
	2	25
	3	50
	4	75
	5	100

SUBSCALE ITEMS

APPENDIX J:: Detailed profiles of key informants

Respondent	Gender	Years in Same Position	Age	Education Level	Employer
Medical Superintendent	Male	3	43	Post Graduate	Government
Opportunistic Infections Clinic Nurse	Female	4	30	Diploma	Government
Opportunistic Infections Clinic Nurse	Female	2	32	Diploma	Government
Opportunistic Infections Clinic Nurse	Female	5	41	Diploma	Government
Opportunistic Infections Clinic Nurse	Female	5	39	First Degree	Government
Counselor	Female	2	40	First Degree	Government
Village Head	Male	3	52	Certificate	Community
Village Head	Male	3	47	Primary	Community
Religious Leader	Male	2	60	Secondary	Church
Religious Leader	Male	4	70	Secondary	Church
Community Based Organization Leader	Female	5	43	Diploma	CBO
Community Based Organization Leader	Female	5	36	Diploma	CBO
Community Based Organization Leader	Female	4	54	Diploma	CBO
Village Health Worker	Female	3	39	Certificate	Community
Village Health Worker	Female	3	61	Diploma	Community
Village Health Worker	Female	2	44	Secondary	Community
Village Health Worker	Female	4	42	Secondary	Community
Village Health Worker	Female	3	37	Secondary	Community
Village Health Worker	Female	5	37	Secondary	Community
Village Health Worker	Female	5	38	Certificate	Community
Village Health Worker	Female	6	35	Certificate	Community
Village Health Worker	Female	2	41	Certificate	Community
Village Health Worker	Male	1	39	Certificate	Community
Councilor	Male	1	45	Secondary	Government
Councilor	Male	3	46	Diploma	Government
Councilor	Male	2	41	Diploma	Government
Councilor	Male	3	45	Diploma	Government
Councilor	Male	1	40	Diploma	Government
PLHIV Representative	Male	1	33	Certificate	CBO
PLHIV Representative	Female	4	39	Certificate	NGO
PLHIV Representative	Female	4	29	Secondary	NGO
PLHIV Representative	Female	4	31	Secondary	CBO

PLHIV Representative	Female	3	43	Post Graduate	CBO
PLHIV Representative	Male	3	28	Post Graduate	CBO
PLHIV Representative	Male	3	29	Certificate	CBO
Local leader	Male	5	42	Secondary	Community
Local leader	Male	6	31	Certificate	Community
Local leader	Male	7	44	Certificate	Community
Provincial Leader	Male	3	47	Post Graduate	Government
Provincial Leader	Female	4	55	First Degree	Government

APPENDIX K: INFORMED CONSENT FORM

PROJECT TITLE: Social Capital and Utilization of HIV and AIDS- Related Healthcare Study

Principal Investigator: **Tolbert Mucheri** [PhD Student]
Phone number(s) **0774222030, email: mchtol001@myuct.ac.za**

What you should know about this research study:

- We give you this consent so that you may read about the purpose, risks, and benefits of this research study.
- This is a purely PhD academic research by a Zimbabwean Student Mucheri Tolbert pursuing a PhD in Social Development at the University of Cape Town, South Africa. The main goal of research studies is to gain knowledge that may help future shaping of our rural healthcare system.
- We cannot promise that this research will benefit you. Just like regular care, this research can have side effects that can be serious or minor.
- You have the right to refuse to take part, or agree to take part now and change your mind later.
- Whatever you decide, it will not affect your regular care.
- Please review this consent form carefully. Ask any questions before you make a decision.
- Your participation is voluntary.

PURPOSE

You are being asked to participate in a research study of Social Capital and utilization of HIV and AIDS related Health Care. Social Capital is defined as covering your local connectedness, level of trust, participation in local groups and sense of belonging to your community. The purpose of the study is to examine the role of social capital in utilization of HIV and AIDS related healthcare. You were selected randomly as a possible participant in this study based on your arrival time to this meeting venue because you are a beneficiary of non-medical support being provided by local organizations working with People Living with HIV (PLHIV). A total number of 385 respondents in rural Matabeleland South Province are targeted for this study.

PROCEDURES AND DURATION

If you decide to participate, you will undergo a one on one confidential interview with the researcher in which you will respond to a set of questions relating to your social networks in your community, health related quality of life and other general questions. The approximate duration is 45 Minutes during which you are allowed to withdraw at anytime.

