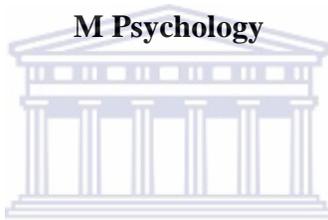


Investigating depression and quality of life in adults diagnosed with HIV or AIDS

Naadhira Loonat

A thesis submitted in fulfillment
of the requirements for the degree of

M Psychology



In the Department of Psychology,
Faculty of Community and Health Sciences,
University of the Western Cape

Supervisor: Professor P Naidoo

November, 2009.

Declaration

I, the undersigned, declare that *Investigating depression and quality of life in adults diagnosed with HIV or AIDS* is my own work, that it has not previously in its entirety or in part been submitted at any other university for a degree, and that all the sources I have used or quote have been indicated and acknowledged by complete references. This study is, however, part of a larger study which is entitled: *Implicative personal dilemmas and cognitive conflicts in health decision-making in HIV positive adults and adults with AIDS*. The larger study is being conducted and managed by the Principal Investigator.

Full name Naadhira Loonat

Date.....



Signed.....

Acknowledgements

I wish to express my sincere gratitude to the individuals listed below, without your assistance this study would not have been possible:

I would like to first and foremost thank my supervisor, Professor P Naidoo for her time taken and guidance and for introducing us to the larger research study. I would like to thank the NRF and the MRC for the partial scholarships. A special thanks goes to my colleague Nondumiso Majazi for her support and friendship throughout the research process, it was certainly appreciated. A special thanks to the entire M Psych class of 2009, with particular reference to Tarryn Kelly and Claire Lund for their support, guidance and assistance whenever needed, I will be eternally grateful. I would also like to thank Professor K. Mwaba for his suggestions and support with the revision of the proposal and the results chapter. An extra special thank you to Umesh Bawa for his ongoing support and motivation throughout the research process and for making alternate arrangements for me through the data collection process and whenever needed and last, but certainly not least to my family and loved ones, with particular reference to my father for the time and support taken whenever needed and my mother and siblings for their motivation and support, which made this process more bearable and helped me to get through it. A special thanks to Riaz for his support and assistance, for your inspiration and for being the light in my life.

This thesis is dedicated to my loving family, who has stood by me throughout this year. It is also dedicated to Andre, a colleague and a dear friend who passed away earlier this year. May he R.I.P.



Abstract

HIV and AIDS are disease conditions that have led to high mortality rates in Southern Africa since the late 1970s. The socio-economic system has led to the unequal spread of resources' and vulnerability and exposure to HIV is more prevalent in poorer communities. The added burden of life stresses cause for many to be isolated and stigmatised and are often not equipped with the necessary support and coping skills to deal with the magnitude of these circumstances. There is a high prevalence of mental disorders and especially depression amongst individuals infected with either HIV or AIDS. Research shows that stressful life events can impact HIV course progression and impacts the QoL of those infected with HIV or AIDS. Given the social and psychological context of HIV and AIDS, the aim of the study was to examine the relationship between depression and QoL in a sample of adults diagnosed with HIV or AIDS. This quantitative, cross-sectional study used the Becks Depression Inventory II (BDI II) and the Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q), to measure the variables concerned. This battery of questionnaires was administered to a purposive sample of adult individuals diagnosed with HIV or AIDS residing in a previously disadvantaged area in the Cape Metropole region. Using SPSS, data was analysed and descriptive and inferential statistics were conducted. The study found that there were more women than men with HIV or AIDS that were found to be depressed (mild, moderate and severe depression). Furthermore, the depressive state increased when the progression of the disease increased. There were generally no significant differences in the QoL experienced within various areas of life and overall life satisfaction experienced. However, the QoL experienced in work was lower. There was a significant relationship between the depressed state and QoL and life satisfaction experienced in household duties and tasks. The contribution of this study includes informing the larger research project, with regards to future treatment regimes. It will update statistics on the prevalence of depression and QoL of adults diagnosed with HIV or AIDS in the area. This study is framed within a biopsychosocial model and is theoretically underpinned by Beck's theory of depression.

Key words: HIV, AIDS, adults, depression, quality of life (QoL), Beck Depression Inventory II (BDI II), Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q), Antiretrovirals (ARV's), prevalence data, correlations



CONTENTS PAGE

Title	i
Declaration	ii
Acknowledgements	iii
Dedication	iv
Abstract	v
Table of Contents	vii
CHAPTER 1	1
Introduction.....	
1.1 Background to the study.....	1
HIV and AIDS.....	2
<i>Psychological aspects of HIV and AIDS.....</i>	3
<i>HIV and Depression.....</i>	3
Quality of life (QoL).....	4
Social factors.....	5
1.2 Epidemiological Pattern of HIV and AIDS.....	6
1.3 Rationale for this study.....	10
1.4 Aims and Objectives of the Study.....	11
Chapter Summary.....	12
CHAPTER 2.....	
Theoretical Overview and A Review of the Literature.....	
Introduction.....	14
2.1 Theoretical Overview.....	14
The Biopsychosocial (BPS) Model.....	14

Depression and QoL.....	19
2.2 A Review of the Literature.....	21
Introduction.....	21
HIV and AIDS.....	23
Medical aspects of HIV and AIDS.....	23
Mental health and HIV and AIDS.....	26
Depression and QoL.....	30
Mental disorders and QoL in people with chronic illnesses.....	32
Social Conditions and QoL.....	35
Depression, QoL and HIV and AIDS.....	39
CHAPTER 3.....
Methodology.....	45
3.1 Research Design.....	45
3.2 Research Setting.....	46
3.3 Participants and Sampling.....	46
3.4 Procedure.....	47
3.5 Ethical Considerations.....	48
3.6 Data Collection Tools.....	49
Beck Depression Inventory II (BDI-II).....	50
Quality of Life Enjoyment and Satisfaction Questionnaire.....	54
3.7 Data Analysis.....	57
CHAPTER 4.....
Results.....	60
Introduction.....	60
4.1 Characteristics of the sample.....	60



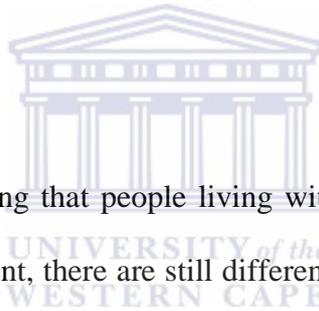
4.2 Descriptive Statistics: Depression and QoL	63
<i>Depression and Demographic Characteristics</i>	65
<i>Demographic Variables and Depression Categories</i>	66
Quality of Life	69
4.3 Correlations between Depression and the QoL Domains	69
Conclusion	71
CHAPTER 5	
Discussion	73
Introduction	73
5.1 Characteristics of the sample	73
5.2 The prevalence of depression	78
5.3 Quality of Life (QoL)	82
5.4 Relationship between depression and QoL of adults diagnosed with HIV or AIDS	86
5.5 Contributions of the Study	93
5.6 Limitations of the Study	94
5.7 Recommendations for Future Research	95
Appendices	
FIGURES	A
TABLES	B
INFORMATION SHEET	C
CONSENT FORM	D
BDI II	E
Q-LES-Q	F

Chapter 1

Introduction

1.1 Background to the study

For the last three decades HIV and AIDS has been an international pandemic and is regarded as a high-mortality chronic illness (Johnson & Laga, 1988). It is considered the deadliest threat to global health. South Africa (SA) in particular has the largest incidence of HIV in the world. According to the United Nations Programme on HIV and AIDS (2008), HIV in SA has also been considered a ‘hyper- endemic epidemic’ (cited in HSRC, 2009). This is due to the high prevalence of young adults with the virus.



Despite evidence demonstrating that people living with either HIV or AIDS benefit from pharmacological treatment, there are still differences in the quality of life (QoL) or life outcomes of these individuals. This led to the conclusion that psychological interventions can positively influence the disease course progression or health outcomes of the disease and the infected individuals QoL. However, in the South African context, it is important to consider the limited resources and other social factors which serve as barriers to attaining adequate management of the disease, as well as the difficulties posed by people with either HIV or AIDS, such as stigma, social isolation, discrimination and trauma in the treatment of the pandemic. These factors often lead to mental health problems such as depression or substance abuse. Mental health disorders, such as depression are shown to have a direct negative influence on the course progression of the disease and an indirect influence through

treatment adherence and compliance to treatment regimens (Bottonari & Stepleman, 2009).

Many individuals with HIV or AIDS are distressed and have a sense of hopelessness despite the stability in their CD4 counts and viral loads. This could be due to the influence of stress and social factors on the individuals QoL, psychological well-being and poor adherence to treatment regimens due to the poor social circumstances with which they faced (Bradley, Gaynes, Pence, Eron, & Miller, 2008).

This study is interdisciplinary as it interfaces Psychology with Public Health. The study took place within a previously disadvantaged area in the Cape Metropolitan region. This area is regarded as a peri-urban area, which is surrounded by informal settlements. HIV and AIDS is the leading health care challenge for this community (Wreford, Esser, & Hippler, 2008).

HIV and AIDS.

The 'Human Immunodeficiency Virus' (HIV) is a virus which infects the cells of the human body. It then replicates, and damages these cells. At this stage the virus can be transmitted through direct contact with the bodily fluids of someone who is already infected with the virus (UCT HIV/AIDS Policy, 2004). It can also be transmitted via infected blood transfusion and through needles or drug usage. Acquired Immune Deficiency Syndrome (AIDS) is a medical condition which develops as a result of the damage done by the HI virus on the natural defenses of the immune system (Jackson, 2002). AIDS is often regarded as the advanced HIV disease (San Francisco AIDS

Foundation, 2008). However, an individual with HIV can still be healthy if their CD4 lymphocyte counts are high and viral load low. The CD4 lymphocyte count indicates how healthy the immune system is and is also regarded as the best predictor of the risk of opportunistic diseases amongst these individuals with either HIV or AIDS (Health/24, 2003). Despite the awareness that people with AIDS are HIV positive, for the purpose of this study a distinction between those adults that are in the earlier stages of the disease will be made from those with AIDS, which are in the later stages of the disease.

These biological and medical aspects can result in significant consequences. Thus, living with this chronic disease can impact negatively on a person's life. Apart from the physiological needs, people living with either HIV or AIDS also encounter added emotional and social needs. There are often changes in the way the individuals and their communities view them, as well as disruptions in family life and financial difficulties (Brannon & Feist, 2000). Particularly in developing countries such as SA, where there is a lack of resources, economic and contextual factors may lead to the contraction of the virus (Pienaar, Myer, Cleary, Coetzee, Michels, Cloete, Schneider, & Boulle, 2006).

Psychological aspects of HIV and AIDS.

HIV and depression.

HIV and AIDS, in particular, is a disease which can affect an individual's mind, mood, body, and behaviour. Depression is found to be the most prevalent co-morbid disorder in adults living with HIV or AIDS (Myer, Smit, Le Roux, Parker, Stein, & Seedat,

2008). Furthermore, depression was found to be at least twice as common in those diagnosed with HIV than those without HIV (National Institute of Mental Health, 2002). The comorbidity of depression often results in resistance and non-compliance to treatment, as well as diminished health outcomes in people living with HIV and AIDS. Therefore, depression largely serves as a mediator between the disease and the individual's Quality of Life (QoL) outcomes. QoL refers to the individual's experiences of living with HIV or AIDS. This includes aspects such as pain, fatigue, disability and other broader aspects of the individual's physical, emotional, and social wellbeing (Sanders, Egger, Donovan, Tallon, & Frankel, 1998).

Quality of life (QoL).

According to Calman (1984), QoL is said to measure the difference between the hopes and expectations of an individual (at a particular period of time), and their present experiences. QoL is generally reported in a descriptive manner by an individual. In the evaluation of QoL, it is important to take into account many aspects of the individual's life and experience. It should include the impact of the illness and treatment on the person's experience of life (Calman, 1984). QoL has been measured within various domains of life, according to the self reports of the individuals regarding their HIV or AIDS status and possible depressive state. This allowed for the investigation of the influence of illness on life experience.

The assessment of QoL is common in recent medical studies in the effort to understand people's health outcomes (Katsumasa, Shimozuma, Ohsumi, Imai & Ono, 2007). However, it has been a difficult concept to define, measure and interpret. There

is currently little information regarding how the term is defined. There was also relatively little experience of using QoL (objective) instruments and concerns regarding the interpretation and application of results due to the subjective nature of its evaluation. Despite this noted downfall, its assessment is still a common and important component in recent medical studies. It is often used in order to understand the health outcomes of people diagnosed and living with HIV or AIDS. The contribution of its assessment in understanding depression, somatising symptoms and other mental health disorders has increased in the empirical literature (Chaturvedi, & Venkateswaran, 2008).

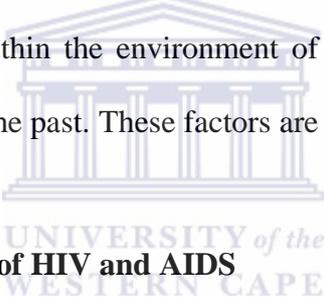
QoL was further reinforced as the concept of health progressed to a more holistic understanding, which included the physical, psychological, social and spiritual wellbeing of an individual. According to Long and Scott (1994) health-related QoL refers to the level of mental, physical, role and social functioning (cited in Naidoo, 2004). This refers to the person's general well-being, which includes their mental health status, levels of stress experienced, and their overall perception of their health status or health outcome (Stedman's Medical Dictionary, 2006). These are some of the areas with which this research study deals, within QoL.

Social factors.

An individual cannot be viewed in isolation of the environment, therefore illness and health care should be considered in the context of the individuals and the countries economic and political circumstances. Furthermore, the ecological, social and cultural contexts need to also be considered (Marks, Murray, Evans, & Willig, 2000). This

allows for an understanding of the social and environmental circumstances and its influence on the individual's living with either HIV or AIDS quality of life (QoL). The measure of the influence of these factors on the QoL of these individuals is imperative in order to ensure change in the high prevalence rates of HIV or AIDS (Naidoo, 2004).

Public health has largely focused on the biological aspects of illnesses and has not sufficiently delved into the mental health aspects such as depression within these individuals with either HIV or AIDS (Myer et al., 2008; Olley, Seedat & Stein, 2004; Van der Ryst, Strydom, Scott, Boshoff, Joubert, & Els, 1998). The contextual aspects and psychosocial stressors within the environment of affected individuals have not been sufficiently explored in the past. These factors are highlighted in this study.

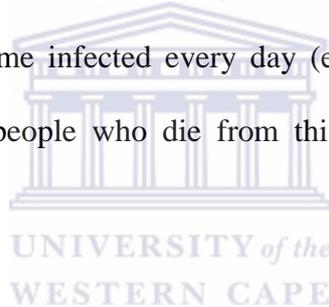


1.2 Epidemiological Pattern of HIV and AIDS

Sub-Saharan Africa continues to be the area most affected by HIV or AIDS. Statistics from 2007 demonstrates that one in every three people in the world infected with HIV/AIDS live in this region (WHO, 2008). It is estimated that in SA alone, 11% of the population are infected with HIV or AIDS (World Health Statistics, 2008). An estimated 5.6 million South Africans were found to be infected with HIV in 2008, which is the largest number of any country in the world. According to Nicolay (2008), the HIV prevalence rate in SA was 12%, of which 20% were adults between the ages of 20 and 64 years. The adult HIV prevalence rate varies between provinces in SA. One example of this is the difference in the prevalence figures between KwaZulu-Natal, where there is a prevalence rate of 28% and Western Cape, where there is a 9%

prevalence rate. This difference in the prevalence of the epidemic in each province emphasises the need for different approaches to be adopted in each province, in order to minimise the risk of new infections and mortality rates (Nicolay, 2008). An additional difficulty is that the prevalence figures for HIV and AIDS differ within provinces, i.e. historically previously disadvantaged areas has the highest prevalence rates of the disease.

Although the total number of people living with HIV has increased significantly over the past three decades, the proportion of people infected with the virus has not changed since the latter part of the 1990's (WHO, 2008). This is a result of the number of people who become infected every day (estimated at over 6800) being higher than the number of people who die from this disease (estimated at 6000) (WHO, 2008).



According to Goebel (1995) and Vella (1995), this is largely a result of the use of antiretroviral therapy (ART), which allows for the suppression of the virus and an increase in the life expectancy of an infected individual (Supriya, Moore, & Graham, 1997). However, its long-term effectiveness depends on strict adherence to the prescribed regimen (Cinatl, Cinatl, Rabenau, Doerr, & Weber, 1994; Moutouh, Corbeil, & Richman, 1996) (cited in Supriya, Moore, & Graham, 1997). According to Edlin, Toakrs, Grieco, et al. (1992), this results not only in diminished outcomes for the patient, but also the public health threat of multidrug-resistant HIV, and widespread transmission of the virus (cited in Supriya, Moore, & Graham, 1997).

This has been an ongoing struggle, particularly in SA, thus affirming the need for the implementation of more effective treatment regimens.

Worldwide, 0.8% of the adult population between the ages of 15 and 49 years are estimated to be infected with HIV (WHO, 2008). Even though there has been a decrease in prevalence rates since 2000 (from 6% to 5% in 2007), there is still a need to investigate the causes for these high mortality rates and the subsequent re-evaluation of existing treatment programmes in SA in particular (WHO, 2008).

There is a high co-infection of tuberculosis (TB) in adults with HIV and AIDS in SA (Brannon & Feist, 2000; Middelkoop, Whitelaw, Ntutela, Vogt, Kreiswirth, Wood, & Bekker, 2004; Naidoo, 2009). According to the WHO (2005), SA had the 7th highest TB rate in the world. The current status of TB was a result of the fragmented health services in SA. The preventative treatment for tuberculosis usually begins when a patient's CD4 cell count is below 350 cells per mm³ (Health/24, 2003). In 1996 TB was declared a health priority by the South African Department of Health (Brannon & Feist, 2000). In order to treat TB, a control programme of the World Health Organisation (WHO) was implemented. This strategy is known as the Directly Observed Short-course (DOTS) programme which was enforced in the final decade of the 20th century. The DOTS programme provides a package for the diagnosis and use of practical interventions for the treatment of TB. Despite its implementation in SA the cure rate of TB stands at a meager 57% (cited in Naidoo, 2009). TB also assists in the fast progression of HIV and AIDS. This includes TB as a health factor of concern, especially in SA. Therefore, clinicians and researchers should approach their

strategies around HIV or AIDS with a dualistic perspective i.e. considering the multiple impacts of HIV and TB on the South African population.

There has also been a general increase in the percentage of women living with HIV (UNAIDS, 2008). On average in SA there are three women infected with HIV for every two men who are infected. However, in mid-2006, within the 15-24 age group there was a greater difference, where three young women for every one young man were infected (National Department of Health, 2008). Furthermore, the women on ART's are found to be on average younger than their male counterparts (Pienaar & Myer et al., 2006). The 2008 estimate of women attending public health care clinics is 29% (WHO, 2007). This is significantly greater than the amount of males. This could be due to an increase in the infection rate amongst women with HIV or AIDS, or due to the added pressure and discrimination with which women are faced (Bradley, Gaynes, Pence, Eron, & Miller, 2008). This largely affects the health outcomes, due to the lack of social support and stigma.

Research undertaken in 2000 demonstrates that most individuals infected with HIV-1 developed AIDS (within a period of approximately 10 years). After the onset of AIDS, the average length of survival was within the range of approximately 11 months to a maximum of 9 years (Stern, Perkins, & Evans, 2000). This signifies the importance of the improvement of treatment protocols. One of the primary purposes of the larger study (within which this study is located) was to inform the relevant health authority on what measures can be taken to improve the treatment protocol of

people living with HIV or individuals with AIDS, by including a more rigorous approach to treating the mental health aspects of the disease.

1.3 Rationale for this Study

This study is located within a larger study, entitled: ‘Implicative personal dilemmas and cognitive conflicts in health decision-making in HIV positive adults and adults with AIDS.’ The larger study addresses the interface between psychological and public health factors in trying to understand the comorbidity of HIV or AIDS and mental health and its influence on health-decision making and adherence to treatment regimens, which influences the health outcomes of the infected individuals. The purpose of this study is to establish the relationship between depression and QoL of individuals living with HIV or AIDS so that suggestions can be made as to how to improve the psychological well-being of those infected. The improvement of QoL is often the major goal in the provision of health care, thus signifying the importance of the measurement of health-related QoL in order to inform the management of patients, policy decision making, as well as informing the allocation of resources in the future in individuals with HIV and AIDS and depression (Jelsma & Ferguson, 2004).

In order for increased QoL, contributions to the development of future treatment programmes, an understanding of depression and QoL in adults diagnosed with HIV or AIDS needs to be assessed. The findings from this study could increase practitioner’s knowledge regarding adults with depression as a co-morbid disorder with HIV or AIDS. It could provide an understanding of the QoL and functioning of

individuals with HIV or AIDS. The results of this study will inform the larger study which focuses on the impact these aspects have on individuals diagnosed with HIV or AIDS, their act of seeking public health care, the process of decision-making and its influence on QoL.

Furthermore, the larger study wishes to inform management programmes in the future. In so doing, focus needs to be placed on personal and social restrictions and motivations within the individual's life, which influences decision-making and adherence to treatment (Naidoo, 2009). Thus the focus on the relationship between depression and QoL in this study adds to the research base, which will inform the larger study and assist with the establishment of treatment programmes and its implementation. Treatment for depression is shown to assist people in the management of their status, and consequently the enhancement of survival and QoL (National Institute of Mental Health, 2002).

In order to make recommendations for the treatment protocol of the individuals infected with HIV, this study asked the following research question:

What is the relationship between depression and QoL in adults diagnosed with HIV or AIDS and residing in an under-resourced setting?

1.4 Aim and Objectives of the Study

Aim.

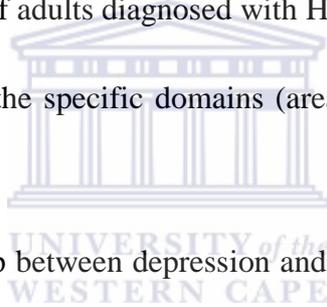
The main aim of the study which was derived from the research question was:

To examine the relationship between depression and QoL in a sample of adults diagnosed with HIV or AIDS.

Objectives.

The Objectives of the study were:

1. To establish the prevalence of depression amongst adults diagnosed with HIV or AIDS.
2. To measure the levels of the intensity of depression (i.e. mild, moderate, severe) in adults diagnosed with HIV or AIDS.
3. To measure the overall QoL of adults diagnosed with HIV or AIDS.
4. To measure the QoL within the specific domains (areas of life) of adults diagnosed with HIV or AIDS.
5. To investigate the relationship between depression and QoL of adults diagnosed with HIV or AIDS.



Chapter Summary

This chapter discussed HIV or AIDS as a leading healthcare concern in SA and the contribution of this research study to the larger one, as well as its potential impact on the development and implementation of future treatment programmes.

This chapter highlighted the rationale and the aim and objectives of the study were also explained. The high co-morbidity of depression in adults with HIV or AIDS, and the factors contributing to the high prevalence in an under resourced context made

this an important study to undertake. The treatment of depression also assists in the management of HIV or AIDS. QoL was an important variable to measure as it determines health outcomes. The investigation of the relationship between depression and QoL could assist with the provision of data for the larger research study, in its development of a better treatment regimen.