RISKS AND DISCOMFORTS

Risk Type	Specific Risk	Mitigation Measure
Psychological	▪ Provoking memories on HIV and AIDS ▪ Stress and depression	The Researcher has a humanitarian support background and have assistants with counselling background to offer any needed support. Severe cases will be referred to local social worker.
Social /Economic	• Opportunity cost of Time consumed during interview	Recruited Participants will be asked for convenient time and place for interview to ensure that they do not miss on their important activities.
Ethical	▪ Disclosure of sensitive information during interviews	No names will be recorded so anonymity will be guaranteed.

BENEFITS AND/OR COMPENSATION

We cannot and do not guarantee or promise that you will receive any benefits from this study. Participation in this study is voluntary and the researcher will travel to meeting sites for recruitment of participants and follow up for interviews in the event that separate venue is agreed on for the actual interview. The cost to participants will be time but no monetary reimbursement as traveling to the meeting venue was coordinated by the support organization for other purposes. Each participant will however receive an exercise book and a pen as material gift for their personal use. Unique cases for compensation will be handled separately.

CONFIDENTIALITY

If you indicate your willingness to participate in this study by signing this document, we plan to disclose filled in questionnaires to the academic supervisor only. Data collected for this study will be kept private and confidential and only used for the purpose of this study. Anonymous questionnaires and interview schedules will be stored under secure lock and key and only accessed by the researcher and supervisor. The questionnaires will be destroyed after the final thesis has been submitted and marked. Captured data will be password accessed.

ADDITIONAL COSTS

No additional costs are to be borne by the participant

VOLUNTARY PARTICIPATION
Participation in this study is voluntary. If you decide not to participate in this study, your decision will not affect your future relations with the local organizations working with PLHIV, its personnel, and associated hospitals or health centres. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without penalty. rr consequences

ADDITIONAL ELEMENTS
- In the event of sudden illness or other circumstance beyond control of the researcher during the interview, the investigator may terminate the interview immediately.
- Should findings of this study be deemed critical for National Policy and further study is required your continued participation in future similar studies will be greatly appreciated.

SIGNATURE PAGE

Social Capital and Utilization of HIV/AIDS- Related Healthcare in Rural Matabeleland South in Zimbabwe

Protocol Version 2: 8 June 2015

OFFER TO ANSWER QUESTIONS
Before you sign this form, please ask any questions on any aspect of this study that is unclear to you. You may take as much time as necessary to think it over.

AUTHORIZATION
You are making a decision whether or not to participate in this study. Your signature indicates that you have read and understood the information provided above, have had all your questions answered, and have decided to participate.
Do you agree to participate in this study? Yes_____ No_____

_____	_____	_____
Name of Staff Obtaining Consent	Signature	Date

_____	_____	_____
Name of Witness (*if required)*	Signature	Date

YOU WILL BE OFFERED A COPY OF THIS CONSENT FORM TO KEEP.

If you have any questions concerning this study or consent form beyond those answered by the investigator, including questions about the research, your rights as a research participant or research-related injuries; or if you feel that you have been treated unfairly and would like to talk to someone other than a member of the research team, please feel free to contact the Principal Investigator, Tolbert Mucheri 0774222030, Medical Research Council of Zimbabwe (MRCZ) on telephone (04)791792 or (04) 791193 and cell phone lines 0772 433 166 or 0779 439 564. The MRCZ Offices are located at the National Institute of Health Research premises at Corner Josiah Tongogara and Mazowe Avenue in Harare.

IsiNdebele: INFORMED CONSENT FORM

PROJECT TITLE: Social Capital and Utilization of HIV/AIDS- Related Healthcare in Rural Matabeleland South in Zimbabwe

Principal Investigator: **Tolbert Mucheri** [PhD Student]
Phone number(s) **0774222030, Email: mchtol@myuct.ac.za**

Omele ukwazi ngezidingo zalezizifundo:

- Sikunika leliphepha ukuze ubale njalo ubelolwazi lokuthi kungani lezizifundo zisenziwa lokuhle lokubi kwalezizifundo.
- Konke ozahlangana lakho kugoqela izifundo zika Mucheri Tolbert yena oyenza izifundo ezisebangeni eliphezulu ezePhD kweze Social Development eUniversity yaseCape Town, South Africa. Isiqokoqela salezizifundo yikuthi athole ulwazi olungaba lusizo kwezempilakahle zakuleli.
- Asithembisi ukuthi lezi zifundo lalokhu okudingwa kulezi zifundo kungaba lusizo kuwe. Njalo ulwazi oludingwa kulezi zifundo lungenelisa ukubangela ingozi loba nje kungabi lohlupho nje.
- Uvunyelwe ukwala ukuthi ube yingxenye yalezi zifundo loba ukuvuma kumbe ukuthi utshiyele endleleni lakho nxa uthe wabona ukuthi ngeke ube usenelisa ukuqhubekela phambili.
- Kulokho oyabe ukukhethile akula okuzatshintsha endleleni ophathwa ngayo namuhla.
- Sicela ubale konke okusefomini leli uthathe isikhathi sakho njalo ubuze imibuzo lapho uthe wangazwisisi okuthile.
- Awubanjwa ngamandla ukuthi ube yingxenye yalezi zifundo ngokuphendula imibuzo kuvunyelwe ukuyala.