CHAPTER 2

Theoretical Overview and A Review of the Literature

Introduction

This chapter outlines the theoretical underpinning of the study. It also provides a review of the past literature available, concerning the various variables which were studied.

2.1 Theoretical Overview

The Biopsychosocial (BPS) Model

The biopsychosocial (BPS) model has extensively been used in the critical formulation of health-related behaviours (Engel, 1977). This model can be used to conceptualise how psychology, sociology and health are interrelated. It is also consistent with the concept of systems theory (cited in Sarafino, 1977). This model can be used as a general framework which provides an understanding and guides our research (Armitage & Conner, 2000).

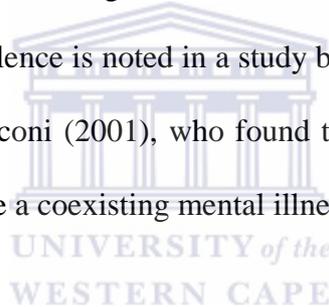
Historically, the focus was on the physical basis of all disorders, whether they were physical or psychological in nature. This was noted in Hippocratic and Galen's theories, where psychological causes were often dismissed and related to physical imbalances. An example of this would be Galen's attribution of melancholy (which is recently referred to as depression) to physical 'humoural imbalances' or an excess of black bile (Marks, 2002).

The biological component of the BPS model focuses on the biological and medical aspects of the illness (Walby, 2006). It attempts to find the aetiology in the physiological aspects of HIV or AIDS within the individual. It looks at aspects such as symptomology, CD4 proliferation, stage of the disease and its influence on health, amongst other biological aspects. It explores how the HIV or AIDS process physically works and provides an outline of its mechanisms. However, in this exploration it is also important to note that the biological and medical aspects of the disease often result in symptoms which depict depression, such as lack of interest and fatigue (Walby, 2006). Within the framework of the BPS model, the various components of HIV and AIDS may also be unpacked. At the biological level CD4 proliferation, stage of disease and disease progression are important. At a social level factors such as exposure to stress due to difficult living conditions should be considered and at a psychological level, factors such as the perception of loss of control and bereavement has been associated with the decline of immune activity, such as lymphocyte proliferation. This indicates the biological, social and psychological factors which often have adverse effects on the individual's health and wellbeing (Kiecolt-Glaser & Glaser) (cited in Taylor, Repetti, & Seeman, 1997).

Since the evolution of 19th century theorists (which included psychoanalysis, biologism and behaviourism), mental health professionals were in search of a model which integrates the psyche and the soma. From this emerged the BPS model as suggested by (Engel, 1977) (cited in McLaren, 2006). Critics regard it a broad framework that lacks a detailed understanding. Some psychiatrists see the BPS model as flawed, in either formulation or application (Epstein & Borrell-Carrio, 2005).

Practically, it has not been realised due to western society's preference of medicine and the biomedical model (Pilgrim, 2002). Another barrier which is encountered in its application is that it is difficult to note which component develops first due to studies only addressing these aspects after the development of the illnesses.

The psychological component of the BPS model investigates psychological aspects which may cause health problems. This includes aspects such as the use of poor coping mechanisms, lack of self-control, emotional turmoil, and negative thought processes which alter optimal functioning. This may result in mental health problems, such as depression, in people living with HIV or AIDS. The evidence of this component and its high prevalence is noted in a study by Bing, Hays, Jacobsen, Chen, Gange, Kass, Chmiel, & Zucconi (2001), who found that at least 50% of those who are being treated for HIV have a coexisting mental illness (cited in Davis, 2005).



The social component of the BPS model looks at social and environmental factors such as the individual's socioeconomic status, which includes aspects such as poverty, accessibility to resources, support from friends, family and the community, which are just a few aspects that are shown to influence health (Santrock, 2007). This component deals with some of the aspects which influence QoL. This is of critical importance given that this study is located within a low socioeconomic and under-resourced social context. This is a result of the individuals overall life satisfaction due to the experience of different activities and domains within their life. Contextual and environmental factors can contribute to the depressed state or the diagnosis of HIV or

AIDS. These states conjointly influence on the individuals overall health outcome and wellbeing.

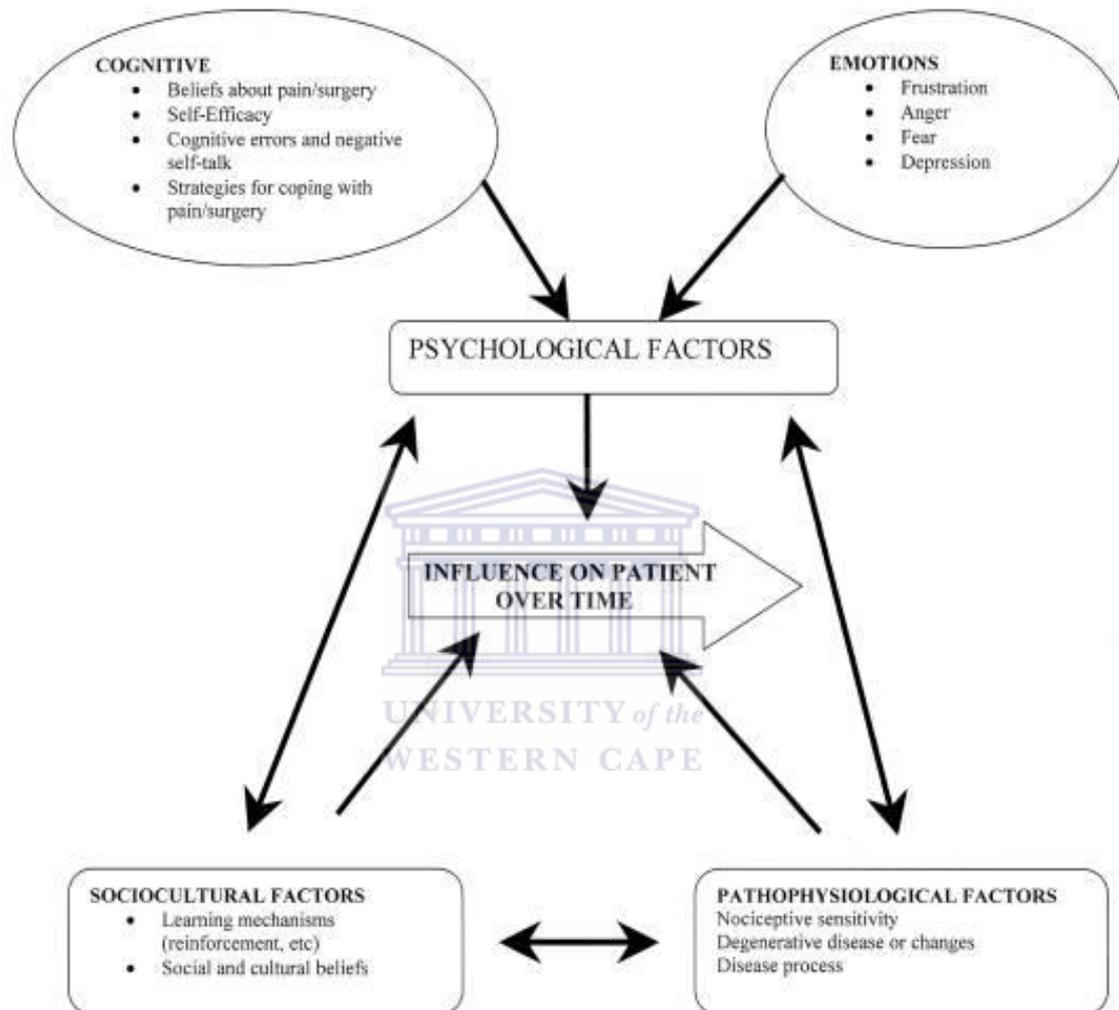


Figure 2.1 The Biopsychosocial conceptual model. A graphical representation of the components of the BPS model. Adapted from Chapman et al. (1999, p. 43) (cited in Deardorff, 2007)

This BPS model, according to Marks (2002) provides a means of thinking about health and illness. It can be used to gain a holistic view of the relationship between depression and QoL of adults diagnosed with HIV or AIDS, as well as considering the circumstances and social context in which they live. Looking after one’s physical

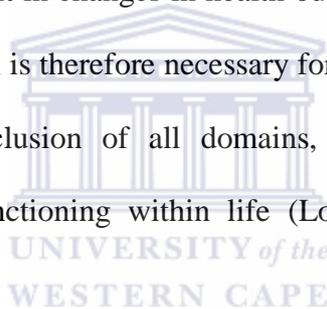
health and mental, emotional and social wellbeing is shown to assist with health, and also offers psychological benefits and increases QoL (Jackson, 2002).

The BPS model is used as a means of understanding an individual with HIV or AIDS' subjective experience. This assessment could assist in accurate diagnosis, health outcomes, and the required care to be provided from a humanistic perspective. The BPS model provides an important contribution to this clinical method. However, it is important to highlight the downfalls in its use.

The relationship between mental and physical aspects of health is complex. The subjective experience contributes to, but is not the means and ends to physiological aspects. The implementation of a collaborative relationship also uses a western perspective, but may not be universally accepted (Borrell-Carrió, Suchman, & Epstein, 2004). This is important to note in the South African context, with its cultural diversity. Numerous cultures include a spiritual dimension as part of health, which accounts for many of the symptoms and where the power to cure is seen on a hierarchy, with traditional healing valued more than western medication and treatment (Larson, 1996).

However, taking all of the above into account, this holistic view of the broad framework allows for the integration of all domains. The medical model is unable to provide comprehensive information for the person as a whole, nor for data of the psychological or social nature of illness. Biological explanations in the biomedical model do not explain the function of the disorder. It is also unable to explain

phenomena of a psychological nature (Engel, 1980). It does not answer the reason the disorder occurred, or its meaning or purpose. It has been criticised for its simplistic view of psychopathology. Health and disease also do not occur in a vacuum. Therefore, it is paramount to consider HIV or AIDS within cultural, social and psychological contexts as well as taking into account biological considerations (Engel, 1980). The BPS model thus allows for an assimilation of all these aspects. It is important to note that despite the previous use of the biomedical model, international studies are becoming more interested in psychosocial factors; and disease factors on health-related QoL. Previous research studies have demonstrated that psychosocial and disease factors often result in changes in health outcomes (Naidoo, Lindeggar, & Mody, 2004). The BPS model is therefore necessary for the purpose of this study, due to health related QoL's inclusion of all domains, which include the physical, psychological and social functioning within life (Long & Scott, 1994) (cited in Naidoo, 2004).



Depression and QoL

The use of Beck's (1979) cognitive theory of depression is utilised in this study in order to understand the presence of depression in adults diagnosed with HIV or AIDS.

When people are depressed they encounter symptoms which affect their daily functioning. It may be in the form of a lack of energy, low self esteem, difficulties concentrating, amongst other symptoms referred to in the Diagnostic and Statistical Manual of Mental Disorders. It is a state which influences the person's mood, thoughts, behaviour, motivation, as well as their somatic functioning (DSM-IV, 1994, DSM-IV-TR, 2000). Previous research has shown that depression can lead to a sense

of hopelessness that often diminishes the degree of health-promoting behaviour, such as seeking help and adherence to treatment (Chung, Pan, & Hsiung, 2009). Depression is also shown to negatively impact health by altering the immune system (Bender, 2006). The cognitive dysfunction, which is a core feature of the depression is expressed in the individual's negativity, which could significantly influence the manifestation of other depressive symptoms.

In his theory, Beck (1979) considers the importance of both the influence of cognitive and interpersonal factors on emotional health. Many of these individuals diagnosed with HIV and those with AIDS, particularly in SA are exposed to other psychosocial stressors such as poverty, stigma and the lack of social support. Being diagnosed with HIV or AIDS may lead to an individual becoming depressed. According to Beck (1979) the depression originates in the individuals constructions of reality, which is a reflection of the individual's cognition or "schemas". This is formed in interaction with the environment. This causes life events to be interpreted through these schemas, which may lead to dysfunctional and distressing thoughts and behaviours (cited in Prochaska & Norcross, 2007). These behaviours may include non compliance to treatment regimens and other negatively influenced behaviours which affects acts of health promotion (Bender, 2006). The relationship between dysfunctional attitudes and depressed mood is said to be mediated by negative views of the future. Depression, as a result is one of the factors which is shown to influence the person's QoL and health outcomes (Naidoo, 2004). This finding is further reinforced by the fact that there is a direct correlation in SA between HIV infections and poverty, lack of adequate resources, and a negative world view.

The depressed affect further activates the underlying schemas, which reflects a sense of personal failure, loss or a sense of deprivation. The severity and duration of the depressive state would also depend on the activation of these schemas, and the degree to which it overpowers and consumes the person's processing of the dysfunctional schemas. The depressive episode is said to continue as long as the underlying dysfunctional schemas remain. Furthermore, these schemas make the individual vulnerable to a number of negative life experiences (Clark, Beck, & Alford, 1999).

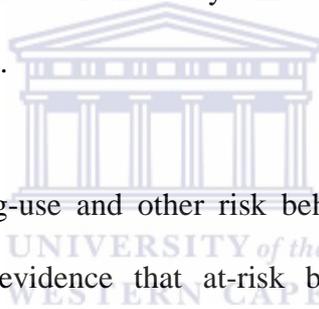
Therefore, according to Clark, Beck, and Alford (1999), the depressed state is a result of cognitive schemas and processing, which is often a result of dysfunctional and destructive ways of viewing oneself. This often results in the individual's inability to access alternate and more constructive ways of thinking. This results in the individual's inability to deal effectively and react adequately and functionally in life. This influences the individuals diagnosed with HIV or AIDS wellbeing and QoL (Clark, Beck, & Alford, 1999).

2.2 A Review of the Literature

Introduction

In the quest to implement better health and social services it is important to identify factors that determine health outcomes. These broadly include individual factors such as disease factors, reaction to stress, and risky decisions, amongst numerous others. It also includes factors which are out of the control of the individual and largely a consequence of structural enforcements, such as the economic system, unequal access

to resources and the poor availability of medical care, low socioeconomic status, and inadequate availability of physical and social environments which include aspects such as access to clean water. The health care provision usually originates from within the health sector, for example, within hospitals, health services, and health personnel (Bryam-Williams, 2006). Other social and environmental factors which individuals often have no control over include patterns of injury and violence within communities. SA currently has the highest gun violence and homicide rate, which stands at 125.96 in SA (NationMaster.com, 2009). This signifies the importance of the social component in measuring QoL and health outcomes. Due to the limited scope of this thesis the main focus of this study will be on depression and QoL within individuals with HIV or AIDS.



Negative QoL, injection drug-use and other risk behaviours are seen to influence health outcomes. There is evidence that at-risk behaviour in relation to HIV transmission has been influenced by the deterioration of the economic systems and circumstances. This resulted in a number of women partaking in transactional and commercial sex activity (Bryam-Williams, 2006). There are many factors that seem to influence QoL, including the above mentioned aspects. Besides these physical and mental health-related factors, socio-demographic characteristics, such as age, gender, education, income and employment status, have also been strongly associated with the QoL of individuals with HIV or AIDS (cited in Rүүtel, Pisarev, Loit, & Uusküla, 2009).

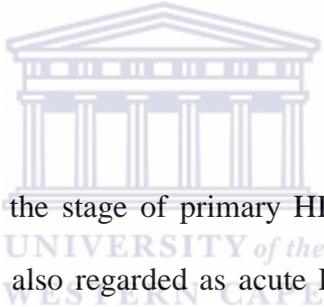
HIV and AIDS

The biological and physiological aspects of HIV and AIDS and their mechanisms:

Medical aspects of HIV and AIDS.

HIV is a virus which causes the chronic disease AIDS which people have to live with and to which there is currently no cure (Brannon & Feist, 2000). After the virus has been transmitted, HIV enters the bloodstream and the cells of the body. This is the stage that the individual is regarded as having HIV. At this stage the individual is considered to be infectious and has the ability to transmit the HIV (Jackson, 2002).

Stages of infection.



The first stage is regarded as the stage of primary HIV infection. At this stage the virus settles in the body. It is also regarded as acute HIV infection. It is the period from when the individual is first infected with HIV, to the period when proteins (called antibodies) are made by the immune system in response to the infection. This is the point that the virus can be detected by an HIV test (San Francisco AIDS Foundation, 2008). During this stage an individual with HIV usually first presents with night sweats, chills and fever and a rash. Thereafter an infected person could return to feeling and looking completely healthy. Some may not experience symptoms at this stage at all or they may be acute and may not be noticed at all. This is referred to as being HIV asymptomatic. During this stage, the virus proceeds to the lymph nodes. The HIV virus then replicates itself within the bloodstream. Individuals at this

stage of the infection usually have a high HIV viral load, which is an indication of the amount of the virus in the body.

Viral load testing is used in order to inform the progression of HIV disease in the body. This can be used to assist the individuals with HIV in the decision making process regarding the implementation of appropriate treatment strategies. The viral load test assists in the identification of HIV infection during what is known as the window period, before HIV antibodies have developed. “Seroconversion” is the period when a person’s immune system responds to the infection by producing antibodies to the virus (San Francisco AIDS Foundation, 2008).

After the acute stage of HIV infection has passed, the person moves into the asymptomatic stage. The only indication the individual is infected with HIV at this stage is through testing and some show swollen lymph glands. The HIV is still very active and continues to weaken the immune system during this stage. Early detection and care of the HIV disease can increase the chances of survival and improved QoL. Early and regular care is shown to assist people in the control of treatment before symptoms are visible (San Francisco AIDS Foundation, 2008). This could possibly assist in increasing the QoL and health outcomes of individuals living with HIV or AIDS.

During the early and medium stage of the HIV disease, the immune system (as a result of the infection) becomes damaged. At this stage many individuals begin to experience mild symptoms of HIV. They may develop skin rashes, experience night

sweats, constant fatigue, slight weight loss, mouth ulcers, and fungal skin and nail infections (San Francisco AIDS Foundation, 2008). It is thus important to note these symptoms, which are biological and the similar manifestations in mental disorders, such as depression and anxiety.

During the latter part of the HIV infection, even before the person has been diagnosed with AIDS, some individuals become ill. This includes chronic oral or vaginal thrush, recurrent herpes blisters on the mouth or genitals, fevers, diarrhea, and extreme weight loss. These symptoms usually occur when the virus has already caused a considerable degree of damage to the immune system, rather than it being unique to HIV or AIDS (San Francisco AIDS Foundation, 2008). During the late stage HIV disease (AIDS), when the damage done to the immune system is severe, and the CD4 lymphocyte count is usually below $500/\text{mm}^3$, the risk of contracting opportunistic infections becomes very prevalent. According to the Centers for Disease Control and Prevention (CDC, 2008), an AIDS diagnosis can be given to an individual with HIV who has a CD4 count of less than $200/\text{mm}^3$ or a history of what is called an AIDS-defining illness, such as an opportunistic infection, even if a previous HIV disease was not experienced (cited in San Francisco AIDS Foundation, 2008).

Many people have lived for numerous years after being diagnosed with HIV or AIDS. This increase in life expectancy has largely been a result of the availability of antiretroviral (ARV) therapy, which has significantly extended the lives of people living with HIV and AIDS. Many developments in the treatment of opportunistic infections can result in these infections being prevented or treated successfully. This

has increased the QoL of people living with HIV or AIDS (San Francisco AIDS Foundation, 2008).

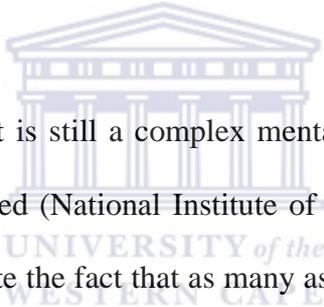
Treatment of HIV and health outcome.

With regular medical care and implementation of other positive lifestyle factors, such as emotional support, many long-term survivors have been living for more than two decades with HIV or AIDS. This highlights the importance of the treatment of the disease and the depression, as well as the enforcement of social changes in order to increase compliance to treatment, life expectancy and QoL. The earlier treatment of the HIV disease and the development of new treatments have shown to increase health outcomes (Shisana, Hall, Maluleke, Stoker, Schwabe, et al., 2002; Natrass, 2006; San Francisco AIDS Foundation, 2008). In South Africa, the use of the National antiretroviral (ARV) rollout programme has been implemented in order to ensure standardised guidelines for the decision making in the selection of individuals and for the process to be followed for its use in treatment (Advanced Adult Antiretroviral Treatment Guidelines, 2005).

Mental health and HIV and AIDS.

Studies which investigated the relationship between HIV infection and risk for depressive disorders demonstrate that individuals diagnosed with HIV are not at greater risk for depression than individuals without HIV (Atkinson, Grant, & Kennedy, 1988; Williams, Rabkin, Remien, Gorman, & Ehrhardt, 1991; Rosenberger et al., 1993; Chuang, Jason, Pajurkova, & Gill, 1992; Lipsitz et al., 1994; Maj et al., 1994; Perkins et al., 1994; Rabkin, Ferrando, Jacobsberg, & Fishman, 1997; Kelly et

al., 1998). However, in a study undertaken which examined the relationship between HIV and depression showed that the diagnosis of major depressive disorder was nearly two times higher in individuals diagnosed with HIV than in the comparative sample without (cited in Ciesla & Roberts, 2001). This was confirmed by another study which demonstrated that alcohol dependence or abuse, anxiety and Post Traumatic Stress Disorder (PTSD) is often prevalent in adults with HIV or AIDS, particularly in Cape Town, but that depression is the most prevalent co-morbid disorder (Rabkin, Ferrando, van Gorp, Rieppi, McElhiney, & Sewell, 2000; Tate et al., 2003; Bradley, Gaynes, Pence, Eron, & Miller, 2008; Myer, Smit, Le Roux, Parker, Stein, & Seedat, 2008).



Despite its high prevalence, it is still a complex mental health disorder which often goes undiagnosed and untreated (National Institute of Mental Health, 2002, Ashton, 2009). It was found that despite the fact that as many as one in three people with HIV suffer from depression, the symptoms of depression were often misinterpreted as a result of the reaction of being diagnosed with HIV (National Institute of Mental Health, 2002). This is one of the objectives of this research study, which will investigate the prevalence of depression within a previously disadvantaged group of adults with HIV or AIDS. It is also important, according to the above mentioned study that clinicians focus on depression as an important neuropsychiatric symptom which is associated with HIV (Tate et al., 2003).

Research has found that adults with severe mental illness have been unequally and disproportionately affected by the HIV or AIDS epidemic (Meade & Sikkema, 2005).

This was confirmed by several other studies which show an increase in HIV infection amongst acute and chronic mentally ill adults in urban areas (Kelly, Murphy, Sikkema, Somlai, Mulry, Fernandez, Miller & Stevenson, 1995). This also demonstrated that individuals with mental illness are more at risk for contracting HIV/AIDS. Another reason for the increase in mental disorders amongst people diagnosed with HIV (according to Dr. John Joska, a UCT neuropsychiatrist) is that HIV attacks the brain quickly (Palitza, 2009). Therefore, empirical evidence supports the fact that mental illness can be a result of the HIV or AIDS, as well as be a consequence of the disease.