INJONGO

Uyacelwa ukuba ube yingxenye yezifundo zeSocial Capital and utilization of HIV and AIDS related Health Care ezikhangela ngezempilakahle yalaba abaphila legcikwane leHIV le AIDS. ISocial Capital leyi ke kuthwa igoqela ukubambana kwakho labanye bonke jikelele esigabeni loba lapho ohlala khona,ithemba olalo kwabanye, ukuncedisana labanye ohlalisane labo ngokuba yingxenye yezinto ezenzakalayo kanye lokuthi wena uzizwa uyingxenye yalesosigaba na. Injongo yalezizifundo yikuthi umfundi abone isiqokoqela seSocial capital ekusetshenzisweni kwezempilakahle eziphathelane le HIV le AIDS. Ukhethiwe ukubayingxenye yalezizifundo ngoba ufike ngesikhathi emhlanganweni lo njalo ngenxa yokuthi uyathola lawe ubusekeli lokuncediseka obuvela kulabo abasebenza labantu abaphila laleligcikwane leHIV(PLHIV) abangasomadokotela

ezibhedlela. Sikhangelele ukusebenza lenani labantu abangangamakhulu amathathu lamatshumi ayisitshiyagalombili lanhlanu (385) kuprovinsi yasemakhaya eMatabeleland South ukuze lezizifundo ziphumelele.

IMIBUZO LE IZAGOQELA LABO

Nxa suthe wavuma ukuthi ube yingxenye yalezizifundo uzathola isikhathi sokubuzwa ngulowo oyeza lezizifundo. Uzakubuza imibuzo kungela omunye ozwayo ngako ukhululekile ukuphendula ngendlela oyifunayo. Imibuzo le izagoqela labo ophilisana labo, ezempilakahle kanye leminye nje imibuzo lokhu kungathatha imizuzu engamatshumi amane lanhlanu njalo ukhululekile ukutshiya nxa usizwa usuphelelwe yimpendulo loba imibuzo ingakaphelei.

UMHLOBO WENGOZI

Umhlobo wengozi	**Ingozi**	**Ukuncediseka**
Psychological	▪ Kungakwenza uqale ukucabanga ngegcikwane olalo ▪ Kungakudinisa loba kwenze ucabange kakhulu emva kokubuzwa imibuzo le	Umninizifundo uhamba labanye abalolwazi olujulileyo mayelana lengozi lezi njalo laye ulolwazi lokuthi nxa kungaba lengozi ungancediseka njani. Nxa suthe wafunisisa uncedo uzakuhambisa kulabo abangakuncedisa abezempilakahle.
Social /Economic	• Kungakuqedela isikhathi	Labo abazafuna ukuphendula imibuzo bazacelwa ukuthi bancedise lapho abayabe bekhululeke khona ukuze bengaphambaniseki kulokho abakwenzayo.
Ethical	▪ Kungabangela ukuthi ukhulume izinto ongabe ungafuni ukuthi abanye abantu babezazi ngempilo yakho	Akula bizo lomuntu elizathathwa ngumninizifundo loba labo azabe encedisana labo.

IMBADALO

Asithembisi ukuba labo abazancedisa kulezizifundo bazathola imbadalo ethile. Ukuncedisa njengoba sike satsho kuzakuya ngokufuna komuntu akula ozabanjwa ngamandla. Umninizifundo uzalanda labo abazabe befisa ukuncedisana laye nxa kuyikutthi bazabe befuna ukulandwa endaweni eziyabe zitshiyene kulalapho okuzabe kulomhlangano khona. Labo abazancedisa bazasebenzisa nje isikhathi sabo kodwa akula mali abazathi bayikhuphe ephathelane lalezizifundo. Kodwa ke wonke ozancedisana lathi uzathola usiba lokubhala lebhuku lokubhalela njengesipho sokuncedisana lathi. Abangabe bedingisisa ukubhadalwa loba uncedo bazakhangela emveni kokuba sokuphelile lokhu.