In the investigation of the intensity of the depressed state, the severity of depression does not appear to be related to the disease stage of the infected individuals (Ciesla & Roberts, 2001). Furthermore, depression and other mental illnesses can arise independently of HIV infection, can predispose HIV, through risk-related behaviours, or can be a psychological consequence of the HIV diagnosis and disease factors. This co-morbidity poses a challenge for HIV care for professionals and the individuals affected. This results in the need for the development of more complex treatment (Davis, 2005).

Furthermore, according to research studies in developed countries women with HIV or AIDS were found to have higher rates of depression when compared to males (Morrison, Petitto, Have, Gettes, Chiappini, Weber, Bauer, Douglas, & Evans, 2002). A similar research study was then undertaken nationally and findings signified that there were no significant gender differences between males and females with HIV or

AIDS (Olley et al., 2003). In the comparison of demographic characteristics and HIV status, HIV infection on its own was not a risk factor for psychological morbidity for women, but psychosocial stressors were (Stranix-Chibanda, Chibanda, Chingono, Montgomery, Wells, Maldonado, Chipato, & Shetty, 2005). The roles and responsibilities placed on these women, coupled with the lack of recognition and power, results in the occurrence of psychosocial stressors (Ashton, 2009). This indicates the BPS integration and the importance of contextual considerations in the aetiology of mental illness.

Blumberg and Dickey (2003) found that adults with at least one of three psychiatric disorders, namely depression, generalised anxiety disorder and panic attacks, were more likely to partake in high risk behaviours. Depression and high risk behaviours are often mediated by substance abuse and violence in urban areas (Boyd, 1993; El Bassel et al., 1998; Grella, Anglin & Allon, 1996; Johnson, Cunningham-Williams, & Cottler, 2003; Morrill et al., 2001) (cited in Ceyes, 2006). This often results in the transmission of HIV. This also gives a sense of the complex biopsychosocial interrelation and influences on health outcomes.

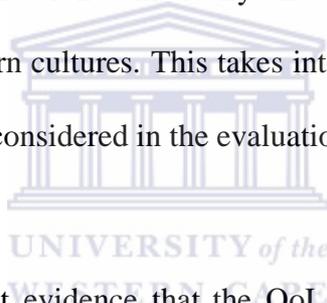
Another study reported that depression in older adults may be related to health status in that they noted there was an association between depression and physical illness (Callahan, Kesterson, & Tierney, 1997). This is the basis of the study, in trying to understand its relationships and how it can inform treatment development in the future (Diwan, Cohen, & Bankole, et al., 2007) (cited in Bartels & Pratt, 2009).

Depression and QoL.

A study by Moore, Höfer, McGee, & Ring (2005) on the relationship between depression and QoL demonstrates that depression and a sense of hopelessness were perceived to be associated with poorer QoL, but depression was not found to alter future QoL, as it remained consistently high despite the depressive state. However, the depressed individuals were found to have a larger gap between their actual present QoL and future QoL. Thus we see that changes in QoL were in actual fact influenced by depression and hopelessness (Moore, Höfer, McGee, & Ring, 2005). Other studies confirmed this as they found that major depression significantly impaired the individual's QoL (Angeletti, 2009; Seeward, Laberge, Gaunthier, Fournier, Bouchard, Baril, Bergeron, 1998). In a review of studies over the past 28 years it was found that generally, lower QoL in people with schizophrenia showed a strong correlation with more depression, more positive symptoms, greater cognitive deficits, and more physical disorders (cited in Bartels & Pratt, 2009). This depicts the link between lower QoL and mental health within individuals that had a mental health disorder.

Research studies investigating the impact of depressive disorders on QoL shows that people who are depressed have diminished QoL due to their depressive state, and that it is proportional to the severity of their depressive state. This was found in English speaking populations, as well as in a Brazilian study (Berlim, Mattevi, & Fleck, 2003;

Demyttenaere, Fruyt, & Huygens, 2002; Sartorius, 2001). Thus, similarities in findings across populations and diverse cultures were found. In another review of studies on QoL and mental illness, there were two studies which showed that mood disturbance was a strong predictor of poorer QoL (Tostes, Chalub, & Botega, 2004; Yang, Chen, Kuo, Wang, 2003) (cited in Collins, Holman, Freeman, & Patel, 2006). However, it is imperative to take culture into account as SA has a multicultural society, where depression may be manifested and QoL may be experienced in differing ways, according to differing cultural beliefs and values to that of western societies (Mukherji, 1995). This can be seen in Xhosa cultures where individuals experience symptoms of depression somatically and conceptualise depression in a different way to that of western cultures. This takes into account the ethnic and racial differences which need to be considered in the evaluation of depression.



Despite there being sufficient evidence that the QoL of people with depression is reduced, and it depicts impairment in social functioning and poorer living conditions, not much is known about QoL after the remission of a depressive episode. In one study it was found that despite there being an improvement, individuals never reach an optimal standard in their QoL, when compared to the larger population (Angermeyer, Holzinger, Matschinger, & Stengler-Wenzke, 2002).

In a sample of 200 older adults with schizophrenia, lower social integration and a lower level of successful aging (measured by their ability to avoid disease and disability, the retention of good cognitive and physical functioning, and engagement in activities in life), Bankole et al. found that the QoL varied in many aspects,

including depressive symptoms, cognitive functioning, acute life stressors, medication side effects, financial strain, and self-rated physical health (cited in Bartels & Pratt, 2009). This study clearly depicted the relationship between the depressive symptoms and various activities and medical aspects which influence a person's QoL. There is also a need to incorporate health promotion, healthcare, and assistance in self management of illness into these psychosocial interventions for older adults (Bartels, 2004) (cited in Bartels & Pratt, 2009). We see that the person needs to be considered holistically in an integrated approach in the development of interventions for older adults with mental illnesses. This includes both mental and physical health needs.

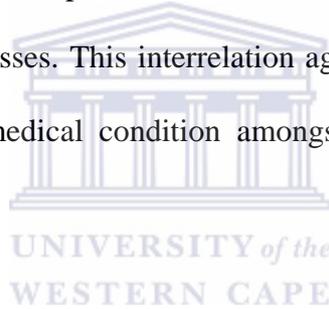
Mental disorders and QoL in people with chronic illnesses.

The high prevalence of depression and anxiety as a co-morbid disorder among patients with general medical disorders has been extensively researched and is currently well known. Its impact on the individuals functioning has also been extensively researched. However, the study of their QoL is currently an area of importance in research (Herrman & Chopra, 2009).

We also see that the impact of somatisation on an individuals functioning and their QoL is a gap and is less well studied (Herrman & Chopra, 2009). Thus, the interrelation between the biological aspects and psychological aspects on their overall well-being is not an area which has been extensively studied. Depression, anxiety and somatisation are prevalent in the general population. The psychological and physiological state, which is often a result of stressors in the environment, alludes to the integrated biopsychosocial components. Failure in addressing these problems in

the management of the general healthcare of the population will result in delayed recovery (Herrman & Chopra, 2009). This indicates the importance in readdressing the current management plans in improving health outcomes and the overall QoL.

Medical problems play a big role in the evaluation of depression in the elderly. With age, there is an increase in a number of medical disorders and risks to medical conditions are also higher. There is equal evidence which suggests that the same is true of depression in middle age. These medical diseases include cancer, heart disease, Parkinson's disease, Alzheimer's disease, stroke, and arthritis. These medical conditions are a risk factor for depression and conversely, depression is also a risk factor for many medical illnesses. This interrelation again highlights the relationship between depression and a medical condition amongst individuals (Krishna et al., 2002).



All of these medical conditions are more prevalent amongst the elderly. This shows that age is an important aspect which should be considered in vulnerability to most medical conditions. HIV is the only virus where the risk is not more amongst this age group (Krishnan, Delong, Kraemer, Carney, Spiegel, Gordon, McDonald, Dew, Alexopoulos, Buckwalter, Cohen, Evans, Kaufmann, Olin, Otey, Wainscott, 2002). In a study examining the impact of chronic disease status on health and well-being of South Africans in early and later old age, it was found that chronic diseases with and without hypertension were more detrimental to health and well being than having no chronic disease or just hypertension alone (Westaway, 2009).

Furthermore, medical co-morbidity puts the person at further risk of responding poorly to treatment and poor tolerance to antidepressants'. This is important to note in the co-morbidity of either HIV or AIDS and their disease factors and depression. Depression in old age also has a poor long term prognosis. There is equal evidence that the same is true of depression in middle age. However, in old age it appears that risk of relapse appears higher (Mitchell & Subramaniam, 2005). This is important in the investigation of depressed people with either HIV or AIDS within various age groups.

Cancer pain was found to have a significant impact on the overall quality of a cancer patient's life by influencing physical, psychological, and spiritual aspects (Ahmedzai, 1995) (cited in Azadeh, Montazeri, Roshan, Tavoli, & Melyani, 2008). Pain is the result of a complex process that can involve emotional, spiritual, cognitive, and sensory components (Chapman, 1998) (cited in Azadeh, Montazeri, Roshan, Tavoli, & Melyani, 2008). This shows the relation of medical conditions and physical pain and its influence on the mental and physical wellbeing or QoL of an individual.

Depression was found to be a potential risk factor for morbidity amongst patients with a number of medical conditions, including HIV, and it was also linked with decreased immune functioning (Cruess, Douglas, Petitto, Have, Gettes, Dubé, Cary, & Evans, 2005). This study depicted the relationship between depression and QoL experienced within people with either HIV or AIDS and their health outcomes.

It was found that positive coping mechanisms were related to positive psychological and health outcomes, particularly with regards to everyday functioning. The negative-internal coping, which included a passive avoidance, was found to be associated with lower pain experienced and better functioning. This finding was contrary to other studies which show a negative correlation with health outcome in these patients (Newman & Mulligan, 2000) (cited in Naidoo, Lindeggar, & Mody, 2004).

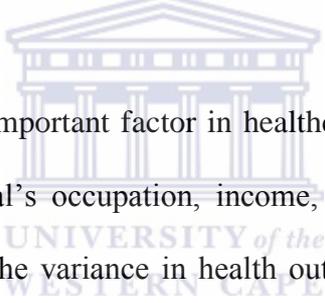
In studies focusing on patients with rheumatoid arthritis, there was no significant association between perception of social support and health outcome in rheumatoid arthritis. This however, was contrary to other findings (Naidoo, Lindeggar, & Mody, 2004).

(Hilsabeck, Hassanein, & Perry, 2005) suggests that treatment for fatigue in patients with Chronic Hepatitis C (CHC) should focus on increasing social functioning, improving physical functioning and decreasing depressive symptoms. This signifies the importance of the holistic treatment in ensuring better health outcomes. In this particular study social functioning was regarded the most significant predictor of fatigue, followed by deterioration in physical functioning, depression and the female gender (Hilsabeck, Hassanein, & Perry, 2005). This provides an indication of the factors which influence QoL.

Social Conditions and QoL.

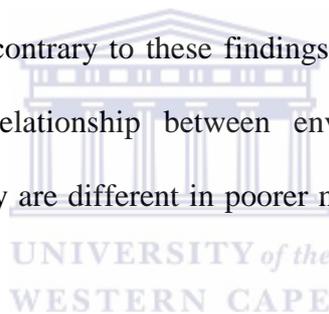
In the investigation of an individual's perception and satisfaction within various activities, it is important to consider contextual and social issues these individuals

face. Furthermore, it is important not to investigate the individual within a vacuum, therefore the context and time (including history) needs to be investigated (Cushman, 1990). In SA, the economy has been negatively impacted by its history of colonisation. The advent of capitalism has resulted in the unequal dispersion of resources and lowered wages, particularly for the poorer and working class individuals. Poverty is rife within developing countries such as SA (Wray, 2009). In studies, the average life expectancy is generally higher when there are smaller differences in income (Wilkinson, 1996) (cited in Gilmartin, 2009). Thus, the consequence of this unequal spread of resources crippled socio-economic growth. This has negatively impacted health promotion and the general QoL (Naidoo, 2004).



Socio-economic status is an important factor in healthcare and illness. It delves into aspects such as the individual's occupation, income, level of education and other aspects. It controls much of the variance in health outcomes and a person's health-related QoL (Adler et al., 1994; Carroll et al., 1996; Carroll & Smitj, 1997) (cited in Gilmartin, 2009). Behavioural and psychosocial aspects are likely to be psychological mediators of the individual's socio-economic status. The unemployment rate in 2006 in South Africa (which excluded those that are unable or discouraged to work) stood at 26.7%. There was also an increase in workers rights, which increased the level of satisfaction amongst the employed. However, this gain for the employed was at the expense of those without work. The enforcement of wage and labour laws resulted in an increase in the unemployment rate. The new labour laws which were enforced as a result of the increase in unemployment, aimed to promote job creation (Moller, 2007). However, this still left a large portion of the countries population unemployed.

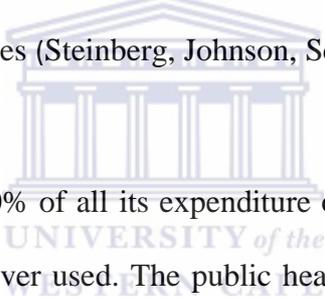
Thus, the economy of the nation and its impact on communities has a grave effect on the individual's general well-being, and is an aspect of concern within many individuals diagnosed with HIV or AIDS. Similar results were found in studies conducted by Young et al. (2000), in patients with rheumatoid arthritis, where course progression of the disease was predicted by lower socioeconomic circumstances (cited in Naidoo, Lindegger, & Mody, 2004). This was confirmed by a study that demonstrated that those adults accessing antiretroviral treatment (ART) are less privileged, relative to the Cape's provincial population (Pienaar et al., 2006). According to Rogers (1992), this is evident in both rich and poor countries (cited in Gilmartin, 2009). However, contrary to these findings, a study conducted by Marks (1999) signifies that the relationship between environmental factors and life expectancy within the country are different in poorer nations than the wealthier ones (cited in Gilmartin, 2009).



As a result we see that although there isn't a sector of the population unaffected by HIV/AIDS, that it is the poorer South Africans who are more vulnerable and affected by its consequences (Steinberg, Johnson, Schierhout, & Ndegwa, 2002). This is due to the added difficult social circumstances with which these adults with HIV and those with AIDS are faced. This also impacts the progression of the epidemic (Ironson & Hayward, 2008). Poverty is also linked to debt. With fewer resources in developing countries, and the offering of loans from the wealthier developed ones, countries in sub-Saharan Africa are falling deeper into debt. This leaves little advantage to the World Health Organisations (WHO) 'Health for All' strategy. In order for this strategy to be a success, health needs to be prioritised in the global developments

policies (cited in Gilmartin, 2009). This allows for the link between the high prevalence of HIV/AIDS in sub-Saharan Africa, and other poverty-stricken areas around the world.

South Africa's health care system consists of a large public sector and a smaller, but fast-growing private sector. Health care within these sectors varies from the most basic primary health care, which is offered free by the state, to highly specialised health services which are available in the private sector for those who can afford it (Health Care, 2008). Given the high rate of poverty within the country, the majority of individuals seeking treatment have no option, but to access these poorly resourced government health care facilities (Steinberg, Johnson, Schierhout, & Ndegwa, 2002).



The state contributes about 40% of all its expenditure on health. The public sector is largely under-resourced and over used. The public health sector is under pressure to deliver services to about 80% of the population. Despite this, most resources are concentrated in the private health sector, which responds to the health needs of the remaining 20% of the population. Approximately 11% of SA's total budget is enmeshed in public health, which is allocated to and spent by the nine provinces. The allocation to and standard of health care delivered varies between these provinces. The Eastern Cape for example, which is faced with greater poverty and health problems, is allocated less resources and financing than wealthier provinces like Gauteng and the Western Cape. The private sector also attracts most of the country's health professionals, which makes the availability of staff unequal and denser in the smaller sector, where privileged services and the latest equipment are also offered

(Health Care, 2008). This leaves the majority of the population neglected and with poorer quality in health outcomes.

According to research, QoL is more concerned with issues regarding family, self and their livelihoods which are often associated with personal wellbeing. QoL in individuals in SA had increased after the first democratic elections in 1994, where it was reported that South Africans were generally satisfied with their lives (Moller, 2007). In another study on elderly people's perceptions of their health care and QoL in a rural area in SA, it was found that despite living beyond the life expectancy, no significant improvement in their QoL was related after Apartheid (Brathwaite, Mogotlane, Rodriguez, Dorsey, Mangongo, Matlakala, 2002).

In QoL studies, national QoL was generally stable over time. These findings were evident through the second Mbeki Presidency where there were promises to improve service delivery in order to achieve the "better life for all" (Moller, 2007). The current President of the Republic of SA, Jacob Zuma, delivered his annual address to the National Council of Provinces (NCOP), where the focus was on achieving the goal of a better QoL for all (South African Government Information, 2009). The results of this are yet to unfold.

Depression, QoL and HIV and AIDS

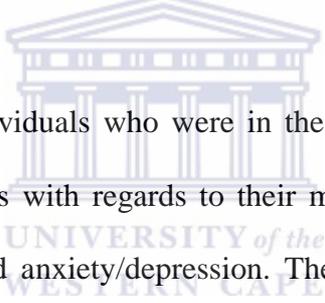
Many individuals diagnosed with HIV or AIDS are depressed due to everyday life stress, a lack of skills, resources, knowledge and prejudices, as well as having to face the epidemic (Jackson, 2002). This gives us a sense of the relationship between the

state, economy, and society and how it affects class struggles. Furthermore, this allows us to understand the QoL of these adults with HIV and those living with AIDS (Kimber, 2002).

In a study which explored the relationship between apathy, depression, and QoL within individuals diagnosed with HIV, apathy was more common among individuals diagnosed with HIV. Furthermore, the impact of apathy on QoL was less significant than depression (Tate et al., 2003).

People that have been recently diagnosed with HIV or AIDS are often found to be at higher risk of depression. This was also found in people that are on ARV treatment and those in the later stage of the disease. This is often due to the side effects of the medication and the deterioration of health (Kay, 2005). A study by Seeward, et al. (1998) demonstrates that people with a medical condition and a co-morbid mental disorder, were not receiving quality medical care. Whether this is due to inequalities in treatment by medical staff due to prejudices regarding their current or previous mental disorder, or due to reduced care taken up by the patients themselves was not certain. However, other studies reviewed suggest that adherence to treatment is effected in these individuals with the epidemic and a co-morbid diagnosis of depression. Those with previous mental health problems are often at high risk of medical complications such as diabetes, cardiovascular and lipid disorders therefore it is important to enhance appropriate medical care in this group (Mitchell, 2009).

Higher levels of depression were also associated with an increase in high risk sexual behaviour which could lead to further HIV transmission (Seeward, Laberge, Gaunthier, Fournier, Bouchard, Baril, Bergeron, 1998). A number of studies on homosexual men with HIV have examined the association between decreased CD4 Lymphocyte counts and depression. Earlier studies found no association between depression and HIV disease stage and CD4 cells over the 6 month period. However, a later study showed a relationship between baseline depression scores and a faster rate of CD4 decline over a 5 and a half year follow up amongst these men (Olley, Seedat et al., 2004). This raises the question of whether depression influences the course of the disease in the later stages of the infection.



According to a study on individuals who were in the third and fourth stage of the disease, there were limitations with regards to their mobility, performance in usual activities, pain/discomfort and anxiety/depression. Therefore we see that there is a need to provide not only medical care, but also physical and mental rehabilitation services needs to be provided as health services (Hughes, Jelsma, Maclean, Darder, & Tinise, 2004). Other variables predicting the QoL to a lesser degree includes age, number of negative life events and evidence of an increase in symptoms. This highlights the importance of QoL in HIV-infected adults (Olley & Bolajoko, 2008).

In a review of seven studies on QoL and mental health variables (Au et al., 2004; Jacob, Eapen, John, & John, 1991; Mast et al., 2004; Molassiotis, Callaghan, Twinn, & Lam, 2001; Tostes, Chalub, & Botega, 2004; Yang, Chen, Kuo, & Wang, 2003) it was discovered that an increase in the physical symptoms of HIV was associated with

poorer QoL and greater levels of anxiety. Depression was related to fatigue, higher uncertainty in illness, and scored lower on psychological, social and environment subscales of a QoL assessment.

Fatigue is frequently reported as symptomatic of the HIV disease and affects all aspects of an individual's QoL. In order to improve the treatment of individuals living with the HIV disease, it is imperative to address all factors which contribute to fatigue. This was done in a past study in order to determine the associations of physiological, psychological, and sociological factors with fatigue in people with HIV/AIDS. In the study there was a significant relationship between the quality of sleep, sleepiness during the course of the day, symptoms of HIV, anxiety, depression and perception of stress. This study added to the findings that more emphasis was needed on environmental aspects and psychosocial stressors are important and not only the amount of sleep, but also the qualities of sleep (Phillips, Sowell, Rojas, Tavakoli, Fulk, & Hand, 2004). Thus, this would assist in informing treatment in the future, as well as future research studies.

A study indicating the severity of the depressed state indicated that one in ten people who were diagnosed with HIV were also suicidal (Palitza, 2009). HIV infected adults who thought about suicide, were found to have greater levels of emotional distress, used avoidance strategies for coping and were found to have poorer health-related QoL than those who did not have suicidal ideations (Rabkin, Remien, Katoff, et al., 1993). They were also more likely to have disclosed their HIV status, and perceived receiving significantly less social support from friends and family (Kalichman,

Heckman, Kochman, Sikkema, & Bergholte, 2000). This further demonstrates the link between HIV and AIDS, depression and psychosocial stressors. This also depicts the subjective nature of perceived social support and its influence on the depressed state.

Within the demographic characteristics, gender, impact of negative life events, and disability were shown to predict current major depression in people with HIV or AIDS (Olley, Seedat, Nei, & Stein, 2004). Studies, however, also demonstrate that QoL was the strongest predictor of depression (Gore-Felton et al., 2006). There is evidence to suggest that the QoL decreases when a person is faced with depression (Lundbeck Institute, 2009). Another study by Collins, Holman, Freeman, & Patel (2006) showed that women with HIV had lower scores in all areas of QoL, including mental health, when compared to their counterparts. Among infected women with greater than four HIV-related symptoms, they reported morbid and severe depressive states. Another study showed that positive outcomes in the individual's disclosure were related to higher total QoL scores and higher scores reported in the social and environmental domains. However, the outcomes of the process of disclosure were not related to anxiety or depression (Collins, Holman, Freeman, & Patel, 2006).

In the investigation of the relationship between the quality of social support and depression, a study which explored the role of attachment style in adults with HIV or AIDS, adult romantic attachment style was strongly associated with perceived stress, depression and stigma. Therefore, we see that with the inclusion of symptoms of HIV, other psychosocial risk factors such as attachment style and stigma contribute to perceived stress and depression among men and women diagnosed with either HIV or

AIDS (Riggs, Vosvick, & Stallings, 2007). In the field of neurology, extensive research has been undertaken on depression amongst individuals diagnosed with HIV or AIDS. However, the effects of stress and depression on endocrine and immune function and its possible effects on the progression of the HIV-1 disease require a long term and cross-cultural comparisons in its investigation (Stern, Perkins, & Evans, 2000).