IMFIHLO

Nxa suthe wavuma ukuncedisana lathi ngokuphendula imibuzo esizakubuza yona siyathembisa ukuthi emva kokusayina leliphepha akula omunye ozalibala ngaphandle kwalowo ozamaka lezizifundo. Konke okuzatholakala ngenxa yalezizifundo kuzabe kuyimfihlo njalo kuyasetshenziswa ezifundweni lezi kuphela. Imibuzo lempendulo ozasipha yona kuzabhidlizwa emveni kokuba umninizifundo esemakelwe wathola imiklomelo yakhe mayelana lezifundo lezi azenzayo.

IMALI

Akulalutho ozathi ulubhadale oluphathelane lezifundo lezi

KHULULEKA

Ukuba yingxenye yalezizifundo yikufuna komuntu lomuntu. Nxa ungazwa kusala ukuthi ube yingxenye yalezi zifundo lokhu akusoze kubuye phakathi kwakho lalabo abakukhangeleyo loba abasebenza lawe mayelana ngezempilakahle yako abagoqela iPLHIV kumbe izibhedlela. Lakho nxa ungathi usuphakathi uzwe sokusala khululeka ukuthi ungasaphenduli imibuzo.

OKUNYE OKUNGABALUNCEDO

- Nxa singathi siphakathi kokubuzana lokuphendula kutholakale ukuthi usugula kumbe kukhona okuphambanisekileyo kwezempilakahle yakho umninizifundo kasoze abe esaqhubekela phambili njalo kasoze agcine lokho ozabe umtshele khona.
- Nxa kungatholakala ukuthi izifundo lezi zibaluncedo olukhulu kwezempilakahle zelizwe ngingajabula ukuthi sisebenze ndawonye njalo.

SIGNATURE PAGE

Social Capital and Utilization of HIV/AIDS- Related Healthcare in Rural Matabeleland South in Zimbabwe

Protocol Version 2: 8 June 2015

UYAVUMA NA?

Ungakasayini lelifomu thatha isiokhathi sakho ubuze konke ongabe ungakuzwisisi bekuchazele wenze ulolwazi.

IMVUMO

Nguwe wedwa ongavuma loba uyale ukubayingxenye yalezi zifundo. Ngakho ke nxa suthe wasayina phansi lapha kubonisa ukuthi uzaphendula imibuzo elandelayo uncedisane lathi ukuze izifundo lezi ziqhubekele phambili njalo uyazwisisa usazi lokho okwenzayo.

Ibizo lakho (Bhala kuhle)	Signature	Ilanga
Ibizo lalowo oncedisana laye	Signature	Ilanga
Ibizo lomfakazi Witness (*nxa edingeka)*	Signature	Ilanga

UZANIKWA LAWE EYINYE IFOMU ENJENGALEYI UKUZE UGCINE

Nxa ulokhe ulemibuzo mayelana ngezifundo lezi eyedlula leyo oke wayibuza yaphendula ngesikhathi sincedisana engabe imayelana lalezizifundo kube okunye. Kumbe nxa ubona angathi awphathwanga kuhle loba usizwa angathi ungafuna nje umuntu wokuxoxisana laye khululeka ukubamba laba abalandelayo. abe Medical Research Council of Zimbabwe (MRCZ) kunombolo (04)791792 kumbe (04) 791193 kanye lalezi inombolo 0772 433 166 kumbe 0779 439 564. Amawofisi eMRCZ atholakala eNational Institute of Health Research premises at Corner Josiah Tongogara and Mazowe Avenue in Harare.

APPENDIX L: PERMISSION LETTER ZNNP+

ZIMBABWE NATIONAL NETWORK OF PLHIV (ZNNP+)

P.O. Box BE255 Belvedere, Harare
Tel.: 263-4-741829
E-mail: znnp@goldnett.co.zw

Zimbabwe

July 2015

Attention Mr Mucheri (PhD Student, University of Cape Town)

Dear Tolbert

I acknowledge receipt of your application and I have copied Profit Mukuze the Provincial Coordinator for Matabeleland South who can assist you.

Mgcini and Rumbi I hereby request Profit to assist and contribute towards the academic research by Tolbert.

Profit may you kindly assist. Tolbert you can go ahead and start communicating with Profit to implement your academic research.

Yours faithfully,

Muchanyara Mukamuri
Director ZNNP+

APPENDIX M: RAND COOPORATION –SF 36 PERMISSION

Dear Tolbert Mucheri,

As a part of the RAND Health Surveys and Tools, this study tool is available for use without permission. You can access the survey here:
http://www.rand.org/health/surveys_tools/mos/mos_core_36item.html
For more information about the surveys/tools, please visit:
http://www.rand.org/health/surveys_tools.html

Please be sure to provide the appropriate citation.

Best of luck with your studies!