Moreover, education and literacy of women was found to be an additional predictor of life expectancy (Gilmartin, 2009). This shows the quality of education on life expectancy of women particularly, who are marginalised. This influence on health has been related to a mother's health contributing to the promotion of health within her family (Gilmartin, 2009). However, nuclear families are not always evident in many societies and thus, this will not be the standard protocol in many cultures, particularly within SA (Richter & Desmond, 2008). South Africa's culture, family structures, economic circumstances and sociological patterns differ from developed countries. Many South Africans rely on social support on a micro systematic level. This leaves many children taking on the role of parents and grandparents looking after children. Also, many seek care from spiritual advisors and traditional healers, including witch doctors as a primary source of care and treatment (Sorsdahl, Stein, Grimsrud, Seedat, Flisher, Williams, Myer, 2009). This, as opposed to traditional western forms of treatment is often valued more. This also negatively affects compliancy to treatment and health outcomes if it is not considered (Van der Merwe, 1995). These national studies depict the cultural and contextual circumstances of the sample.

Chapter 3

Methodology

3.1 Research Design

This study is a cross-sectional, descriptive one, located within a quantitative research paradigm. This design was utilised because it is an objective, systematic process where numerical data was used to obtain information about adults diagnosed with HIV or AIDS (Cormack, 1971). The research question, aim and objectives of the study further justify the use of this research design. This was a structured study, where established questionnaires or inventories were used in order to reach the aim and more specific objectives of the study (Mc Millan & Schumacher, 1997). The participants were requested to answer specific questions in order to attain quantitative data, which in turn addresses the research question. The dependent variables (DVS) in this study were depression and QoL. The disease, i.e. HIV or AIDS was the independent variable (IV).

This research study will contribute to the larger study as already discussed in the introductory section of the thesis. The findings in the larger study will be applied to the establishment of treatment regimens for people living with HIV or AIDS in the setting in which the project was conducted. The larger study is a pre post-intervention design, which will measure the effectiveness of a newly proposed management plan for individuals with HIV and AIDS being treated at a public health site.

3.2 Research Setting

The study took place in a previously disadvantaged area, at a city health clinic within the greater Cape Metropolitan area. The city health clinic is surrounded by 44% of brick structured houses (with yards) and 36% of informal settlements and other diverse housing and living arrangements (City of Cape Town Census 2001). This area has identified HIV and AIDS as its leading health care problem (City of Cape Town, 2008).

3.3 Participants and Sampling

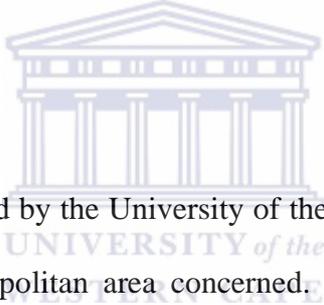
The participants in the study comprised of 70 male and female adult patients diagnosed with HIV or AIDS. The sample included 20 males and 50 females (this indicates a male to female ratio of 2:5). The participants were recruited within a previously disadvantaged area; therefore the majority was of a low socioeconomic status. 90% were isiXhosa speaking and 10% comprised of English and other African language speakers. Adults on antiretroviral (ARV's), and those being prepared for antiretroviral treatment were recruited using a convenience sampling method. Convenience sampling was used due to the fact that the total population of HIV and AIDS patients was relatively small. Consequently, every patient was approached and those that agreed to participate in the study were included provided they met the inclusion criteria. The participants' health was considered in recruiting the sample. This meant that if the potential participant was feeling physically unwell, they were not recruited for the study. This non-probability method was used in order to get a gross estimate of the results, without incurring the cost or time required to select a random sample. The sample did not exclude adults who had

tuberculosis (TB), due to the high comorbidity of TB in adults diagnosed with HIV or AIDS in South Africa (Heywood, 2004).

Inclusion and exclusion criteria.

The study was limited to adults attending a health care clinic in a previously disadvantaged area in the Cape Metropole. Due to the high prevalence rates of TB within individuals diagnosed with HIV or AIDS, as previously stated in this chapter, this will be included as a viable co-morbid medical diagnosis within this sample. The study did not include those participants that were too ill to partake in the study and those that had a mental illness and were cognitively impaired.

3.4 Procedure



Ethical clearance was provided by the University of the Western Cape and the Health Authority of the Cape Metropolitan area concerned. Four research assistants were trained by the Principle Investigator (PI) and participants were recruited with the assistance of the staff at the respective clinic. The staff was also trained by the PI with respect to how to go about including or excluding potential participants. The potential participants were briefed with regards to the research study and its aims and objectives. They were informed of the benefits of their contribution to the study and about the scope of the study. This information was also included in the information sheet, which is included in the appendix.

Those participants who agreed to participate were given consent forms, available in isiXhosa and English, and were provided with an option to answer the questionnaires

in a language of their choice. Research assistants were available throughout the data collection in order to provide assistance and ensure the smooth flow of the research process. A room was located for the participant to complete the questionnaires. This room also ensured that the participants had a private space in which to take part in the study. The questionnaires took approximately two hours to complete and refreshments were made available for the participants. The research was conducted in an ethical manner, as stated in the section on ethical considerations.

3.5 Ethical Considerations

Ethical clearance was granted by the University of the Western Cape (UWC) to the larger research project (Ref. Code: 08/06/5). Ethical clearance was also provided by the Health Authority that administrates and provides services at the clinic. The prospective participants were informed about the aims and procedure of the study, the benefits and length of the questionnaire, as well as the availability of counseling if requested. They were also made aware of voluntary participation, and assured that they would not forfeit any benefits, if they refused to partake in the research study. The participants were informed of their rights in the research process.

They had the ability to withdraw at any stage during the research process and the necessary steps were taken to ensure confidentiality. The collected data was kept with the PI under lock and key and was only accessed for the purpose of data analysis. The participants were allocated a participant number in order to ensure anonymity. All of this was available in the form of an information sheet, which was made available in English and isiXhosa. A consent form was signed by each participant before the

questionnaires were undertaken. This was also available in English and isiXhosa, so as to ensure the participant has a choice of language. Participation did not interfere with the treatment programme as it existed within the clinic. When patients appeared distressed during the process, they were referred to a mental health professional within the clinic, who was available to assist with psychological support.

3.6 Data Collection Tools

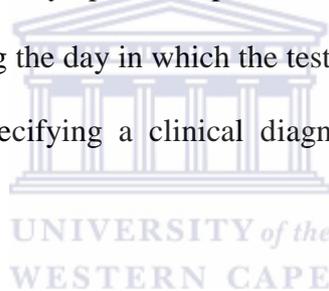
A battery of questionnaires was used for the purpose of collecting data for the larger study. This included a biographical questionnaire, the Beck Depression Inventory II (BDI II), the Hospital Anxiety and Depression Scale (HADS), Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q) and the Repertory Grid Technique (RGT). For the purpose of this study, part of the Biographical questionnaire, the Beck Depression Inventory II (BDI II), and the Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q) was used.

The biographical questionnaire gathered data regarding the participants age, sex, marital and socioeconomic status. Disease factors, such as whether the participants was HIV positive or was diagnosed with AIDS and whether they were on ARV's, were also obtained. Where possible, the CD4 count was also obtained. This information was used to allow a comparison of subgroups within the sample and to enhance findings, which could be a platform for future studies. It also contributes to the existing data base.

Beck Depression Inventory II (BDI-II).

The Beck Depression Inventory II (BDI-II) was used to measure depression. It is the updated version of the self-report depression inventory, which consists of 21 questions developed to screen the degree, intensity and depth of depression in clinical patients aged 13 years and older (Beck, Steer, & Brown, 1996) (cited in Kumar, Steer, Teitelman, & Villacis, 2002). It was used to indicate the presence and severity of depressive symptoms as stated as criteria in the Diagnostic and Statistical Manual of Mental Disorders- Fourth Edition (DSM-IV, 1994).

The BDI evaluated depressive symptoms experienced by the participants over the previous two weeks, including the day in which the test was administered. It was used for screening rather than specifying a clinical diagnosis (Beck, Steer, & Brown, 1996).



The BDI measures the somatic, cognitive, affective and vegetative symptoms of a depressive state. The revised version corresponds with the criteria of a Major Depressive Disorder in the DSM-IV. The inventory has been translated into several languages, including isiXhosa (Arbisi, 2001). The BDI-II was administered by individuals that were given training in the administration of the questionnaire. Also, the guidelines for the use of test were made familiar to the people administering the questionnaire. Test administration was relatively simple and user-friendly. Provision was made for a quiet environment with adequate lighting, which was imperative in the facilitation of optimal concentration and valid results. The administrator was made aware of the importance of the participant's ability to read and comprehend the items.

If it appeared that they were unable to, then the research assistants would read the items (Beck, Steer, & Brown, 1996).

The research assistants administering the questions were adequately trained and had the resources in place in the case of a crisis or the need for assistance. Special attention needed to be given to the responses to specific items, e.g. those exploring pessimism and item 9, which deals with suicidal thoughts or wishes, and alluded to possible suicidal risk. It was imperative to take note that some participants may not exhibit suicidal potential, but may have stopped eating and sleeping. Hence, suicidal tendencies had to be further examined at a later stage. The administrator also remained aware of the fact that each person uniquely displays their own manifestation of symptoms, which needed to be individually assessed.

The BDI-II generally took approximately 5-10minutes to complete. However, patients with a severe degree of depression, who found it difficult to comprehend and who was in the more advanced stage of the disease were expected to take longer (Beck, Steer, & Brown, 1996). Because we were working with people with HIV and those with AIDS and possible co-morbid diseases this needed to be well considered and expected. The raw scores were calculated by adding the ratings on the 21 items, each of which was rated on a 4 point scale. The highest score total was 63. Cut-off scores were set for the purpose of assessing the severity of depression. They were classified into four groups (mildly depressed, moderately depressed, severely depressed and nondepressed) (Beck, Steer, & Brown, 1996).

Reliability and validity of the Beck's Depression Inventory II (BDI II).

Two reviews on the BDI's properties across both clinical and non-clinical populations showed high reliability in both (Beck, Steer, & Brown, 1996). The BDI-II is shown to have a high internal consistency and test-retest reliability, in comparison to its previous versions, and is reliable on both the psychiatric and non-psychiatric samples (Smarr, 2003).

The concurrent construct validity of the BDI concerning a variety of psychological measures was established (Beck, Steer, & Brown, 1996). The BDI II version has higher content validity through its revision and added items. It has construct validity and correlates with the construct hopelessness within the normative sample, and is found to have yielded two factors, namely somatic-affective and cognitive factors. It has criterion validity and is positively correlated with the Hamilton Rating Scales for Depression (HRSD). The Cronbach alpha coefficient was used to measure the reliability of the BDI II used for data collection for the purpose of this research study.

The sample age ranges from 18-65. The BDI II has moderate to high convergent validity with other measures of depression within individuals of this age group (Kumar, Steer, Teitelman, & Villacis, 2002). It provides a valid assessment of depressive symptoms in people with HIV/AIDS particularly. The depressive and HIV-related symptoms are easily distinguished because the scale has a somatic symptoms subscale (Arbisi, 2001). It has shown high levels of validity and reliability across cultures (Kojima, et al., 2002; Nuevo et al., 2008). According to Foxcroft & Roodt (2001), the BDI has been increasingly adopted and standardised on various cultural

groups in South Africa, and has been used extensively for research purposes particularly. However, there is little research investigating the psychometric properties of the isiXhosa version in South Africa. The BDI II is also an inexpensive tool that can be utilised in South African public sectors to detect depression and assess the QoL of these individuals seeking health care services (Naidoo, 2004).

Scoring of the BDI II.

The BDI is based on raw scores and does not have norms. Twenty-one items produces a maximum score of 63 and a minimum score of 0. Each item has a range of scores from 0 to 3 (Beck, Steer, & Brown, 1996). The BDI II was not standardised for different ethnic and cultural groups, and therefore, it is difficult to capture the various cultural factors influencing how depression is experienced and expressed (Hagen, 2007). Research indicates that women tend to score higher on the BDI than men and items on the BDI which focuses on 'crying' may hold different meaning for men and women and may have resulted in gender bias (Hagen, 2007). The sample consisted of 20 males and 50 females. This was considered in the scoring of the questionnaires.

Item-related issues.

The BDI has an obvious pattern in its ordering of responses, which may have led to faking, social desirability bias and/or defensiveness (Gregory, 2000). In a past study, patients with greater social desirability response bias reported less depression on the BDI, but higher levels of pain experienced (Deshields, Tait, Gfeller, & Chibnall, 1995). The weighting of the items poses another problem. The generation of the scores is a result of adding the individual scores of each of the items. This raises questions regarding the scoring technique and whether the total score is accurate. It

also questions the weighting of the items, and whether or not each of the added items should have equal value (Hagen, 2007).

Limitations of the BDI II.

The limitations of the BDI II includes issues related to norms, which include bias issues, problems wording, ordering and weighing of the BDI items; potential gender bias; and criticisms regarding the theoretical limitations (Hagen, 2007). However, questions regarding weight gain or loss were considered if manifested in conjunction to feeling sad and not wanting to partake in pleasurable activities.

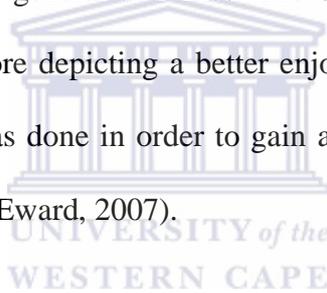
Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q).

The Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q) is a self-report measure, which is used to obtain information on the degree of enjoyment and satisfaction the individual experiences. It is available in English and was translated into isiXhosa. The Q-LES-Q consists of 93 items, which covers a vast range of daily activities. These questions were rated on a Likert scale from 1 to 5. The ranges of the QoL within each domain signified a minimum of 1.79 and a maximum of 112.50 within the General domain of QoL. The physical domain indicated a minimum of 6 and a maximum QoL of 100. The minimum QoL on the social relations domain indicated a minimum of 9.09 and a maximum of 100.

In the evaluation of the individuals QoL, it was essential to take into account numerous aspects and activities within the person's life (Chaturvedi & Venkateswaran, 2008). It included various areas of life and experience, as well as the

inclusion of the impact of illness and treatment. Furthermore, if changes are to be made in health outcomes, QoL could not be understood in isolation of the context of gender, class, or ethnicity/race (Naidoo, 2004). This highlights the importance of the descriptive information within the sample. Furthermore, an individual cannot be viewed in isolation of that environment, thus giving rise to the importance of the social domain within the Q-LES-Q (Marks, Murray, Evans, & Willig, 2000).

The questions were sub-grouped into scales, which included the person's physical health, subjective feelings, work, household duties, school/course work, leisure-time activities, social relations and general activities. The 8 sections were scored on a 5-point scale, with a higher score depicting a better enjoyment and satisfaction within that specific domain. This was done in order to gain a sense of their perception and satisfaction in life (Ritsner & Eward, 2007).



Reliability and validity of the Q-LES-Q.

Since 1993, the Q-LES-Q was used to measure health-related QoL in studies on depression amongst other mood and anxiety disorders, as well as psychosis. This validates its use alongside the BDI II and for the purpose of measuring the relationship between depression and QoL. The Q-LES-Q possesses acceptable psychometric properties and is responsive to change in both psychological (depression) and pharmacological (HIV or AIDS) treatment interventions, which will inform the larger research study (Michalak, Yatham, & Lam, 2005).

The basic Q-LES-Q domains include the 18-items from the following domains: physical health, subjective feelings, leisure-time activities and social activities. The Q-LES-Q-18 showed that the test-retest reliability showed high reliability, validity and stability and thus is important in its inclusion (Ritsner & Eward, 2007). The Q-LES-Q was found to be reliable and valid particularly in its use on depressed patients. The Q-LES-Q was also able to detect differences between depressed patients, in comparison to other similar measures (Endicott, Nee, Harrison, & Blumenthal, 1993).

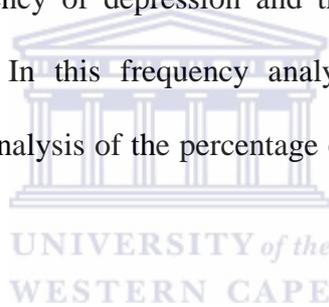
The Cronbach alpha coefficient was used to measure the reliability for six domains of the Q-LES-Q in this study. The internal reliability for work, household duties and school work domain could not be run due to missing data and the non-relevance of the item(s) for certain participants. This was due to many of the participants that were unemployed, not attending school or a course and a large portion that were not expected to attend to household duties. The Cronbach alpha coefficient for the Q-Physical health/Activities domain is 0.88, and for the Q-Feelings domain is 0.83. The Cronbach alpha coefficient for the Q-Leisure Time Activities is 0.91 and Q-Social Relations is 0.81. The Cronbach alpha coefficient for the General Activities domain of the Q-LES Q signified a reliability coefficient of 0.93. This indicates an overall high internal consistency for all the domains.

The administration of the Q-LES-Q on subjects with mood or anxiety disorders was previously found to have impairment in their QoL. However, the degree of dysfunction varied. This validates its use for the purpose of this study. The results are also partly impacted by the individual's perception of QoL (Rapaport, Clary, Fayyad,

& Endicott, 2005). Thus the subjectivity of the results and its validity needed to be considered in the interpretation.

3.7 Data Analysis

The data collected was analysed using the Statistical Package for the Social Sciences version 17.0 (SPSS), which is used to analyse quantitative information, manage data and chart results (SPSS-SA, 2008). Descriptive and inferential statistics were used (Bless & Kathuria, 1993). Descriptive statistics was used to organise and summarise the data (Pretorius, 2007). This was conducted with the use of graphic displays, in order to calculate the frequency of depression and the measure of QoL of adults diagnosed with HIV/AIDS. In this frequency analysis an ungrouped frequency distribution was used in the analysis of the percentage of depressed individuals in the larger sample.



In the analysis of the severity of depression and QoL a grouped frequency distribution was used (Pretorius, 2007). The number of participants within a certain range of severity was allocated, namely non-depressed, mild, moderate and severe depressed individuals. The ranges were allocated according to cut-off scores. The cut-off scores were 0-13 (minimal or non-depressed), 14-19 (mild), 20-28 (moderate) and 29-63 (severe). Thereafter, a percentage of the larger sample was calculated, within the ranges of severity. The cumulative frequency provided an analysis of the amount of people within the sample who fell in or below a certain range or severity of depression. The cumulative frequency was the percentage of these people who fell in, or below, a particular group of severity (Pretorius, 2007).

Inferential statistics were also used in order to generalise and draw conclusions concerning the quantitative set of data describing the sample, to the larger population. It was also used in drawing conclusions about the data. With regards to the relationship between depression and QoL of these individuals diagnosed with HIV or AIDS, both descriptive and inferential statistics was used in this correlation analysis (Pretorius, 2007).

In determining the relationship between QoL and depression, a correlational analysis was used. This was conducted in order to determine if depression and QoL co-vary or systematically change together (Pretorius, 2007). This relationship was indicated as a correlation coefficient (Pretorius, 2007).

Chi-square was used in order to compare two categorical variables or biographical data and a categorical variable, such as HIV/AIDS and depression or gender and depression. Chi-square was used in order to test how much difference there was between the actual observed frequencies and the expected frequencies (Pretorius, 2007). When the differences between more than two groups were tested, the one-way Analysis of Variance (ANOVA) was used. This was used in order to compare the means of QoL with the frequency of adults with HIV or AIDS, within the different levels of intensity of depression. This was used in order to conclude whether observed differences in these adults were a result of a chance occurrence or an actual systematic effect (Pretorius, 2007).

In order for this to be affective, the differences between these means were reduced to a variance. This was done as a summary of all the groups around the mean. If there was a large difference between the means of the groups, then the variation would be large. If however, the means do not differ, the variation was small. Furthermore, the differences between groups and within groups needed to be taken into account. Thus, a significant difference is a result of the variations occurring within the groups being larger than the differences between the groups. In order for this to be determined, a comparison of (within) variance and (between variance) was made (Pretorius, 2007).

However, in certain groups which are non-parametric, Kruskal-Wallis or the H-test was used. This has the same purpose as the one-way ANOVA, but is not restricted to the analysis of normal distribution or the homogeneity of the variance. Thus, it was utilised in cases where more than two independent groups were compared to one continuous variable. Thus, if this test is significant, it is an indication that these individuals with HIV/AIDS have a significant effect on the outcome measure (Pretorius, 2007).

Chapter 4

Results

Introduction

In order to describe the sample, various descriptives of demographic information have been outlined. This is followed by the descriptive statistics of the variable depression, and the number of participants with HIV or AIDS within each range of the intensity of depression. Furthermore, the relationship between depression and various other demographic variables follows in order to conclude whether there were significant differences. Thereafter, a description of the overall QoL is outlined. This is followed by the descriptions of the various domains of QoL within their lives, and the relationship of each domain of QoL with depression.

4.1 Characteristics of the sample

In Table 1 below, the demographic characteristics of the sample is presented. The sample consisted of 70 adults diagnosed with either HIV or AIDS.

Sex.

The males consisted of 28.6% of the sample and the females 71.4%. This may be a result of the larger amount of females attending the public health care facility or a result of more females that were willing to participate in the research study.

Age group.

There was 17.6% of the sample that were within the ages of 18 to 24 years, 76.5% of the sample were within the age group of 25 to 49 years and 5.9% were within the age

group 50 years and older. A larger amount of the sample was within the age group 25 to 49 years and this may be a result of chance, due to the convenience sampling method used in the selection process. This also correlates with past studies which signify that AIDS-related mortality is the most common amongst individuals that are of reproductive age (Myer, Seedat, Stein, Moomal, & Williams, 2009).

Language.

A large majority of the sample were isiXhosa-speaking (90%) and 2.9% were English-speaking. A meager 7.1% of the sample spoke one of the other African languages. In this study setting, isiXhosa is widely spoken and accounts for the larger amount of Xhosa speaking individuals within the sample.

HIV or AIDS.

Within the sample, 40% were HIV positive and 60% were diagnosed with AIDS. This excluded the missing data (7.1%). As mentioned in chapter 1 and two, HIV is the virus that attacks and replicates within the cells of the human body and AIDS occurs during the later stage of the disease when the virus attacks the immune system and the CD4 count is usually below 200 cells per mm³ (Jackson, 2002). Thus a larger amount of the sample was within the later stages of the disease.

Stage of disease.

Within the 46 people with which the CD4 count was recorded, 4.3% were within stage 1 of the disease, 28.3% were in stage 2 of the disease and 67.4% were within

stage 3 of the disease. A higher number of participants were in the later stages of the infection and therefore diagnosed with AIDS.

Employment status.

The majority of male and female participants that was unemployed (85.7%). This could be a result of the low levels of education, which influences the employment opportunities available for these individuals. Furthermore, all the employed participants (14.3%) were males. This could be due to traditional patriarchal beliefs that may still be held within the culture and as a result of the high unemployment rate in SA.

Marital status.

There were 47.8% of adults with HIV or AIDS in this study that were never married, 11.6% were living with their partners. Whilst 29% of the sample was married, 5.8% were separated, 2.9% were divorced and 2.9% were widowed.