Beth

Beth Bernstein
Permissions
Office of External Affairs
RAND Corporation
1776 Main Street
PO Box 2138
Santa Monica, CA 90401
Email: [bethb@rand.org]bethb@rand.org
Ph: 310.393.0411 x7423

APPENDIX N: RESEARCHER'S MOTIVATION FOR THE STUDY

'With over 11 years working experience in the social development field particularly humanitarian work focusing on educational support to over 250,000 HIV/AIDS orphaned children in Zimbabwe, Burundi and Lesotho under the Higherlife Foundation, the researcher felt there could be no better time than now to invest in exploring HIV/AIDS-related healthcare utilization and the social capital nexus with an impetus to understand how we can leverage social capital as an enabling factor to improve healthcare utilization. Hands on experiences and observations over the years on issues around HIV/AIDS raised empirical questions on why rising mortalities as a of result the pandemic given ground breaking advancements in suppressive medication which can prolong lives of People living with HIV/AIDS and enable them to continue contributing economically to families, communities and the nation at large. What is the pattern and nature of healthcare utilization amongst rural people living with HIV? Can social capital be a panacea to suboptimal healthcare utilization? These were some of the empirical question which filled my mind with curiosity as I undertook this doctoral study.

Not only did conducting this doctoral study broaden my academic prowess, but it provoked a need to act, a passion to share knowledge and an explicit drive to contribute towards improving lives of PLHIV especially in rural contexts. I believe if robust measures to optimize HIV/AIDS-related healthcare utilization are put in place quality of lives will be improved and nations will economically benefit.

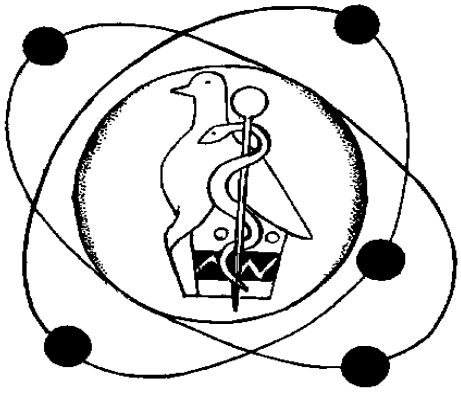
Tolbert Mucheri Senior Associate Research, Higherlife Foundation

APPENDIX O: MEDICAL RESEACH COUNCIL OF ZIMBABWE RESEARCH APPLICATION FORM

MEDICAL RESEARCH COUNCIL

OF ZIMBABWE

APPLICATION FOR REGISTRATION TO CONDUCT RESEARCH



This form must be completed by all persons/teams intending to conduct health/medical research in Zimbabwe. Upon completion by the investigator(s) it should be submitted to the Institutional Review Board(IRB) of the institution in which/under which the research is to be conducted. Upon completion of the relevant section by the IRB, the form should be submitted to the Secretary, Medical Research Council of Zimbabwe, P O Box CY 573 , Causeway, Harare. A registration fee should accompany each application. Cheques should be made payable to the Medical Research Council of Zimbabwe (MRCZ)

MEDICAL RESEARCH COUNCIL OF ZIMBABWE

INSTRUCTIONS AND GUIDELINES ON SUBMITTING A RESEARCH PROPOSAL

- A completed application form.
- Registration fee payable into the MRCZ Account :

Category: A US $500 for Individual Researcher / studies (*Turn around time: 4 - 6 weeks)*

AE US $1 000 for Expedited Review (Fast Track Review) (New Studies) *(Turn around time: 2 weeks)*

BP US $200 for PhD *(Turn around time: 4 - 6 weeks)*

US $50 for MSc (*Turn around time: 1 week)*

BU US $10 for Undergraduate students (*Turn around time: 2 days*)

(BP – Post Graduate (PhD and Masters), BU – Undergraduate)

- **Four Copies (1 original plus 3 copies). Masters & BSc to submit 2 copies** of the following documents:

1. Research **proposal summary** *(maximum 4 pages)*

2. Informed consent forms *(English & Shona/ Ndebele Versions)*

3. Full **research proposal** and an **electronic version** as well.

4. Drug brochure or supplementary information if applicable.

5. **CVs** for the P.I and Co-Investigators.

- **APPLICATION DOCUMENTS SHOULD BE SUBMITTED IN FLAT FILES WITH CLEAR FLAGS/LABELS.**
- **MASTERS AND BSc APPLICATIONS SHOULD BE SPIRAL BOUND**

Be reminded that the MRCZ requires your study to pay 1% of its total budget before you are issued with an approval letter (Excluding Students). The budget should be as reflected on the Sponsor's letter.