Table 1 <i>Descriptive Statistics of the Demographic Variables</i>		
Variable	x	%
Sex		
Male	20	28.6
Female	50	71.4
Totals (N=70)		
Age group		
18-24yrs	12	17.6
25-49yrs	52	76.5
50yrs+	4	5.9
Totals (N=68)		

Language		
English	2	2.9
IsiXhosa	63	90
Other	5	7.1
Totals (N=70)		
HIV Status		
HIV	26	40
AIDS	39	60
Totals (N=65)		
CD 4 Count		
Stage 1	2	4.3
Stage 2	13	28.3
Stage 3	31	67.4
Totals (n=47)		
Employment Status		
Employed	10	14.3
Unemployed	60	85.7
Totals (N=70)		
Marital Status		
Never married	33	47.8
Living with partner	8	11.6
Separated	4	5.8
Married	20	29
Divorced	2	2.9
Widowed	2	2.9
Totals (N=69)		

4.2 Depression and QoL

Depression.

Table 2 below depicts the prevalence of depression within the sample

Prevalence of depression.

Table 2 <i>Prevalence of Depression</i>		
Depressed State	x	%
Depressed	25	36.8
Not Depressed	43	63.2
Total (N=68)		
Category of Depression		
Minimal	43	63.2
Mild	5	7.4
Moderate	11	16.2
Severe	9	13.2
Total (N=68)		

Categories of depression.

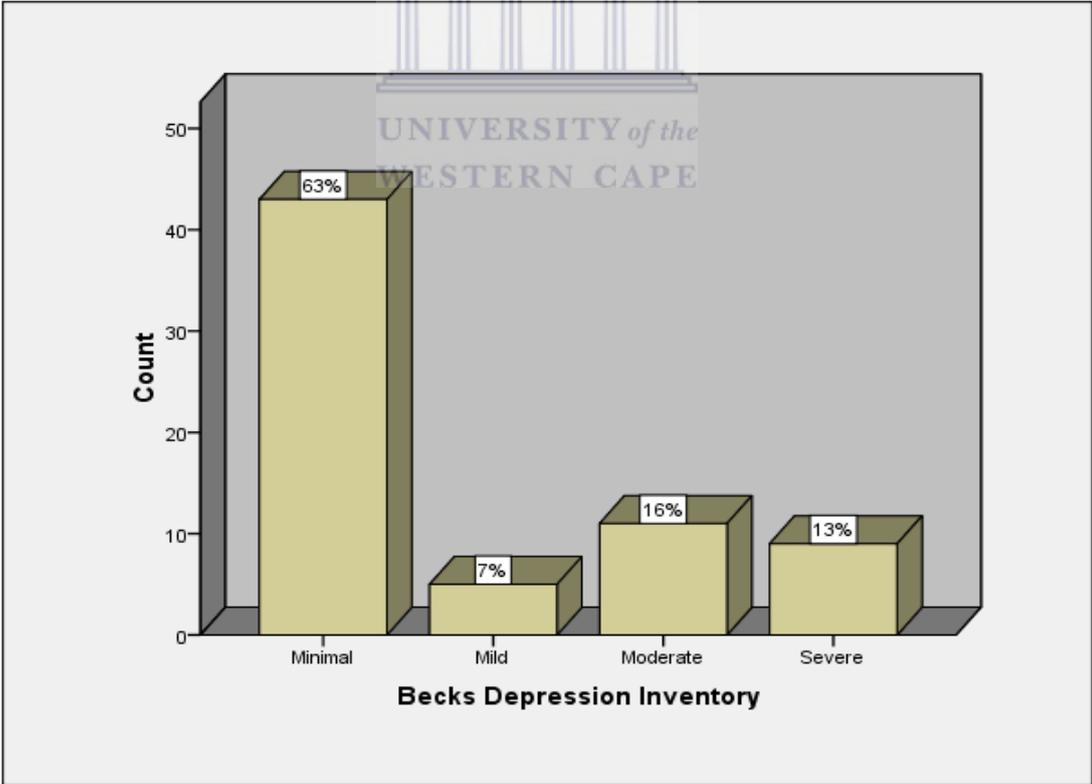


Figure 2A. Frequency count of the Categories of Depression. This figure depicts percentage of people within the sample with minimal, mild, moderate and severe depression respectively.

Table 2 above shows that there were 36.8% of adults with HIV or AIDS who were depressed and 63.2% who were not depressed. Table 2 and graph 1 above show that the depressed group included all those participants that had depression scores within the mild, moderate and severe categories. There were 63.2% of the sample that were minimally depressed, 7.4% with mild depression, 16.2% with moderate depression, and 13.2% with severe depression.

Depression and demographic characteristics.

Table 2.1 below shows that amongst the 36.8% of adults, who were depressed, 50% had HIV and 50% had AIDS. The table below further indicates that amongst the 63.2%, who were not depressed, 65% had HIV and 35% had AIDS. Within the adults with HIV or AIDS who were depressed, 20% were between the ages of 18 to 24 years, 76% were between the ages 25 to 49 years, and 4% were older than 50. Within the adults with HIV or AIDS who were not depressed, 16.3% were between 18 and 24 years old, 76.7% were between the ages 25 to 49 years and 7% were older than 50 years of age. There were 50% of employed adults with HIV or AIDS with depression, and 18.9% of unemployed adults with HIV or AIDS with depression. Amongst the adults who were not depressed, 50% were employed and 50% were unemployed. This inclusion of demographic and disease characteristics are essential in the consideration of treatment protocol, due to SA's multicultural society and the implication of these characteristics on the means of relating etc.

Table 2.1 <i>Cross Tabulation of overall depression and variables</i>			
Variable/Demographics	Depressed State	x	%
HIV Status			
HIV AIDS	Depressed	12	50
HIV AIDS	Not Depressed	12	65
Total (N=64)		14	35
Age Group			
18yrs-24yrs	Depressed	5	20
	Not Depressed	7	16.3
25yrs-49yrs	Depressed	19	76
	Not Depressed	13	76.7
50+ yrs	Depressed	1	4
Total (n=45)	Not Depressed	3	7
Employment Status			
Employed	Depressed	9	50
	Not Depressed	5	50
Unemployed	Depressed	11	18.9
Total (n=63)	Not Depressed	38	65.5

Demographic variables and depression categories.

Table 2.2 demonstrates that 75% of male participants and 58.3% of the female participants had minimal depression. Amongst the males with mild depression there were 5 % with mild depression, and 8.3% of females with mild depression. There were 10% of males and 18.8% of females with moderate depression, and 10% of males and 14.6% of females with severe depression.

Table 2.2 indicates that amongst the employed adults with HIV or AIDS, 50% were minimally depressed, 30% were mildly depressed, and 20% were moderately depressed. Within the group who were employed, none were severely depressed. Amongst the adults who were unemployed, 65.5% were minimally depressed, 3.4% were mildly depressed, 15.5% were moderately depressed, and none were severely depressed. Table 2.2 indicates that 4% of adults with HIV or AIDS within stage 1 of infection who was minimally depressed. Within the individuals within this stage, 0% was mildly depressed, 1% was moderately depressed and 0% was severely depressed. This amounts to 4.4% of adults within the 1st stage of infection.

HIV and AIDS and depression categories.

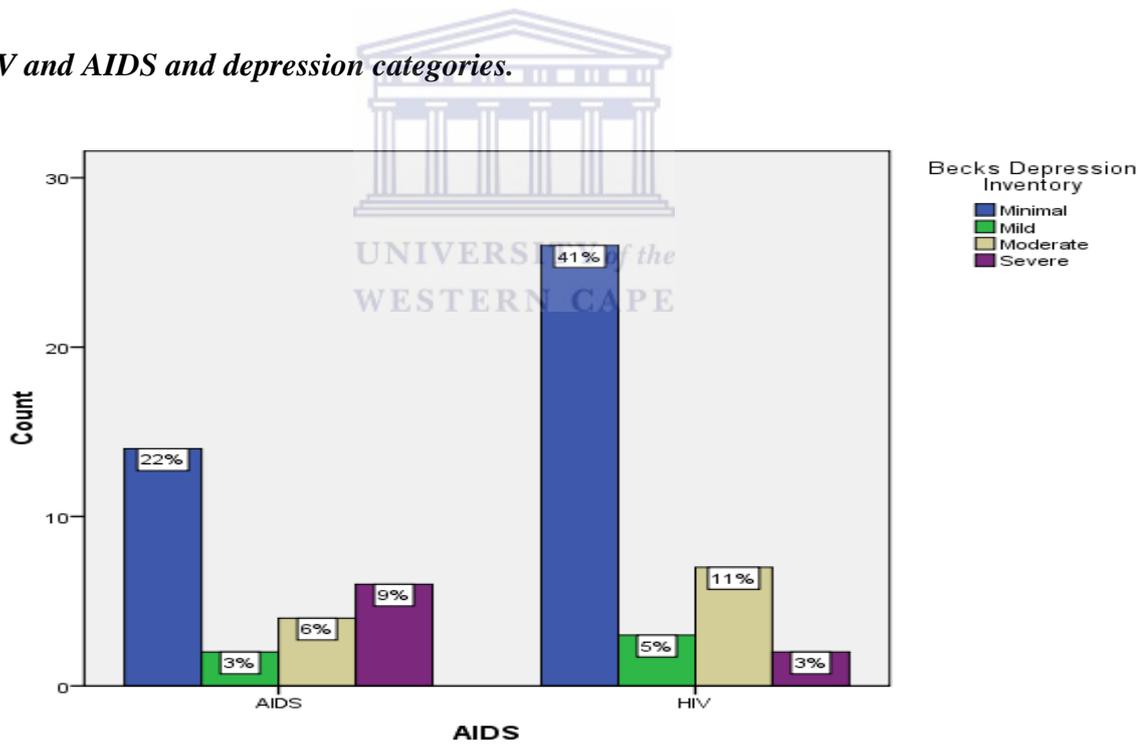


Figure 2B. Bivariate Analyses of HIV/AIDS and Depression Categories. This figure depicts the percentage of participants with HIV and AIDS and their level of depressed state.

Within the adults in stage 2 of infection, 40% were not depressed, 33.3% were mildly depressed, 11.1% were moderately depressed, and 12.5% were severely depressed.

This amounted to 28.9% of adults with depression that were within this stage of infection. Within depressed adults that were within the third stage of infection, 56% were minimally depressed, 66.7% were mildly depressed, 77.8% were moderately depressed, and 87.5% were severely depressed. This amounted to 66.8% of depressed adults within this stage of infection.

Table 2.2 <i>Cross Tabulation of Demographic Variables and Depression</i>			
Variable	Levels of Depression	x	%
Sex			
Male	Minimal	15	75
	Mild	1	5
	Moderate	2	10
	Severe	2	10
Female	Minimal	28	58.3
	Mild	4	8.3
	Moderate	9	18.8
	Severe	7	14.6
Employment Status			
Employed	Minimal	5	50
	Mild	3	30
Unemployed	Moderate	2	20
	Severe	0	0
	Minimal	38	65.5
	Mild	2	3.4
	Moderate	9	15.5
	Severe	0	0
CD4 Count			

Stage 1	Minimal	1	4
	Mild	0	0
	Moderate	1	11.1
	Severe	0	0
Stage 2	Minimal	10	40
	Mild	1	33.3
	Moderate	1	11.1
	Severe	1	12.5
Stage 3	Minimal	14	56
	Mild	2	66.7
	Moderate	7	77.8
	Severe	7	87.5

Quality of Life

Table 2.3 below indicates that the overall QoL was generally within the average range. The QoL experienced within physical activities, household duties, leisure activities and work were below average within the sample. However, the QoL, enjoyment and satisfaction experienced within the work activities (amongst those that were working) was comparatively lower, signifying a QoL of 10.31. Amongst the participants, the mean QoL within the general activities was 58.42. This was higher than the QoL and satisfaction experienced within the performance and completion of household duties within the sample. The mean QoL was the highest within school and coursework activities (amongst those that attended school or were studying) and social relations.

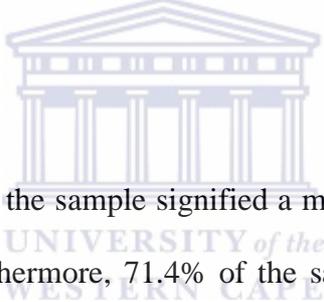
Table 2.3				
<i>Mean QoL within Adults with HIV or AIDS</i>				
QoL Domain	Mean%	Min%	Max%	Std Deviation
General/Overall	58.43	1.79	112.5	25.96
Q-Physical	48.63	6	100	22.36
Q-Feelings	52.74	0	96.43	24.39
Q-House Duties	45.76	0	90	28.64
Q-Work	10.31	0	98.08	25.16
Q-School/Coursework	59.43	0	100	23.76
Q-Social Relations	59.43	9.09	100	22.45
Q-Leisure	47.28	0	100	28.06

4.3 Correlations between Depression and the QoL Domains

Table 2.4	
<i>Correlation Analysis on the Relationship between Depression and QoL</i>	
Overall Depression	
QoL Domain	p-Value
Q-General	.942
Q-Physical	.739
Q-Feelings	.438
Q-Household Duties	*.025
Q-Work	.706
Q-School/Course Work	.556
Q-Social Relations	.319
Q-Leisure	.524

Table 2.4 above indicates that the relationship between the QoL experienced in the performance and completion of the household duties domain signified a correlation of 0.025. $P < .05$, which denotes significance at a 95% confidence interval. This signifies that there is a relationship between the QoL experienced in household duties and depression. This means that the lower the QoL and satisfaction the person experiences in the performance and completion of household chores, the more depressed the individuals were. The relationship between overall depression and the QoL and enjoyment experienced in the general activities in life signified a correlation of 0.942. This signifies that there is no significant relationship between depression and the QoL experienced in the general or overall activities within the sample.

Conclusion

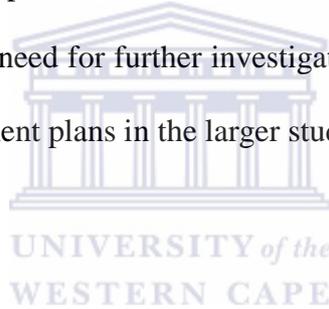


A demographic description of the sample signified a mean age for the participants of this study of 32.6 years. Furthermore, 71.4% of the sample was female. There was 40% of the sample with HIV and 60% were in the later stages of the infection and had full blown AIDS. A large proportion of the sample was isiXhosa speaking (90%). Over half of the sample (60%) was unemployed and the employed participants were all male. There were 47.8% of adults with HIV or AIDS in this study that were never married, 11.6% were living with their partners. 29% of the sample was married, 5.8% were separated, 2.9% were divorced and 2.9% were widowed.

The descriptive statistics depicting the prevalence of overall depression indicates that 36.8% of adults with HIV or AIDS were depressed and 63.2% were not depressed. This signifies that more of the sample had a functional degree of depression. Within

the levels of intensity of depression, 63.2% of adults in the sample were minimally depressed. There were 7.4% with mild depression, 16.2% that were moderately depressed, and 13.2% were severely depressed. Thus amongst the sample that were depressed, the most reported moderate depression.

Correlation analysis showed that there generally was no significant relationship between depression and the QoL or enjoyment within various activities within the samples lives. There was however, a statistically significant relationship between household duties and depression, therefore the less enjoyment and satisfaction experienced within the accomplishment of household duties, the more depressed the sample were. This shows the need for further investigation regarding this relationship and its implications for treatment plans in the larger study.



Chapter 5

Discussion

Introduction

The main aim of the study was to examine the relationship between depression and QoL in a sample of adults diagnosed with either HIV or AIDS. In this chapter the significant findings will be discussed.

5.1 Characteristics of the sample

Sex.

According to the United Nations Programme on HIV/AIDS (UNAIDS, 2006) report on the AIDS epidemic, SA was found to be the country with the highest number of females infected in the world. More women than men were affected by HIV. In SA, 58% of those with HIV were women (UNAIDS, 2006). Furthermore, within those receiving antenatal testing, one in three pregnant women were infected. These high numbers are consistent with the higher number of women within the sample. However, this may also be a result of their willingness to participate.

The vulnerability of women was partly influenced by the industrialisation of the country, which resulted in men moving from rural areas to urban dwellings due to the increase in job opportunities in these areas. This separation of men from their partners and the close proximity to other women resulted in the general increase in the spread of HIV and AIDS amongst the poorer working class. Furthermore, the vulnerability of women was emphasised, as a result of the increase in these males' sexual partners and

no information regarding the history of their partners (Suich, 2006). The dominance of males over females and the economic power they held further exacerbated women's vulnerability.

The higher number of females than males within the sample correlates with past research findings which show that the majority of people attending public health care facilities were female (WHO, 2007), and that women were at a greater risk of infection, particularly in SA (Bradley, Gaynes, Pence, Eron, & Miller, 2008; Morrison, Petitto, Have, Gettes, Chiappini, Weber, Bauer, Douglas, & Evans, 2002; AIDS Foundation South Africa, 2005; UNAIDS, 2008; Owen, 2009). This high infection rate and the health issue of women may also be a result of the high incidence of gender-based violence (GBV) in SA. Here abuse and violence against women (including sexual abuse), which is largely a result of the inequality and disparity in the power of women may result in the transmission of the virus and the larger number of women within the sample (Bradley, Gaynes, Pence, Eron, & Miller, 2008; Morrison, Petitto, Have, Gettes, Chiappini, Weber, Bauer, Douglas, & Evans, 2002; Owen, 2009). This inequality is depicted by Rape Statistics South Africa-and Worldwide that an estimated one in two women in SA are likely to be raped in their lifetime (Owen, 2009) and the Medical Research Council (2005) stated that one in nine survivors of sexual assault in SA report to the police (Morna, 2009). Furthermore, Statistics SA estimated in mid-2008 that 52% of South Africans were female. This larger percentage may also be indicative of the larger sample of women within the sample (cited in Owen, 2009). However, keeping in mind that this was a convenience sample,

the higher number may be a result of more females consenting to participation and the tendency of males to under report.

Age.

The largest amount of people with HIV or AIDS within the sample was within the age group 25 to 49 years. This correlates with past studies which signify that AIDS-related mortality is the most common amongst individuals that are of reproductive age, which fall within this age group (Myer, Seedat, Stein, Moomal, & Williams, 2009). Furthermore, a large proportion of the sample consisted of women; this is consistent with a past study that indicates that the HIV prevalence was disproportionately high for females between the ages of 25 to 29. The increase in HIV prevalence was predominantly observed amongst females that were 30 years and older (Shisana et al., 2009). The high prevalence rate within this group may also be as a result of the convenience sampling method used in this study and may have happened by chance.

This was followed by young adults within the age group 18 to 24 years. This does not correlate with past studies that show that risky sexual behaviours and the spread of HIV or AIDS is the most prevalent within the youth and young adults (Bhana, Zimmerman, & Cupp, 2008). The minority of the sample consisted of adults that were 50 years and older. This correlates with past studies that show that not many reported cases of HIV or AIDS are within this age group.

Language.

The sample consisted of a large amount of Xhosa speaking people over any other language, some of which had some basic knowledge of the English language. This is due to the area in which the study was undertaken, which comprises of a majority of Xhosa speaking people and the predominance of Xhosa culture in the Eastern and Western Cape region where the research study was undertaken (du Preez, 2008).

Stage of disease.

The larger number of adults with full blown AIDS than those that were in the beginning stages of infection may be a result of symptoms that are more prevalent in the later stages and the need to seek treatment during this time. This results in more attending the public health clinics. Furthermore, due to the convenience sampling and ethical reasons, many in the latter stages did not participate in the research study and may not represent these individuals accurately.

Employment status.

The largest number of the sample was unemployed. This high unemployment rate may be partly due to the economic system. This correlates with past research findings which shows that the unequal spread of resources as a result of capitalism have negatively impacted health promotion (Naidoo, 2004). The remaining adults that were employed consisted of all male participants. This is consistent with the Global Gender Gap Report (2008) which shows that women's employment status was just over half (49%) that for men's (82%). Furthermore, the gender gap has increased in 2008 and

may be reflected in this high unemployment rate amongst the women within this sample (cited in Kay, 2005).

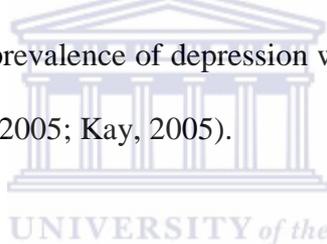
Marital status.

The issue of marital status as a potential risk factor to the acquisition of the HIV or AIDS pandemic has been noted since the early 90's. There have been various studies by Celentano, et al. (1996); Center for International Community Health Studies (2005); Glynn, Carael, Buve, Musonda, Kahindo (2001); Buvé; Caraël; Hayes, et al. (2001) which were undertaken, all displaying contradictory findings (cited in Shisana, Zungu-Dirwayi, Toefy, Simbayi, Malik, & Zuma, 2004). The sample indicated that a high number of adults with HIV or AIDS were never married. This is followed by more than quarter that were married and a few that were divorced and widowed. This result was confirmed by another study which indicated that people that were not married had a higher prevalence of HIV than those that were married. This finding was consistent amongst people with lower socio-economic status specifically (Shisana, Zungu-Dirwayi, Toefy, Simbayi, Malik, & Zuma, 2004). This was also found in a study undertaken in Zimbabwe, with a sample that was not representative of the population. This study indicated that being single may contribute to a higher risk of infection (Buvé; Caraël; Hayes, et al., 2001). Whilst another study by Glynn, Carael, Buve, Musonda, Kahindo (2001) with a more representative sample from four different African countries indicated that those that were married at some point in their lifetime indicated a higher prevalence rate than those that were single (cited in Shisana, Zungu-Dirwayi, Toefy, Simbayi, Malik, & Zuma, 2004). Thus, the higher number of single people within the sample may be a result of the use of a convenience

sample, which is not representative of the population. Thus this may have happened by chance.

5.2 The Prevalence of Depression

In this study 63.2% of the sample was considered to be minimally depressed. This meant that these participants had a normal or a functional degree of depression, and were able to function at the level required within their daily lives. There was 36.8% of the sample that were depressed, but at varying degrees of depression. This contradicts studies which signify that there is a higher prevalence of depression in people with HIV or AIDS. The sample also consists mainly of women and this contradicts findings that signify that the prevalence of depression within women are more than in men (Olley, Seedat , & Stein, 2005; Kay, 2005).



Through the integration of the mind and body, we could hypothesise that the depression could be a result of exposure to psychosocial stressors and prior losses of people close to them. This could be a result of physical illness due to lymphocyte proliferation, which could lead to poor psychological health. HIV is said to also result in depressive symptoms. In other cases the individuals may have been depressed prior to infection (HSRC, 2005).

Within those that were depressed, 16.2% were moderately depressed and 13.2% were severely depressed and the least of which were mildly depressed (7.4%). However, amongst the minimally depressed, the social desirability bias of the self report inventory needs to be considered. This was observed qualitatively when participants

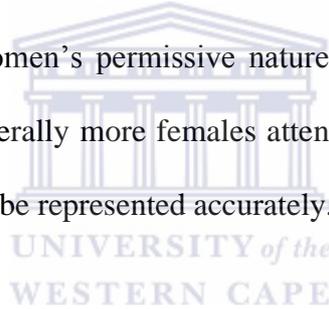
began crying excessively when assistance was provided and noted through their narrations, despite low scores depicted on the BDI II. There were still a large number of adults with HIV or AIDS that were not depressed.