For Office Use Only

MEDICAL RESEARCH COUNCIL

OF ZIMBABWE

MRCZ/A/……..
…

FC ☐EXP☐

XMPT☐

Date received

……

MRCZ FORM 101

APPLICATION TO CONDUCT HEALTH/MEDICAL RESEARCH

This form must be completed by all persons/teams intending to conduct health/medical research in Zimbabwe. Upon completion by the investigator(s) it should be submitted to the Institutional Review Board (IRB) of the institution in which/under which the research is to be conducted. Upon completion of the relevant section by the IRB, the form should be submitted to the Secretary, Medical Research Council of Zimbabwe, P O Box CY 573, Causeway, Harare.

Protocol Version Number:…….

Details of Research Team

Name of Principal Investigator (P.I)	**Tolbert Mucheri**
Nationality of P.I	**Zimbabwean**
Existing Qualifications	**MSc Applied Economics, BSc (HAG) Economics**
Academic Title	**Mr**

Institution & Dept.	**University of Cape Town, Social Development**
Postal address	**Stand No. 6134 Westlea, Harare, Zimbabwe**
E-mail address	**mchtol001@myuct.ac.za, tolbertmucheri@yahoo.com**
Telephone No.	**0774222030**
Is this research expected to lead to the award of a higher degree? (Yes/No)	**Yes**
University/Institution where registered	**University of Cape Town**

Co-investigators Names	**Qualifications**	**Institution/Department**

Details of Research Coordinator

Name	
Postal Address	
E-mail Address	
Telephone Number	
Mobile Number	

Details of the Proposed Research

Title of proposed research	**Social Capital and Utilization of HIV/AIDS – Related Healthcare in Rural Zimbabwe**
Proposed starting date	**January 2015**
Proposed ending date	**December 2015**
Performance site(s) in Zimbabwe	**Matabeleland South Province Zimbabwe**
Performance sites (outside Zimbabwe)	**Nil**
Total number of study personnel	**1**
Budget (state currency)	
Name and address of Funding agency:	**Nil**
Status of funding :	a)Submitted for funding ☐ b)Pending ☐ c)Funded☐

Collaborating Institutions

1st	
2nd	
3rd	

Population : Proposed inclusion criteria *(Check all that applies)*	**Type of study** *(check all that applies)*
Males : ☒	Survey : ☒
Females : ☒	Secondary data : ☐
Adolescents (12 – 17 years) : ☐	Program Project : ☐
Children (Under 12 years of age) : ☐	Clinical community trial : ☐
Pregnant women : ☐	Case control :☐
Foetuses : ☐	Longitudinal study : ☐
Elderly (over 65 years) : ☐	Record review : ☐
Prisoners : ☐	Course activity : ☐
Cognitively impaired : ☐	Other (specify) :
Hospital inpatients : ☐	……..

Consent Process *(Check all that applies)*

Written : ☒ **English :** ☒ **Local Language :** ☒

Proposed sample size :400……

Reading level of consent document :

Below Grade 3☐ Below Grade 6☐ Below Form 2☐ Below Form 4☒ Above O level☐ Graduate level☐

Determination of Risk *(Check all that applies)*

Does the research involve any of the following	**YES**	**NO**
Human exposure to ionizing radiation	☐	☒
Fetal tissue or abortus	☐	☒
Investigational new drug	☐	☒
Investigational new device	☐	☒
Existing data available via public archives/sources	☐	☒
Existing data not available via public archives	☒	☐
Observation of public behaviour	☐	☒
Is the information going to be recorded in such a way that participants can be identified	☐	☒
Does the research deal with sensitive aspects of the participants behaviour, sexual behavior, alcohol use or illegal conduct such as drug use	☒	☐
Could the information recorded about the individual if it became known outside of the research, place the participants at risk of criminal prosecution or civil liability	☐	☒
Could the information recorded about the individual if it became known outside of the research, damage the participant's financial standing, reputation and employability?	☐	☒

- **Do you consider the proposed research**
  A) greater than minimal risk ☐
  B) minimal risk ☒
  C) no risk ☐

Minimal risk is a risk where the probability and magnitude of harm or discomfort anticipated in the proposed research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical, psychological examinations or tests. For example the risk of drawing a small amount of blood from a healthy individual for research purposes is no greater than the risk of doing so as part of routine physical examinations.

- Do any of the participating investigators and or their immediate families have an equity relationship with the sponsor of the project or the manufacturer or owner of the drug or device under investigation or serve as a consultant to any of the above? **YES** ☐ **NO** ☒
  If yes, please submit a written statement of disclosure to the Chairperson of the MRCZ

RESEARCH PROPOSAL SUMMARY

It is the MRCZ requirement that the composition of the Institutional Review Board (IRB) include individuals with varied backgrounds and education. Investigators are therefore required to attach (5) copies of a (maximum 4 pages) Research Proposal Summary using the headings provided below in terminology that is understandable across disciplines.

1. RESEARCH QUESTION TO BE ADDRESSED BY THIS PROPOSAL
2. RATIONALE FOR RESEARCH
   - Describe briefly the background of the study, and state reasons for conducting it.
   - State objectives of study.

3. METHODS

- *Study design and rationale for that design. Explain how the study will be performed.*
- Population: Sample size, outline criteria for selection and exclusion of participants, gender, ethnic group, performance sites (provide justification for single gender or group). For larger sample sizes on greater than minimal risk studies, provide justification of the sample size.
- Participants' state of physical health. Indicate if healthy, ill, seriously ill or terminally ill.

- Does the study involve any special populations: Participants will include: minors, fetuses, pregnant women, prisoners, mentally retarded, mentally disabled, or none of the above.
- If participants are from one of the above special populations, explain the necessity for including them.
- Specify source of participating participants, e.g. hospitals, clinics, institutions, prisons, industry, unions, schools, general population, etc. *NOTE: If you plan to advertise for patients, the ad must be submitted to the MRCZ for review and approval prior to its publication and/or posting.*
- *List all research procedures and/or interventions involving human participants (when applicable) including tests to be conducted and the analysis of samples (where applicable including where the analysis is to be done – if outside the country, application for biospecimen shipment and Foreign Researcher registration should be made to Research Council of Zimbabwe through MRCZ, please justify including how the samples are to be shipped, forms* obtainable from RCZ website*).*
- *Distinguish procedures which are part of routine care from those that are part of the study*
- *Questionnaire/interview instrument (when applicable)*

  If the study includes either of these, a copy of the instrument is to be appended to this application. If the instrument is in development stages, provide an outline of the types of questions to be asked and the expected date of completion and submission to the MRCZ.

- Methods of intervention: Will any new drugs or biologic agents be administered to the participants, or will previously used agents be used in a new manner? If **yes**, please note that you are also required to file a separate application with the Medicines Control Authority of Zimbabwe (MCAZ) and may not conduct your study without the approval of both the MCAZ and the MRCZ. You are also required to complete the relevant part in this application titled " Studies involving the testing of drugs and medical devices".
- *Methods for dealing with adverse events*
- *Methods for dealing with illegal, reportable activities (e.g child abuse)*

RISKS / BENEFITS TO PARTICIPANTS

- Describe in detail any potential risks - physical, psychological, social, legal, ethical (e.g. confidentiality), or other and assess the likelihood and seriousness of such risks (none, low, moderate, and high). Include the incidence of complications if known. You may use a narrative description if more appropriate or a table with 3 columns (Potential adverse effects, seriousness and likelihood of complications (Incidence if known.)
- Describe procedures for protecting against or minimizing potential risks.
- If the activity involves women who could become pregnant and is potentially harmful to a fetus, describe steps that will be taken to prevent pregnancy or exclude pregnant women.
- Assess potential benefits to be gained by the individual participants and explain why the benefits outweigh the risks.
- Assess benefits which may accrue to society in general as a result of the planned work.

COSTS AND COMPENSATION

- Will participants receive any compensation, monetary or other? If monetary, how much? Will participants be asked to assume any out-of-pocket costs for participating in the research? If yes, what? Identify expenses such as additional transportation, laboratory tests, supplies, cost of study drug if it becomes commercially available**,** etc.

CONFIDENTIALITY ASSURANCES

Describe any means by which the participant's personal privacy is to be protected and confidentiality of data maintained. Include information on the following:

- Any sensitive information that will be gathered.
- Plans for record keeping
- Location of the data
- Data security
- Person responsible and telephone number
- Who will have access to the data
- Plans for disposal of the data upon completion of the study

CONFLICT OF INTEREST (real or apparent)

- Other than the normal scholarly gains, are there any other gains you might receive from taking part in this study?

COLLABORATIVE AGREEMENTS

- *Provide letters of approval from collaborating institutions' IRBs and from other local IRBs from other sites.*

INTENDED USE OF RESULTS

- Include plans for dissemination and utilization of study results

OTHER INFORMATION:

- *Any other information.*

FULL RESEARCH PROPOSAL

Attach 5 COPIES of the full research proposal. The full proposal should include the following: Title, objectives, background and literature review, methodology (to include research design, participants and methods, ethical considerations, timetables etc. references, budget etc. Investigators may submit the full proposal in the funding agency format as long as it covers the above headings.