Furthermore, the overall depression within various biographical groupings of the sample indicated that 75% of males were not depressed. This could be a result of under reporting amongst the males and due to the sample of males not being representative of the male population (due to their comparably smaller sample). Amongst the females, 58.3% were considered not depressed. Amongst the sample that was depressed, 25% of males were depressed and 41.7% of the females were depressed. This signifies that the proportion of females that were depressed were more than males that were depressed. This correlates with past international studies which show that women are found to have a higher prevalence of depression than their male counterparts (Morrison, Petitto, Have, Gettes, Chiappini, Weber, Bauer, Douglas, & Evans, 2002).

Much of the studies available is gender-biased and assumes that women and men have the same ways of relating emotionally. However, according to Day (1992), in her review of the work done by feminist theorists she notes that in the examination of the psyche of women, it is important to recognise the effect of external oppressive structures on the emotional and psychological development of this marginalised group. This marginally higher number of women that are infected and the larger proportion of depressed women (than men) indicate that a distinction between women needs to be made. This can assist us in our understanding of how the therapeutic

relationship needs to reconsider the importance of women's needs and for growth to take place in order to achieve an optimal level of QoL.

The higher prevalence of women that are depressed could be due to the increased rates of stigma and psychosocial stressors with which women are faced (Morrison, Petitto, Have, Gettes, Chiappini, Weber, Bauer, Douglas, & Evans, 2002; Olley et al., 2003). According to another national study however there were no significant gender differences in the prevalence of mood disorders (Olley et al., 2003). It is important to note that the sample consisted of significantly more females than males, due to the use of convenience sampling method and the women were more eager to participate than males. This may indicate women's permissive nature as a result of the patriarchal society. Also, there were generally more females attending the public health facility. Therefore, the males may not be represented accurately.



Within the depressed people with HIV or AIDS, 76% of the depressed individuals were with the ages 25 to 49 years. This was followed by 20% that were within the age group 18 to 24 years and 4% that were 50 years and older. According to a past research study these findings correlate with

Amongst the unemployed adults with HIV or AIDS there were more adults that were minimally depressed than the adults that were employed. However, amongst the unemployed adults with HIV or AIDS there were a significant amount that were mildly depressed when compared to the employed adults with HIV or AIDS. There were also fewer adults that were unemployed with moderate depression than amongst

those that were employed. It is important to consider that the employed individuals within the sample were significantly lower than the unemployed individuals. This may affect the precision of the results.

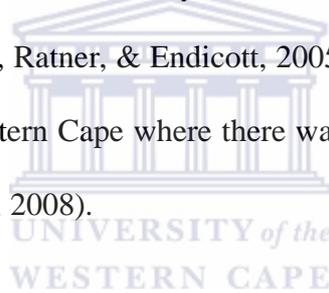
Within stage 1 of the disease, there are more adults with minimal depression than those that are depressed. The adults that were in stage 2 of the infection were similar to the profile noted in stage 1. Adults that had a functional degree of depressive symptoms (minimally depressed) were the most, followed closely by adults that were mildly depressed. However the amount of people within this stage was more (28.9 in comparison to 4.4 in stage1). This may be due to the difficulty in early detection of the infection. Within the 66.8% of adults within stage 3 of the disease, the intensity of the depressed state increases. This shows that with the progression of the disease, there is a proportional progression in the depressed state. This contradicts a past study which indicates that there was no relationship between the disease stage and the severity of the depressed state (Ciesla & Roberts, 2001)

There is a difference in the amount of adults that were minimally depressed. Within the adults diagnosed with AIDS there were less that were minimally depressed. There were more adults with AIDS that were severely depressed than those with HIV. However, in the adults with AIDS there were less that were mildly depressed than in the adults with HIV. Generally, however, amongst the adults with AIDS that were depressed, there was an increase in the level of intensity, possibly signifying that with the progression of the disease that the intensity of depression increases. This correlates with a national study which depicted a relationship between baseline

depression scores and a faster rate of CD4 decline within the later stages of the infection (Olley, Seedat et al., 2004). This may signify that depression influences the course of the disease in the later stages of the infection.

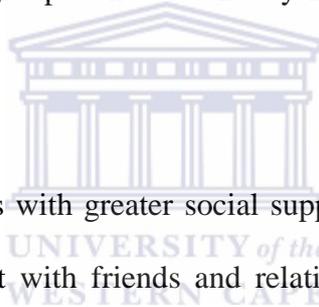
5.3 Quality of life (QoL)

The overall QoL, as indicated by the General domain of the Q-LES-Q includes items from all the other domains or activities and represents the QoL of the adults diagnosed with HIV or AIDS. The overall QoL, as represented by this domain is 58.42%. This signifies a maximum percentage that is over 50%. The QoL depicts an average level of satisfaction and the perceived availability of social support, self-esteem, and self-efficacy (Ritsner, Kurs, Gibel, Ratner, & Endicott, 2005). This is higher than the QoL reported in a study in the Eastern Cape where there was a low degree of overall QoL (Peltzer & Phaswana-Mafuya, 2008).



The QoL and satisfaction experienced within various domains or areas of life by the individuals is depicted within the Q-LES-Q. The results of the individuals diagnosed with HIV or AIDS indicated the highest QoL and satisfaction experienced by the individuals within the social relations domain and the school and coursework domain of the individuals life. Within social relations, there was a 59.42% enjoyment and satisfaction within their relationships. The high average level of enjoyment and satisfaction reported by the sample indicates that social relations are valued, despite their HIV or AIDS status. This may be due to many of the sample not disclosing their status.

Evidence shows that the health of an individual is related to the degree to which their support systems were strong and supportive and the extent to which they were integrated into their communities (Berkman, 1995). The culture from which the sample was extracted are often stigmatised due to their HIV or AIDS status. This leaves many without support and results in the establishment of co-morbid disorders, due to the increased levels of stress which maintains the disease (Bradley, Gaynes, Pence, Eron, & Miller, 2008). It also causes HIV infected individuals resorting to dysfunctional coping mechanisms, for example non compliance to treatment regimens and substance abuse or risky behaviours. Furthermore, it is clear that the incidence of HIV and AIDS is higher in groups who are already marginalised (Bradley, Gaynes, Pence, Eron, & Miller, 2008).



This signified that individuals with greater social support (including those that were married, had constant contact with friends and relatives and other groups) had an increased life expectancy and satisfaction with life. The sample consisted of 40.6% of adults that were married or living with partners and 59.4% of the sample were not in intimate relationships, but related having close family, neighbours or friends. These individuals are generally from a collectivistic society, where relationships and satisfaction within are prized. This could indicate the value placed and the relative importance in comparison to the other activities. However, placing this conception within the South African culture, which has become increasingly more individualistic, may leave these individuals facing a dilemma. This could predict future life satisfaction and possibly better health outcomes if dealt with in the treatment plans. With regards to the relationship between social support and health outcomes in past

research studies, there were contradictory findings (Naidoo, Lindeggar, & Mody, 2004).

Within the school or coursework activities, the individuals, despite reporting a high average degree of enjoyment and satisfaction, were few. This may indicate the influence HIV or AIDS has on the progression of skills and knowledge. This may also be indicative of the social inequality that is still prevalent within this previously disadvantaged community. The primary needs within this community are basic and this may be indicative of the lack of opportunity or lack of motivation (which needs to be further investigated). Amongst those that were studying, this signifies the positive affects of education on health outcome if individuals are stimulated academically. This is noted in the relatively higher degree of satisfaction within those that were in school or were studying. This is confirmed by a past study which indicates that education and literacy of women particularly was found to be a predictor of life expectancy (Gilmartin, 2009).

This was followed by the experience of satisfaction or the quality of feelings experienced by these individuals. Past research indicated that higher QoL amongst people with HIV or AIDS was associated with experiencing negative feelings less often. Furthermore, experience of symptoms was associated with negative feelings (Friend-du Preez & Peltzer, 2009). The quality and satisfaction of the feelings experienced by the sample was average (52.74). This relatively lower satisfaction could be a result of the HIV or AIDS diagnosis, stigma and constant worry of social isolation. It could even be a result of the difficult living conditions and psychosocial

stressors that they face due to adverse living conditions. This may also be a result of the disease course progression which is shown to result in negative feelings.

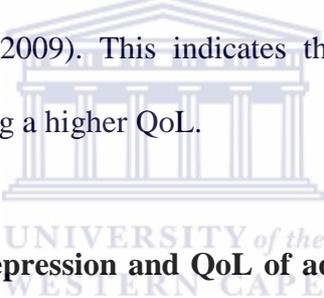
The enjoyment and the satisfaction of the physical activities of these individuals, which included everyday physical activities such as walking and the general level of physical functioning and health was 48.63%, which is low average. This is said to be a predictor of overall QoL and health outcome (Friend-du Preez & Peltzer, 2009). This relatively lower satisfaction within these activities could be a result of the diagnosis and the loss of energy as a result of the progression of the HIV or AIDS or a result of the sense of hopelessness or lack of energy as a result of the depressed state of these individuals. The description of the sample indicated that three fifths of the sample was in stage 3 and 4 of the disease. This may be indicative of the lower degree of enjoyment and satisfaction in these activities due to the limitations with regards to their mobility, performance in usual activities, and pain or discomfort experienced (Hughes, Jelsma, Maclean, Darder, & Tinise, 2004).

This was then followed by the quality and satisfaction experienced by the leisure activities. A past study indicated that certain leisure activities predicted adaptation, which includes effective and satisfaction with coping mechanisms and reduction of stress, as well as mental and physical health (Iwasaki, Mannell, Smale, & Butcher, 2005). This could indicate a relationship between the quality of the leisure activities and depression within the sample.

This was followed by the enjoyment and satisfaction with household duties. The quality within the household activities, which included cleaning and maintenance of

the home, was relatively lower. The QoL experienced within these activities varied. However, there were no significant differences between them.

There was a significantly lower enjoyment and satisfaction experienced within work activities by these adults diagnosed with HIV or AIDS. It is important to note that a significant portion were unemployed. This may be due to the difficulties in attaining work which allows for a high reward and satisfaction in return. This may also be due to frequent illnesses in those with symptoms and the economic system and their lower level of education. A past research study indicated that higher QoL was associated with receiving a disability grant and having enough money to meet their basic needs (Friend-du Preez & Peltzer, 2009). This indicates the importance of income and economic stability in predicting a higher QoL.



5.4 Relationship between Depression and QoL of adults diagnosed with HIV or AIDS

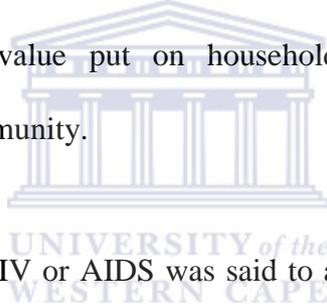
The study did not find a significant relationship between depression and their general QoL or life satisfaction experienced in a combination of everyday life activities. This may be representative of the overall QoL and health outcomes. This did not correlate with past research studies that indicated that depression and a sense of hopelessness were perceived to be associated with poorer QoL (Moore, Höfer, McGee, & Ring, 2005; Angelettie, 2009; Seeward, Laberge, Gaunthier, Fournier, Bouchard, Baril, Bergeron, 1998).

It is important to note the difference in sexual power between men and women and its influence on health outcomes (Pettifor, Measham, Rees, & Padian, 2004). The significant association between the QoL in household duties and depression indicated that there was a relationship between a depressed state and taking care of household chores and satisfaction experienced as a result of accomplishing the tasks. It is important to note that within this culture where patriarchal ways of relating is still very prevalent, that many of these individuals doing the household duties were women. Furthermore, the sample consisted mainly of women.

A past research study indicates that psychosocial stressors such as lack of social support, stigma, poverty and violence experienced by these women, as well as depression predicts early disease progression and negatively influences health outcomes (Serovich, Kimberly, Mosack, & Lewis, 2001). Other studies demonstrate the relationship between depression and dysfunctional coping styles, such as denial and inappropriate venting of emotion (Olley, Seedat, Nei, Stein, 2004). This could explain the inability to cope with the household duties, considering the value placed on this activity and its influence on the depressed state. Studies also demonstrate that depression has a negative impact on the course of HIV by affecting patients' adherence to treatment and recommendations, as well as their immunocompetence (Ciechanowski, Katon, & Russo, 2000; DiMatteo, Lepper, & Croghan, 2000). It is also said to increase high risk sexual behaviours and further HIV transmission (Seeward, Laberge, Gaunthier, Fournier, Bouchard, Baril, Bergeron, 1998, Blumberg and Dickey, 2003). This signifies the affects of depression on health outcomes. This, coupled with the sustained high prevalence of women signifies the importance of

further investigation of this relationship and implementation of interventions (Shizana et al., 2009).

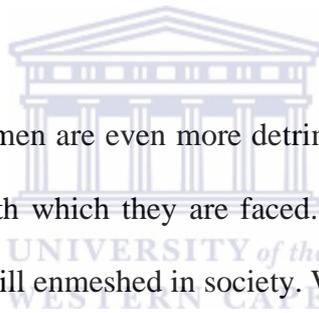
In a study of youth within a Xhosa township, there was an indication that women's early sexual experiences were controlled by men (Wood, Maforah, & Jewkes, 1998) (cited in Pettifor, Measham, Rees, & Padian, 2004). The economic circumstances leave these women further disadvantaged and money seems to be the driving force for many to partake in transactional sex and sexual relationships (Pettifor, Measham, Rees, & Padian, 2004). The vulnerability of women in particular is evident here and the high unemployment rate within this sample of (mainly) women confirms this sexual inequality and the value put on household activities above economic independence within the community.



A past study indicated that HIV or AIDS was said to accompany impairment in role and physical functioning at any stage of the disease. The relationship of this disability to psychiatric morbidity or major depression in recently diagnosed HIV or AIDS patient's needs to be substantiated (Olley, et al., 2004). The physical relationship between physical functioning and depression signifies no association. However, there is a relationship between role functioning and depression, particularly within household duties.

The internalisation of their roles is evident in the value placed on household duties and the relationship to depression, as their value may be compromised by lower satisfaction and enjoyment in these activities. This can be understood using Beck's

(1979) theory of depression, where their early exposure to activities, such as roles within the household result in the formation of their schemas, and beliefs that they are not worthwhile if they do not perform these duties optimally. This may be triggered by the lowered satisfaction and enjoyment experienced within these activities and result in the depressed state. The relation between a state of depression and lowered satisfaction within household duties may also be a result of fatigue or loss of interest in activities. This was found in past studies where depression was related to fatigue (Au et al., 2004; Jacob, Eapen, John, & John, 1991; Mast et al., 2004; Molassiotis, Callaghan, Twinn, & Lam, 2001; Tostes, Chalub, & Botega, 2004; Yang, Chen, Kuo, & Wang, 2003).

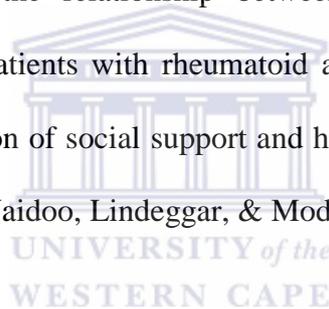


The effects of poverty on women are even more detrimental than that of men, due to the psychosocial stressors with which they are faced. This is largely a result of the patriarchal system, which is still enmeshed in society. Women are still expected not to work. This is noted in the employment rate, which signifies that the rate of poverty is much higher among women than male-headed households. There are 60% of female-headed compared to the 31% of male-headed households that fall below the poverty line in SA. Furthermore, women are found to make 70% that of what men earn in SA (Suich, 2006). The inequality of women is further depicted in that the economic vulnerability with which women face forces many into sexual relationships without free will and allows men to take on multiple sexual partners. This does not only depict the inequality of women, but also results in the spread of HIV and AIDS and women's vulnerability, as is noted by the larger number of women in the sample (Suich, 2006).

As mentioned previously, many of the participants were within the third and fourth stage of the disease and correlations were found in a past study, with the state of depression and their physical functioning (Hughes, Jelsma, Maclean, Darder, & Tinise, 2004). Contrary to these findings, there was no relationship between an overall depressed state and a low QoL experienced within this area of functioning. This also contradicts other correlation studies that supported the targeting of depressive symptoms, cognitive functioning, and physical health in the enhancement of QoL and the individuals functioning (Leung, Bowie, Harvey, 2008). This also contradicted a past study which indicated a significant relationship between the quality of sleep, fatigue during the course of the day, symptoms of HIV, anxiety, depression and perception of stress (Phillips, Sowell, Rojas, Tavakoli, Fulk, & Hand, 2004).

There was no significant relationship found between depression and the satisfaction reported by the adults within the sample within the other areas of life. This means that there was no significant relationship between the overall state of depression and the QoL experienced within those areas of life. The experience of negative feelings was not related to the depressed state. This included feelings of contentment and satisfaction in daily activities and with regards to themselves. This contradicted past research which indicated that negative-internal coping, which included avoidance and passivity was related to a person's depressed state and health outcomes, whether positive or negative (Newman & Mulligan, 2000) (cited in Naidoo, Lindeggar, & Mody, 2004).

Depression was also not related to the satisfaction with school performance. There were a small portion of adults that were studying or doing any course work and should be considered. Despite a prior research study which indicated that social support was generally found to be associated with better cognitive well-being and functioning in people with chronic illnesses (Newman, Fitzpatrick, Lamb, & Shipley, 1990; Ward & Leigh, 1993) (cited in Naidoo, Lindeggar, & Mody, 2004), there was still no significant relationship between QoL and satisfaction experienced within social relations and overall depression. However, it is important to note that the effects of the relationships may not always be positive and may have negative effects. However, with regards to the relationship between social support and health outcomes, a past study on patients with rheumatoid arthritis showed no significant association between perception of social support and health outcome. This however, contradicted other findings (Naidoo, Lindeggar, & Mody, 2004).



Contrary to past studies, the samples satisfaction and enjoyment experienced in leisure activities did not correlate with the depressed state, despite research indicating that active participation in leisure activities predicted less stress and better coping mechanisms used, as well as better mental and physical health (Iwasaki, Mannell, Smale, & Butcher, 2005). The less satisfied the sample was with work was not related to a state of depression. This does not correlate with past research which indicates that individuals with lower income experienced more pain and a poorer level of functioning and health status (Nathanson, 1980; Verbrugge, 1984) (cited in Naidoo, Lindeggar, & Mody, 2004). However, it is important to note that the proportion of adults with HIV or AIDS that were employed were few. This should be considered in

the precision of the results. The individual's satisfaction in household activities may have substituted the vocational work and correlated with the depressed state.

There was no significant relationship between the overall QoL and the depressed state within the sample. The satisfaction and enjoyment experienced within household duties was the only activity which depicted a relationship with the samples state of depression. This finding contradicted past research studies which indicate that depression and a sense of hopelessness were perceived to be associated with poorer QoL (Seeward, Laberge, Gaunthier, Fournier, Bouchard, Baril, Bergeron, 1998; Moore, Höfer, McGee, & Ring, 2005, Agelettie, 2009). It was also not consistent with past studies which indicate that depressed individuals experience a lower QoL that is proportional to the severity of their depressive state (Berlim, Mattevi, & Fleck, 2003; Demyttenaere, Fruyt, & Huygens, 2002; Sartorius, 2001). Despite this cross cultural finding in a Brazilian and English-speaking culture, it was not consistent in this study.

Conclusion.

A larger number of the sample was not depressed. There were significantly more women than men that were depressed. Within the sample, there were a significant proportion of the adults with HIV or AIDS that were minimally depressed. This was followed by those with moderate depression, severe depression and the least of which were mildly depressed. In the comparison between those with HIV and those with AIDS, there was evidence that the depressive state increased with the progression of the disease.

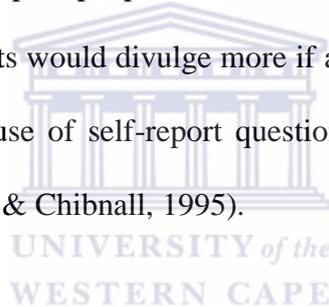
The overall or general QoL was generally relatively higher than QoL within specific areas of life. However, the QoL within school and course work activities and satisfaction in social relations were relatively higher than their overall QoL. There was a significantly lower QoL experienced in work and vocational activities. This may be due to the large unemployment rate and the difficulties in attaining work that is adequate and satisfying. There was only a relationship found between depression and the QoL and life satisfaction experienced in household duties. Signifying that the less satisfied individuals with HIV or AIDS were with completion in household duties, the more depressed they were found to be.

5.5 Contributions of the Study

This study contributes to a larger research project. It updated statistics with regards to the prevalence of depression and the QoL in adults diagnosed with HIV or AIDS in an under-resourced setting. It also adds to available research in South Africa on depression as a co-morbid disorder in adults diagnosed with HIV or AIDS. This finding will assist in informing the larger study on the type of recommendations that can be made to the health authority concerned about the importance of having a treatment programme that includes mental health care for individuals infected with HIV and AIDS. This will be done at the clinic where the study was undertaken. The clinic will be the first to implement the treatment plan in the management of the patients diagnosed with HIV or AIDS. This will allow for more effective management of the patients attending this public health care facility. Furthermore, the gender-specific findings regarding the relationship between QoL and depression within household activities need to be addressed.

5.6 Limitations of the Study

The study was limited to one city health clinic in Cape Town, and the findings cannot be accurately generalisable to the patient population across South Africa. A small number of participants also did not complete the process due to their illness and lack of motivation, and it was difficult to have them return to do so. The sample size was limited to 70 participants, which limited the statistical power. This affected the accuracy and generalisability of the results. Furthermore, the sample was one of convenience, and participants may not have been entirely representative of those in the community or the subgroup of people with HIV or AIDS that attends the public health facility. The participants would divulge more if asked directly. This was due to the limitations noted in the use of self-report questionnaires and social desirability bias (Deshields, Tait, Gfeller, & Chibnall, 1995).



The use of the BDI II which is a self report inventory results in social desirability bias. This limits the accuracy of the findings (Gregory, 2000). The BDI II also only reflects the estimated degree of depression, and does not provide an indication of the diagnosis of the depression. Another area of concern is in the pattern of depressive symptoms reported overall (Beck, Steer, & Brown, 1996). The use of the grouped frequency analysis within the specific classes of severity provided a useful summary, but was limited in its individual scores (Pretorius, 2007). There were also shortcomings in the measurement and interpretation of QoL. However, its use was sufficient for the purpose of this study. There was also a large number of missing data. The cross translation of the BDI II into isiXhosa does not adequately capture the

meaning of the items due to certain constructs not being available in the Xhosa language (de Klerk, 2008). The use of a cross sectional study did not allow for an analysis over a longer period and thus may have negatively influenced the accuracy of the results.

5.7 Recommendations for Future Research

There is a need for a larger sample size in order to allow for the generalisability of the results. The use of more than one public health care clinic would further increase the generalisability and a comparison between two health care clinics and the treatment plans implemented and whether this may have an influence. The use of a mixed method research design, where both quantitative and qualitative research data, techniques and methods are both utilised would be more appropriate due to the limitations posed by social desirability bias and possibly the culture and familiarity of the participants to the standardised inventories. However, the use of this information will contribute to the data captured, in order to assist the larger research study in the future implementation of more affective treatment regimens.