Please also attach copies of ***curriculum vitae*** *for the Principal Investigators and all Co-investigators. The CVs should include the following : Name, Postal address, Employers name and address, Qualifications, Present Position, Past research experience (relevant) and Published Papers (relevant). Principal Investigators or co-investigators who would have already submitted their CVs during the current year are exempted from this requirement.*

INFORMED CONSENT (S*hona & English)*

- ***Any kind of contact with human participants requires a disclosure/consent process.***
- ***Attach a copy of the consent form. Indicate how (written) informed consent will be obtained (please request for guidelines for implementing informed consent from the MRCZ Offices).***
- ***If participants are minors or mentally disabled, describe how and by whom permission will be granted.***

- ***Where will the record of consent be stored? (Consent forms must be kept for three years after the completion of the investigation, unless otherwise stipulated by the MRCZ).***

STUDIES INVOLVING THE TESTING OF DRUGS AND DEVICES

DRUG / DEVICE INFORMATION FORM

Please note that you are required to submit a separate application to the Medicines Control Authority of Zimbabwe for authorization to test a drug or medical device.

1. Which of the following will be used?

☐ a) investigational drug(s)

☐ b) new therapeutic applications for MCAZ approved drug (s)

☐ c) new combination of any of the above

☐ d) medical device

2. Briefly describe how this drug or device is a part of the proposed investigation.

3. For each drug or device to be used, please provide the following information:

Generic Name	**Trade or Brand Name**	**Manufacturer**

4. Please give the risks, hazards, known contraindications.

5. Please give reasons for choice of drug(s) for this study. Include pertinent animal clinical tests or appropriate citations.

6. Please provide dose schedule, route of administration, and duration of therapy.

7. Please describe assessment of patient while receiving therapy including clinical observations and laboratory tests.

SIGNATURE ASSURANCE SHEET

Principal Investigator's Assurance Statement:

I certify that the information given by me is correct to the best of my knowledge, I am familiar with and understand the Medical Research Council of Zimbabwe's policy concerning research involving human participants (CIOMS Guidelines or Helsinki Declaration) and I agree:

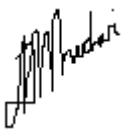
(Please check all that applies)

1. ☒to accept responsibility for the scientific and ethical conduct of this research study;

2. ☒to obtain prior approval from the relevant IRB as well as the MRCZ before amending or altering the research protocol or implementing changes in the approved consent form;

3. ☒to immediately report to the relevant IRB and the MRCZ any serious adverse reactions and/or unanticipated effects on participants which may occur as a result of this study;

4. ☒to complete and submit the Continuing annual Review Form annually (when due) as well as the Final/Study termination form at the end of the proposed study.
5. ☒to submit the final study report to the MRCZ using standard form (MRCZ Termination Form 105).
6. ☐to pay one percent levy to the MRCZ upon approval of my protocol (for study monitoring and general research participants protection requirements).

Signature  Date 02/09/2014

Tolbert Mucheri (PhD Candidate)

Print name _____

Signature of Co-investigator _____ Date _____

Print Name _____

SUBMIT FIVE COPIES OF THE ENTIRE APPLICATION PROPOSAL TO THE MRCZ OFFICES (The entire application package includes the application form, research proposal summary (2-3 pages), full research proposal (even in funding agency format), consent form and other relevant documents).

****

INSTITUTIONAL ETHICAL REVIEW BOARD REVIEW AND ENDORSEMENT REQUIRED

Statement from the Institutional Ethical Review Board:

The MRCZ will only accept for review and approval research proposals that have been found both scientifically and ethically acceptable by an Institutional Ethical Review Board (IERB) appointed and operating in accordance with the Guidelines on Institutional Ethical Review Boards. The acceptable IRB will be that from the Institution in which the research is to be

conducted or one from the institution conducting the research. In the case of institutions without IERBs, investigators are advised to seek advise from the MRCZ Office.

We the **Institutional Ethical Review Committee** established by

……..

(Name of Institution conducting the research/in which the research is to be conducted)

do certify that we have reviewed the research proposal titled

……

……..

submitted by

……..

We attest to the scientific and ethical merit of this study and the competency of the investigator(s) to conduct the project and do hereby recommend the proposal to the MRCZ for approval.

SIGNATURES

Date

Signature
Ethics Committee representative

Name (Please Print)

_____

Signature: Head of Ethics Committee
(or other authorized signatory)

_____

Name (Please Print)

_____

Contact Tel. Number

:……..……..

E-mail address :

……

OFFICIAL STAMP OF INSTITUTION

****Institution includes Universities, Hospitals, Research Institutes or Companies.***