References:

Abela, J. R. Z., & Alessandro, D. U. (2002). Beck's cognitive theory of depression: a test of the diathesis-stress and causal mediation components. *The British Journal of Clinical Psychology, 41*, 111-28,

Advanced Adult Antiretroviral Treatment Guidelines (2005):

http://www.doh.gov.za/docs/misc/hiv/manual/advanced_adult_art.pdf [accessed 12/08/09]

Alansari, B. M. (2005). Relationship between depression and anxiety among undergraduate students in eighteen Arab countries: A cross-cultural study. [Electronic version]. *Social Behavior and Personality, 33*, 503-512,

Aldridge, S. (2006). Quality of life for older people in Europe is a major focus for researchers. World Ageing & Generations Congress (2006) 27th September.

<http://www.healthandage.com/Quality-of-life-for-older-people-in-Europe> [accessed 12/08/09]

Angelettie, L. (2009). Depression Site: <http://www.bellaonline.com/articles/art36245.asp>
[accessed 13/08/09]

Angermeyer, M. C., Holzinger, A., Matschinger, H. & Stengler-Wenzke, K. (2002). Depression and quality of life: results of a follow-up study. *International Journal of Social Psychiatry, 48*, 189-199,

Arbisi, P. A. (2001). Review of the Beck Depression Inventory II. The fourteenth mental measurements yearbook. Lincoln, NE: Buros Institute of Mental Measures.

- Armitage, C. J., & Conner, M. (2000). Social cognitive models and health behaviour: A structured review. *Psychology and Health, 15*, 173-189,
- Ashton, G. (2009). The Hidden Mental Health Crisis in South Africa. The South African Civil Society Information Service.
- <http://www.sacsis.org.za/site/article/325.1>
- Azadeh, T., Montazeri, A., Roshan, R., Tavoli Z., & Melyani M. (2008). Depression and quality of life in cancer patients with and without pain: the role of pain beliefs. *Bio Medical central Cancer, 8*, 177-1182,
- Bartels, S. J., & Pratt, S. I. (2009). Psychosocial rehabilitation and quality of life for older adults with serious mental illness: recent findings and future research directions: conceptualizing functioning and quality of life in aging persons with serious mental illness. *Current Opinion in Psychiatry, 22*, 396-400,
- Beck, A., Steer, R., & Brown, G. (1996). *BDI-II: The Beck Depression Inventory Manual*. New York: The Psychological Corporation Second edition.
- Bender, B. G. (2006). Pulmonary perspective: Risk taking, depression, adherence, and symptom control in adolescents and young adults with asthma. *American Journal of Respiratory and Critical Care, 17*: 953-957,
- Berlim, M. T., Mattevi, B. S., & Fleck, M. P. A. (2003). Depression and quality of life among depressed Brazilian outpatients. *Psychiatric Services, 54*, 254-257,

- Bhana, A., Zimmerman, R. & Cupp, P. (2008). Gender role attitudes and sexual risk among adolescents in South Africa. *Vulnerable Children and Youth Studies*, 3, 112-119,
- Bing, E. G., Hays, R. D., Jacobsen, L. P., Chen, B., Gange, S. J., Kass, N. E., Chmiel, J. S., & Zucconi, S. L. (2000). Health-related quality of life among people with HIV-disease: Results from the multicentre AIDS cohort study. *Quality of Life Research*, 9, 55-63,
- Bless, C., & Kathuria, R. (2004). *Fundamentals of Social Statistics: An African Perspective* (Fifth Edition). Cape Town: Juta & Co, Ltd.
- Blumberg, S. I., & Dickey, W. C. (2003). Prevalence of HIV risk behaviors, risk perceptions, and testing among US adults with mental disorders. *Journal of Acquired Immune deficiency Syndrome*, 32, 77-79,
- Bottonari, K. A., Stepleman, L. M. (2009). Factors Associated with Psychotherapy Longevity among HIV-Positive Patients. *AIDS Patient Care and STDs*, 23, 109-118,
- Borrell-Carrió, F., Suchman, A. L., & Epstein, R. M. (2004). The Biopsychosocial Model 25 Years Later: Principles, Practice, and Scientific Inquiry. *Annals of Family Medicine* 2, 576-582,
- Bradley, N., Gaynes, M. D., Pence, B. W., Eron, J. J., & Miller, W. C. (2008). Prevalence and comorbidity of psychiatric diagnoses based on reference standard in an HIV positive patient population. *Psychosomatic Medicine*, 70, 505-511,
- Brannon, L & Feist, J. (2000). *Health Psychology: an introduction to behavior and health*. United States of America: Wadsworth.

- Braithwaite, D., Mogotlane, S., Rodriguez, H., Dorsey, S., Mangongo, R., & Matlakala, M. (2002). Elderly citizen's perception of their health and care provided in a rural South African community. *ABNF Journal*, *13*, 37-40,
- Bryman, A., Cramer, D. (2005). *Quantitative Data Analysis with SPSS 12 Ind 13: A guide for Social Scientists*. New York: Routledge.
- Callahan, C. M., Kesterson, J. G., & Tierney, W. M. (1997). Association of symptoms of depression with diagnostic test charges among older adults. *Annual International Medicine*, *126*, 426-432,
- Calman, K. C. (1984). Quality of life in cancer patients: an hypothesis. *Journal of Medical Ethics*, *10*, 124-127,
- Campsmith, M. L., Nakashima, A. K., & Davidson, A. J. (2003). Self-reported health-related quality of life in persons with HIV infection: results from a multi-site interview project. [Electronic version]. *Health Quality of Life Outcomes*, *1*, 1-12,
- Ceyes, C. L. M. (2006). *Women and depression : a handbook for the social, behavioral, and biomedical sciences*. Cambridge: Cambridge University Press.
- Chapman, C.R., Nakamura, Y. & Flores, L.Y. (1999). Chronic pain and consciousness: A constructivist perspective. In R.J. Gatchel & D.C. Turk (Eds.), *Psychosocial factors in pain: Critical perspectives* (pp. 35-55). New York: Guilford.
- Chaturvedi, S. K. V., & Venkateswaran, C. (2008). New research in Psychooncology. *Current Opinion in Psychiatry*, *21*, 206-210,

- Ciechanowski, P. S., Katon, W. J., & Russo, J. E. (2000). Depression and Diabetes: Impact of Depressive Symptoms on Adherence, Function, and Costs. *Archives of International Medicine*, 160, 3278-3285,
- Ciesla, J. A., & Roberts, J. E. (2001). Meta-Analysis of the relationship between HIV infection and risk for depressive disorders. *American Journal of Psychiatry*, 158, 725-730,
- City of Cape Town Census (2001). Launch of community centre brings hope to Mfuleni. Habitat for Humanity.
- Collins, P. Y., Holman, A. R., Freeman, M. C., & Patel, V. (2006). Relevance of mental health to HIV/AIDS care: Quality of life and mental health. *AIDS*, 20, 1571-1582,
- Cormack, R. M. (1971). A review of classification (with discussion). *Journal of the Royal Statistical Society*, 134, 321-367,
- Clark, D. A., Beck, A. T., & Alford, B. A. (1999). *Scientific foundations of Cognitive Theory and therapy of depression*. New York: Wiley.
- Cruess, D. G., Douglas, S., Petitto, J. M., Have, T. T., Gettes, D., Dubé, B., Cary, M., & Evans, D. L. (2005). Association of resolution of major depression with increased natural killer cell activity among HIV-seropositive women. *The American Journal of Psychiatry*, 162, 2125-2130,
- Crystal, S., & Sambamoorthi, U. (1998). Health care needs and services delivery for older persons with HIV/AIDS, *Research on Aging*, 20, 739-759,

- Cushman, P. (1990). Why the self is empty. Toward a historically situated psychology, *The American Psychologist*, 45, 599-611,
- Davis, M. (2005). Appendix C. Mental Illness and HIV Comorbidity: A Large and Vulnerable HIV Subpopulation. Cited in Health Promotion and Disease Prevention Public Financing and Delivery of HIV/AIDS Care: Securing the Legacy of Ryan White.
- Day, L. G. (1992). Counselling for women: The contribution of feminist theory and practice. *Counselling Psychology Quarterly*, 5, 373-384,
- de Klerk, G. (2002). Cross-cultural testing. In M. Born, C.D. Foxcroft & R. Butter (Eds.), *Online Readings in Testing and Assessment*, International Test.
- Demyttenaere K, Fruyt J. D., & Huygens, R. (2002). Measuring quality of life in depression. *Current Opinion in Psychiatry*, 15, 89-92,
- Dickens, C., Jackson, J., Tomenson, B., Hay, E., & Creed, F. (2003). Association of depression and rheumatoid arthritis. *Psychosomatics*, 44, 209-215,
- DiMatteo, M. R., Haskard, K. B., & Williams, S. L. (2007). Health beliefs, disease severity, and patient adherence: A meta-analysis. *Medical Care*, 45, 521-52,
- DiMatteo, M. R., Lepper, H. S., & Croghan, T. W. (2000). Depression is a risk factor for noncompliance with medical treatment: meta-analysis of the effects of anxiety and depression on patient adherence. *Archives of Intern Medicine*.160, 2101-2107,
- DSM-IV (1994). *Diagnostic and statistical manual of mental disorders: Fourth Edition*. Washington DC: American Psychiatric Association.

DSM-IV-TR (2000). *Diagnostic and statistical manual of mental disorders: Fourth Edition Text Revised*. Washington DC: American Psychiatric Association.

du Preez, G. (2008). *Women's build 2008*. Habitat for Humanity South Africa.

http://www.habitat.org.za/assets/23/Volunteer_Pack_Women_s_Build_CRO_2008.pdf

[accessed 03/01/10]

Endicott, J., Nee, J., Harrison, W., & Blumenthal, R. (1993). *Quality of Life Enjoyment and Satisfaction Questionnaire: A New Measure*. New York: New York State Psychiatric Institute.

Engel, G. L. (1980). The clinical application of the Biopsychosocial model. *American Journal of Psychiatry*, 137, 535-544,

Epstein, R. M & Borrell-Carrio F. (2005). The biopsychosocial model: exploring six impossible things, *Families, Systems & Health*, 23, 426-431,

Gilmartin, J. (2009). *Health psychology in context*. England: John Wiley & Sons.

Goldney, D. R., Phillips, P. J., Fisher, L. J., & Wilson, D. H. (2004). Diabetes, depression, and quality of life: A population study. *Diabetes Care*, 27, 1066-1070,

Goodkin, K., Wilkie, F. L., Concha, M., Hinkin, C. H., Symes, S., Baldewics, T. T., Asthana, D., Fujimra, R. K., Lee, D., van Zuilen, M. H., Khamis, I., Shapshak, P., & Eisdorfer, C. (2001). Ajiung and neuro-AIDs conditions and the changing spectrum of HIV-1 – associated morbidity and mortality. *Journal of Clinical Epidemiology*, 54, S35-S43,

- Gore-Felton, C., Koopman, C., Spiegel, D., Vosvick, M., Brondino, M., & Winningham, A. (2006). Effects of quality of life and coping on depression among adults living with HIV/AIDS. *Journal of Health Psychology, 11*, 711-729,
- Gregory, R. J. (2000). *Psychological testing: history, principles and application*. USA: Allyn and Bacon.
- Freeman, M., Patel, V., Collins, P. Y., & Bertolette, J. (2005). Integrating mental health in global initiatives for HIV/AIDS. *The British Journal of Psychiatry, 187*, 1-3,
- Hagen, B. (2007). Measuring melancholy: a critique of the Beck Depression Inventory and its use in mental health nursing. *International Journal of Mental Health Nursing, 16*, 108-115.
- Health24 (2003). The interaction between viral load, CD4 cell count and disease progression. <http://www.health24.com/> [accessed 23/03/09]
- Health Care (2008): <http://www.southafrica.info/about/health/health.htm> [accessed 07/09/09]
- Herrman, H. & Chopra, P. (2009). Quality of life and neurotic disorders in general healthcare. *Current Opinion in Psychiatry, 22*, 61-68,
- Heywood, M. J. (2004). People's health summit. Introduction to Health and the South African Health System. Summit presented in East London:
<http://www.tac.org.za/Documents/healthsystem/PHSFinalDoc> [accessed 15/05/09]
- Hilsabeck, R., Hassanein, T., & Perry, W. (2005). Biopsychosocial predictors of fatigue in chronic hepatitis C. *Journal of Psychosomatic Research, 58*, 173-178,

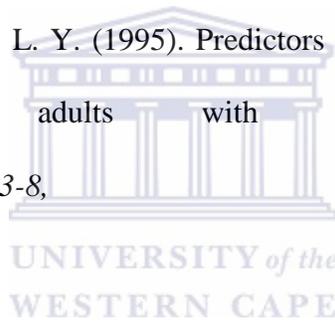
- Hughes, J., Jelsma, J., Maclean, E., Darder, M., & Tinise, X. (2004). The health-related quality of life of people living with HIV/AIDS. *Disability and Rehabilitation*, 26, 371-376,
- Hyman, M., Clary, C., Fayyad, R., & Endicott, J. (2005). Quality-of-Life impairment in depressive and anxiety disorders. *American Journal of Psychiatry*, 162: 1171-1178,
- Ironson, G & Hayward, H. (2008). Do positive psychosocial factors predict progression in HIV? A review of evidence. *Psychosomatic Medicine*, 70: 456-554,
- Iwasaki, Y., Mannell, R. C., Smale, B., J. A., & Butcher, J. (2005). Contributions of Leisure Participation in Predicting Stress Coping and Health among Police and Emergency Response Services Workers, *Journal of Health Psychology*, 10, 79-99,
- Jackson, H. (2002). *AIDS Africa-continent in crisis*. Harare: SAfAIDS.
- Jelsma. J. & Ferguson, G. (2004). The determinants of self-reported health-related quality of life in a culturally and socially diverse South African community. *Bulletin of the World Health Organization*, 82, 206-212,
- Johnson, A. M. & Laga, M. (1988). Heterosexual transmission of HIV. *Gower Academic Journals*, 2, S49-56,
- Justice, A. C., & Weissman, S. (1998). The survival experience of older and younger persons with AIDS. *Research on Aging*, 20, 665-685,
- Kalichman, S. C., Heckman, T., Kochman, A., Sikkema, K., & Bergholte, J. (2000). Depression and thoughts of suicide among middle-aged and older persons living with HIV/AIDS. *Psychiatric Services*, 51, 903-907,

Katschnig H. (2006). Quality of life in mental disorders: challenges for research and clinical practice. *World Psychiatry*, 5, 139-145,

Katsumasa K, Kojiro S, Ohsumi, S., Imai, H., & Ono, M. (2007). Current status of health outcome assessment of medical treatment in breast cancer. *Breast Cancer*, 14, 1340-6868,

Kay, T. (2005). Escape Depression, know the facts. Informer: Your Practical Guide to HIV and AIDS. Emphasis Media.

Kelly, J. A., Murphy, D. A, Sikkema, K. J., Somlai, A. M., Mulry, G. W., Fernandez, M. I., Miller, J. G., & Stevenson, L. Y. (1995). Predictors of high and low levels of HIV risk behaviour among adults with chronic mental illness. *Psychiatric services*, 46, 813-8,



Kidshealth (2007):

http://www.kidshealth.org/parent/pregnancy_newborn/pregnancy/ [accessed 06/06/09]

Kojima, M., Furukawa, T. A. Takahashi, H., Kawai, M., Nagaya, T., & Takeda, S. (2002), Cross-cultural validation of the Beck Depression Inventory-II in Japan. *Psychiatry Research*, 110, 120-299,

Krishnan, K. R. R., Delong, M., Kraemer, H., Carney, R., Spiegel, D., Gordon, C., McDonald, W., Dew, M. A., Alexopoulos, G., Buckwalter, K., Cohen, P. D., Evans, D., Kaufmann, P. G., Olin, J., Otey, E., Wainscott, C. (2002). Comorbidity of depression with other medical diseases in the elderly. *Biological Psychiatry*, 52, 559-88,

Larson, J. S. (1996). The World Health Organization's definition of health: Social versus spiritual health. *Social Indicators Research*, 38, 181-192,

Leung, W. W., Bowie, C. R., Harvey, P. D. (2008). Functional implications of neuropsychological normality and symptom remission in older outpatients diagnosed with schizophrenia: a cross-sectional study. *Journal of the International Neuropsychological Society*, 14, 479-488,

Lundbeck Institute: <http://www.lundbeckinstitute.com> [accessed 11/04/09]

Marks, D. F. (2002). *The Health Psychology Reader*. Wiltshire: Cromwell Press.

Marks D. F., Murray M., Evans, B., & Willig, C. (2000). *Health Psychology, Theory, Research and Practice*. London: Sage Publications.

McLaren N. (2006). Interactive dualism as a partial solution to the mind-brain problem for psychiatry. *Medical Hypotheses*, 66, 1165-1173,

Meade, C. S., & Sikkema K. J. (2005). HIV risk behavior among adults with severe mental illness: A systematic review. *Clinical Psychology Review*, 25, 433-457,

Meadows, J., le Marechal, K., & Catalan, J. (1998). Mental health problems in older adults with HIV referred to a psychological medical unit. *AIDS Care*, 10, S105-112,

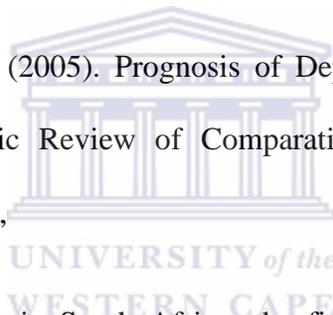
Michalak, E. E., Yatham, L. N., & Lam, R. W. (2005). Quality of life in bipolar disorder: A review of the literature. *Health and Quality of Life Outcomes*, 3, 7525-7572,

Middelkoop, K., Whitelaw, A., Ntutela, C., Vogt, M., Kreiswirth, B., Wood, R., & Bekker, L. G. (2004). Mycobacterium tuberculosis strains within a South African high HIV prevalence community. International Conference on AIDS (15th: 2004 : Bangkok, Thailand). *Int Conf AIDS*. 2004 Jul 11-16; 15: abstract no. B12711. Desmond Tutu HIV Centre, Cape Town, South Africa. U. S. National Institute of Health

Mitchell, A. (2009). People with mental health problems receive inadequate medical care, study suggests. ScienceDaily:

<http://www.sciencedaily.com/releases/2009/06/090602083721> [accessed 15/08/09]

Mitchell, A. & Subramaniam, H. (2005). Prognosis of Depression in Old Age Compared to Middle Age: A Systematic Review of Comparative Studies. *American Journal of Psychiatry*, 162, 1588-1601,



Møller, V. (2007). Quality of life in South Africa: the first ten years of democracy. *Social Indicators Research*, 81, 181-201,

Morrison, M. F., Petitto, J. M., Have, T. T., Gettes, D. R., Chiappini, M. S., Weber, A. L., Brinker-Spence, P., Bauer, R. M., Douglas, S. D., & Evans, D. L. (2002). Depressive and anxiety disorders in women with HIV infection. *American Journal of Psychiatry*, 159, 789-796,

Moore, M., Höfer, S., McGee, H., & Ring, L. (2005). Can the concepts of depression and quality of life be integrated using a time perspective? *Health and Quality of Life Outcomes*, 3: 1-3,

- Morna, C. L. (2009). Glass ceilings: women and men in Southern Africa media. Johannesburg: Gender Links.
- Mukherji, B. R. (1995). Cross-cultural issues in illness and wellness: Implications for depression. *Journal of Social Distress and the Homeless*, 4, 203-217,
- Murray, C. J., & Kopeck, A. D. (1999). On the Comparable Qualification of health risks: lessons from the global burden of disease study. *Epidemiology*, 10, p 594-605,
- Myer, L., Seedat, S., Stein, D. J., Moomal, H., & Williams, D. R. (2008). The mental health impact of AIDS-related mortality in South Africa: a national study. *Journal of Epidemiology Community Health*, 63, 293-298,
- Myer, L., Smit, J., Le Roux, L., Parker, S., Stein, D. J., & Seedat, S. (2008). Common mental disorders among HIV-infected individuals in South Africa: Prevalence, predictors, and validation of brief psychiatric rating scales. *AIDS Patient Care and STDs*, 22, 147-158,
- Naidoo, P. (2004). A critical look at health. *South African Family Practice*, 46, 5-7,
- Naidoo, P. (2009). Public health care practitioner's reflections on tuberculosis patient's perspectives on factors influencing their adherence to the directly observed treatment short-course. *The Open Public Health Journal: In Press*.
- Naidoo, P., Dick, J., Cooper, D. (2009). Exploring tuberculosis patients' adherence to treatment regimens and prevention programs at a public health site. *Qualitative Health Research*, 19, 55-70,

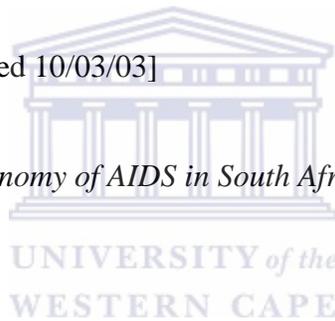
Naidoo, P., Lindegger, G. C., & Mody, G. M. (2004). Sociodemographic and psychosocial predictors of rheumatoid arthritis health outcome. *South African Journal of Psychiatry*, *10*, 109-118,

National Department of Health (2008). National HIV and Syphilis Prevalence Survey South Africa 2007. HIV and AIDS Indicators at mid-2006: People living with HIV and AIDS. South Africa.

National Institute of Mental Health (2002). *Depression and HIV/AIDS: Major depression and unipolar varieties*. Department of Health and Human Services.

<http://www.nih.com> [accessed 10/03/03]

Nattrass, N. (2006). *The moral economy of AIDS in South Africa*. Cambridge: Cambridge University Press.



Nicolay (2008). Summary of provincial HIV and AIDS statistics for South Africa:

http://www.metam.co.za/documents_v2/File/RedRibbon_2009 [accessed 09/04/09]

Olley, B. O., Gxamza, F., Seedat, S., Theron, H., Taljaard, J., Reid, E., Reuter, H., & Stein, D. J., (2003). Psychopathology and coping in recently diagnosed HIV/AIDS patients: the role of gender. *South African Medical Journal*, *93*, 928-931,

Olley, B. O., Seedat, S., Nei, D. G., Stein, D. J. (2004). Predictors of major depression in recently diagnosed patients with HIV/AIDS in South Africa. *AIDS Patients Care and STD's*, *18*, 481-487,

- Osman, A., Barrios, F. X., Gutierrez, P. M., Williams, J. E., Bailey J. (2009). Psychometric properties of the Beck Depression Inventory-II in nonclinical adolescent samples. *Journal of Clinical Psychology, 63*, 83-102,
- Palitza, K. (2009). South Africa: Mental illness in HIV-positive patients largely ignored. Cape Town: Inter Press Service.
- Peltzer, K. & Phaswana-Mafuya, N. (2008). Health-related quality of life in a sample of HIV-infected South Africans, *African Journal of AIDS Research, 7*, 209-218,
- Pettifor, A. E., Measham, D. M., Rees, H. V., & Padian, N. S. (2004). Sexual power and HIV risk, South Africa, *Emerging Infectious Diseases, 10*, 1996-2003,
- Phillips, K. D., Sowell, R. L., Rojas, M., Tavakoli, A., Fulk, L. J., & Hand, G. A. (2004). Physiological and psychological correlates of fatigue in HIV Disease. *Biological Research for Nursing, 6*, 59-74,
- Pienaar, D., Myer, L., Cleary, S., Coetzee, D., Michels, D., Cloete, K., Schneider, H., & Boulle, A. (2006). Models of care for antiretroviral service delivery- Research report. Provincial Government of the Western Cape. Cape Town: Department of Health.
- Pilgrim D. (2002). The biopsychosocial model in Anglo-American psychiatry: Past, present and future. *Journal of Mental Health. 11*, 585-594,
- Pretorius, T. B. (2007). Inferential Data Analysis: Hypothesis Testing and Decision-Making. Wansbeck (SA): Reach Publishers.
- Prochaska, J. O., & Norcross, J. C. (2007). Systems of psychotherapy: A transtheoretical analysis (sixth edition). USA: Thomson Brooks/Cole.

Rabkin, J. G., Ferrando, S. J., van Gorp, W., Rieppi, R., McElhiney, M., & Sewell, M. (2000). Relationships Among Apathy, Depression, and Cognitive Impairment in HIV/AIDS.

Journal of Neuropsychiatry Clinical Neuroscience, 12, 451-457,

Rabkin, J.G., Remien, R.H., Katoff, L., & Williams, J.B.W (1993). Suicidality in AIDS long-term survivors: what is the evidence? *AIDS Care*, 5, 401-411,

Ransom, D., Heckman, T. G., Anderson, T., Garske, J., Holroyd, K., & Basta, T. (2008). Telephone-delivered, interpersonal psychotherapy for HIV-infected rural persons with depression: a pilot trial. *International Journal of Therapy and Rehabilitation*, 12, 362-362,

Richter, L. M. & Desmond, C. (2008). Targeting AIDS orphans and child-headed households?: a perspective from national surveys in South Africa, 1995-2005. *AIDS Care*, 20, 1019-1028,



Riggs, S. A., Vosvick, M. & Stallings, S. (2007). Attachment style, stigma and psychological distress among HIV+ adults. *Journal of Health Psychology*, 12, 922-936,

Ritchie, C. (2007) Health care quality and multimorbidity, *Med Care*: 45, 477- 479,

Ritsner, M., & Eward, A. D. (2007). *Quality of Life Impairment in Schizophrenia, Mood and Anxiety Disorders: New Perspectives on Research and Treatment*. Netherlands: Springer.

Ritsner, M., Kurs, R., Gibel, A., Ratner, Y., & Endicott, J. (2005). Validity of an abbreviated Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q-18) for Schizophrenia, schizoaffective, and mood disorder patients. *Quality of Life Research*, 14, 1693-1703,

Rüütel, K., Pisarev, H., Loit, H. M., & Uusküla, A. (2009). Factors influencing quality of life of people living with HIV in Estonia: a cross-sectional survey. *Journal of the International AIDS Society*, 12, 12-13,

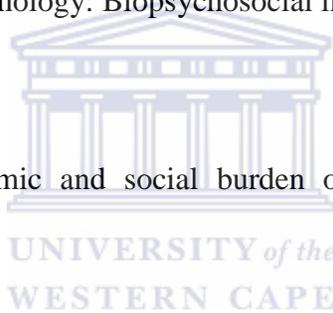
San Francisco AIDS Foundation (2008). The Stages of HIV Disease:

http://www.sfaf.org/aids101/hiv_disease.html [accessed 10/10/09]

Santrock, J. W. (2007). *A Topical Approach to Human Life-span Development* (3rd ed.). St. Louis, MO: McGraw-Hill.

Sarafino, E. P. (2002). *Health Psychology: Biopsychosocial interactions* (4th Edition). New York: John Wiley & Sons Inc.

Sartorius, N. (2001). The economic and social burden of depression. *Journal of Clinical Psychiatry*, 62, 8-11,



Schulz, K. F., & Grimes, D. A. (2005). Sample size calculations in randomised trials: mandatory and mystical. *Lancet*, 365, 1348-53,

Seekings, J. (2008). Beyond 'fluidity': Kinship and households as social projects. *Centre for Social Science*, 237, 2-30,

Sharma, S. K., Mohan, A., & Kadiravan, T. (2005). HIV-TB co-infection: Epidemiology, diagnosis & management. *Indian Journal of Medical Resources*, 121, 550-567,

Shisana, O., Hall, E., Maluleke, K. R., Stoker, D. J., Schwabe, C., Colvin, N., Chauveau, J., Botha, C., Gumede, T., Fomundam, H., Shaikh, N., Rehle, T., Udjo, E., Grisselquist, D. (2002). *The impact of HIV/AIDS on the health sector: national survey of health*

personnel, ambulatory and hospitalised patients and health facilities, 2002. Pretoria: National Department of Health.

Shisana, O., Rehle, T., Simbayi, L., Parker, W., Jooste, S., Pillay-van Wyk, V., Mbelle, N., & van Zyl, J. (2009). South African National HIV Prevalence, Incidence, Behaviour and Communication Survey, 2008: A Turning Tide Among Teenagers? Cape Town: HSRC Press.

Shisana, O., Zungu-Dirwayi, N., Toefy, Y., Simbayi, L. C., Malik, S., & Zuma, K (2004). Marital status and risk of HIV infection in South Africa. *South African Medical Journal*, 94, 7, 1-7,

Siegal, K., Schrimshaw, E. W., & Dean, L. (1999). Symptom interpretation and medication adherence among late middle-age and older HIV-infected adults. *Journal of Health Psychology*, 4, 247-257,

Singh, N., Squier, C., Sivek, C., Wagener M., & Yu, V. (1997). Psychological stress and depression in older patients with intravenous drug use and human immunodeficiency virus infection: Implications for Intervention. *International Journal for STD & AIDS*, 8, 251-255,

Skiest, D. J., Rubenstein, E., Carley, N., Gioiella, L., & Lyons, R. (1996). The importance of comorbidity in HIV-infected patients over 55: A retrospective case-control study. *American Journal of Medicine*, 101, 605-611,

Smarr, K. L. (2003). Measures of depression and depressive symptoms: The Beck Depression Inventory (BDI), Center for Epidemiological Studies-Depression Scale (CES-D),

Geriatric Depression Scale (GDS), Hospital Anxiety and Depression Scale (HADS), and Primary Care Evaluation of Mental Disorders-Mood Module (PRIME-MD). *Arthritis Care and Research*, 49, 134-146,

Sanders C, Egger M, Donovan J, Tallon D, & Frankel S (1998). Reporting on quality of life in randomised controlled trials: bibliographic study. *British Medical Journal*, 317, 1191–1194.

Sorsdahl, K., Stein, D. J., Grimsrud, A., Seedat, S., Flisher, A. J., Williams, D. R., Myer, L. (2009). Traditional Healers in the Treatment of Common Mental Disorders in South Africa. *The Journal of Nervous and Mental Disease*, 197, 434-441,

South African Government Information (2009). Media invitation to the President's annual address to the National Council of Provinces (NCOP). Parliament of South Africa.

South African National HIV Survey (2005). *South African National HIV Prevalence, HIV Incidence, Behaviour and Communication Survey, 2005*: Commissioned by the Nelson Mandela Foundation. Cape Town: HSRC Press.

Stedman's Medical Dictionary 28th Edition (2006). Health-Related Quality of Life. Baltimore: Lippincott Williams & Wilkins.

Steinberg, M., Johnson S., Schierhot, G., & Ndegwa, D. (2002). How households cope with the impact of the HIV/AIDS Epidemic: A Survey of households affected by HIV/AIDS in South Africa. California: Abt Associates Inc.

Stern, R. A., Perkins, D. O., & Evans, D. L. (2000). Neuropsychiatric manifestations of HIV-1 infection and AIDS. *Psychopharmacology: The Fourth Generation of Progress*

- Stranix-Chibanda, L., Chibanda, D., Chingono, A., Montgomery, E., Wells, J., Maldonado, Y., Chipato, T., & Shetty, A. K. (2005). Screening for psychological morbidity in HIV-infected and HIV-uninfected pregnant women using community counselors in Zimbabwe. *Journal of the International Association of Physicians in AIDS Care (JIAPAC)*, 4, 83-88.
- Suich, A. (2006). Women and AIDS in South Africa: a conflicted history leads to a dispiriting present. Magazine article in UN Chronicle, Vol. 43, United Nations Publications
http://findarticles.com/p/articles/mi_m1309/is_2_43/ai_n27007446/ [accessed 05/01/10]
- Supriya, M., Moore, R. D., Graham, N. M. H. (1997). Potential factors affecting adherence with HIV therapy. *AIDS*, 11, 1665-1670,
- Tait, R. C., Gfellar, J. D., & Chibnall, J. T. (1995). Relationship between social desirability and self-report in chronic pain patients. *The Clinical journal of pain*, 11, 181-193,
- Tate, D., Paul, R. H., Flanigan, T. P., Tashima, K., Nash, J., Adair, C., Boland, R., & Cohen, R. A. (2003). The impact of apathy and depression on quality of life in patients infected with HIV. *AIDS Patient Care and STDs*, 17, 115-120,
- Taylor, S. E., Repetti, R. L., & Seeman, T. (1997). Health psychology: What is an unhealthy environment and how does it get under the skin? *Annual Review of Psychology*, 48, 411-447,
- The Early Childhood Measurement and Evaluation Resource Centre (2007).
<http://www.cup.ualberta.ca> [accessed 31/03/09]

Tsevat, J. (2008). Spirituality/religion and quality of life in patients with HIV/AIDS. *Journal of General Internal Medicine*, 21, S1-S2,

UCT HIV/AIDS Policy (2004). University of Cape Town policy on HIV infection and AIDS: a co-ordinated response: Response to HIV/AIDS.

http://hr.uct.ac.za/remunbenefits/docs/hiv_aids.pdf. [accessed 09/05/09]

UNAIDS (2006). Report on the global HIV/AIDS epidemic (2006).

http://www.unaids.org/en/HIV_data/2006/GlobalReport [accessed 24/12/09]

UNAIDS (2008). Report on the global HIV/AIDS epidemic (2008). Executive Summary. WHO Library Cataloguing: In-Publication Data.

<http://www.UNAIDS.com> [accessed 27/03/03]

Van Der Merwe, J. (1995). Physician-patient communication using ancestral spirits to achieve holistic healing. *American Journal of Obstetrics and Gynecology*, 127, 1080-1087,

Van der Ryst, E., Strydom, W., Scott, C., Boshoff, W., Joubert, G., & Els, C. (1998). A high rate of psychiatric comorbidity in South African HIV/AIDS patients. *International Conference on AIDS*, 12, 571-2,

Walby, C. (1996). *AIDS and the Body Politic: Biomedicine and Sexual Difference*.

London: Routledge.

Westaway, M. S. (2009). The impact of chronic diseases on the health and well-being of South Africans in early and later old age.

http://www.sciencedirect.com/science?_ob=ArticleURL [accessed 12/08/09]

Wiegand, P. (2006). *Oxford International Primary Atlas Activity Book*. South Africa: Oxford University Press.

World Health Organisation (2006): <http://www.WHO.com> [accessed 15/03/09]

World Health Organisation (2007): <http://www.WHO.com> [accessed 15/03/09]

World Health Statistics (2008). *World Health Statistics 2008*. USA: WHO.

Wray, R. L. (2009). The rise and fall of money manager capitalism: a Minskian approach. *Cambridge Journal of Economics*, 33, 807-828,

Wreford, J., Esser, M. & Hippler, S. (2008). Involving traditional health practitioners in HIV/AIDS interventions: Lessons from the Western Cape Province. Centre for Social Science Research: UCT.



APPENDIX A

Figure 2.1

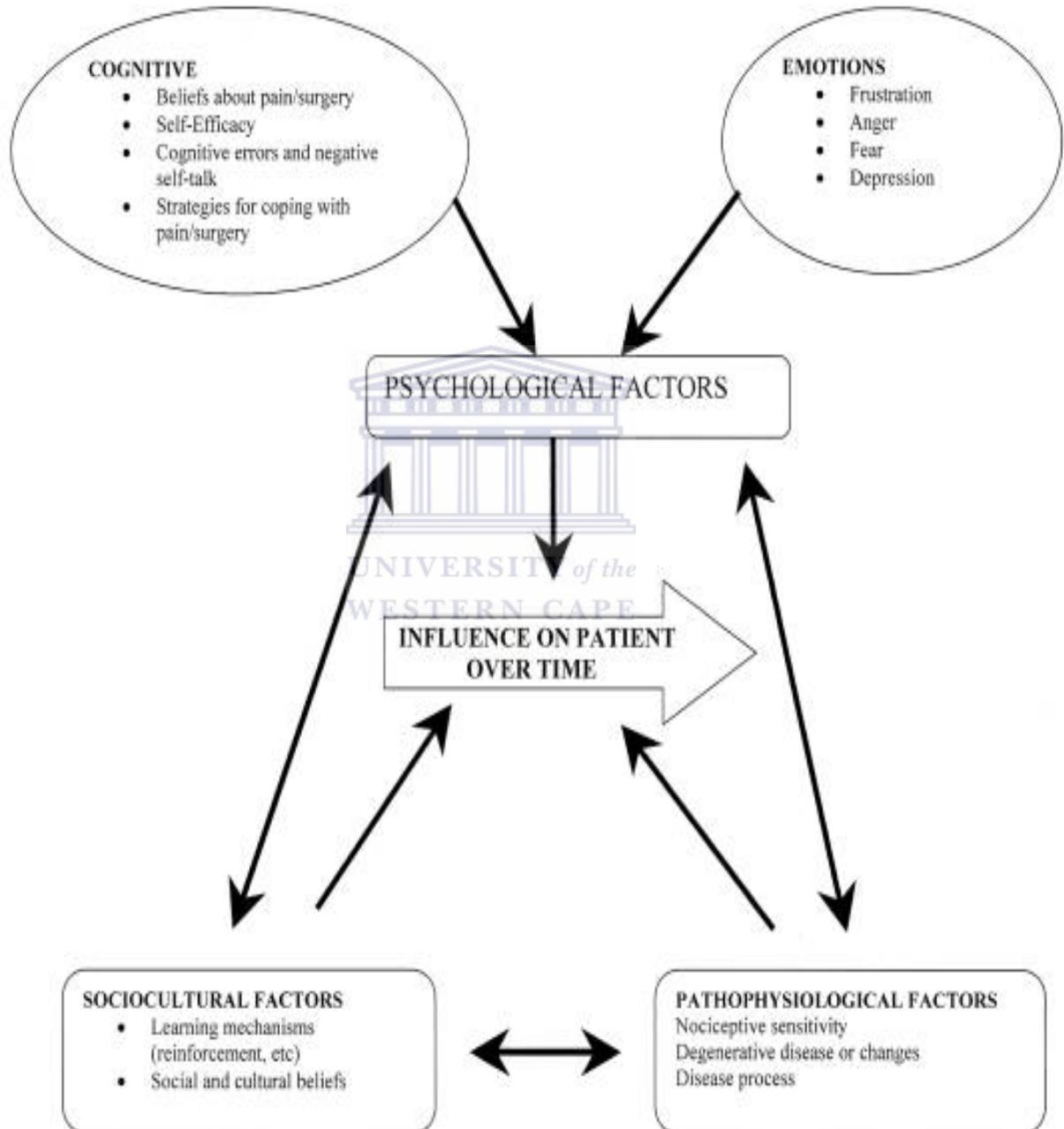


Figure 2.1: Biopsychosocial conceptual model. Adapted from Chapman et al. (1999, p. 43) (cited in Deardorff, 2007) (p.17)

Figure 2A

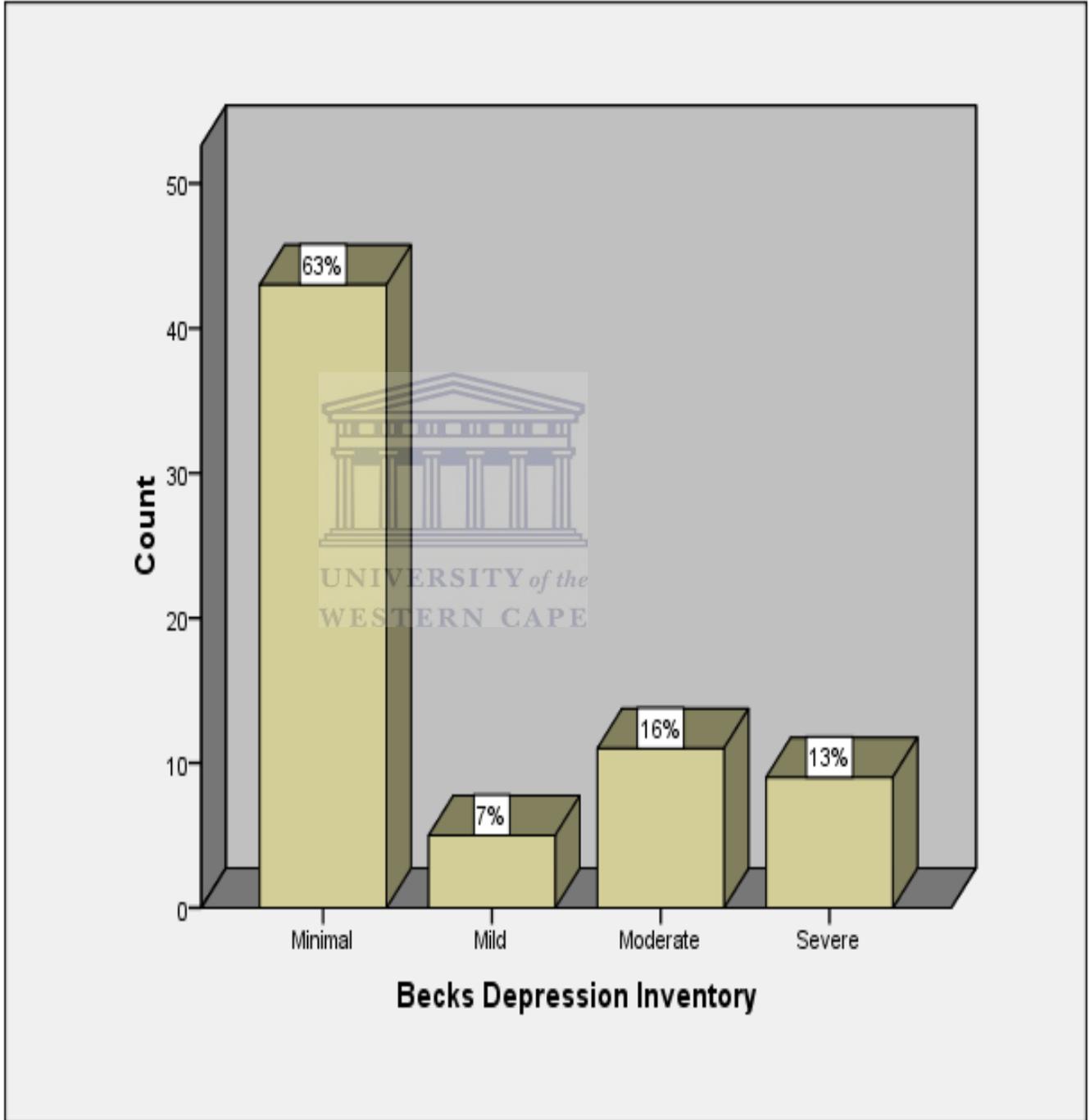
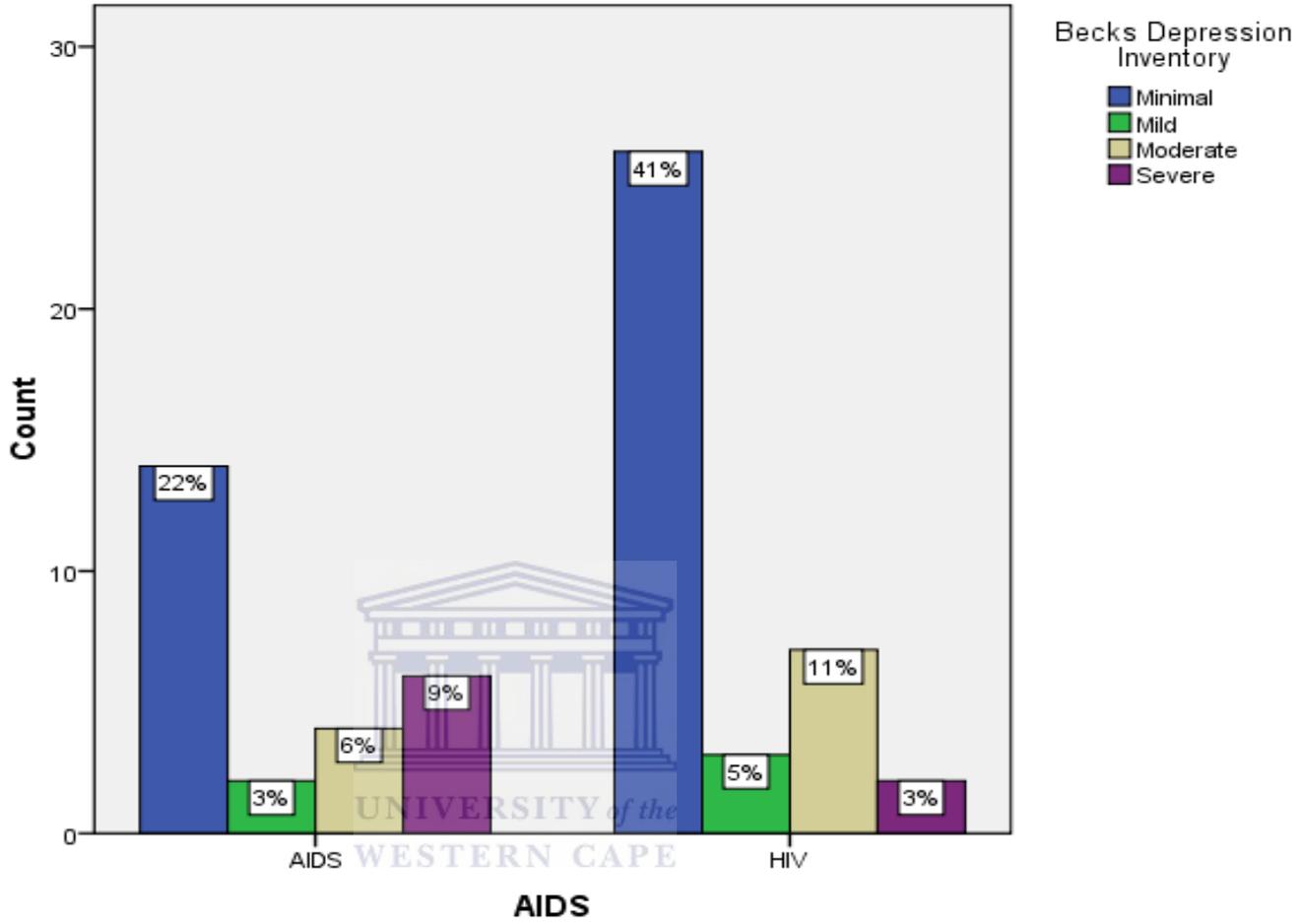


Figure 2A. Frequency count of the Categories of Depression (p. 65).

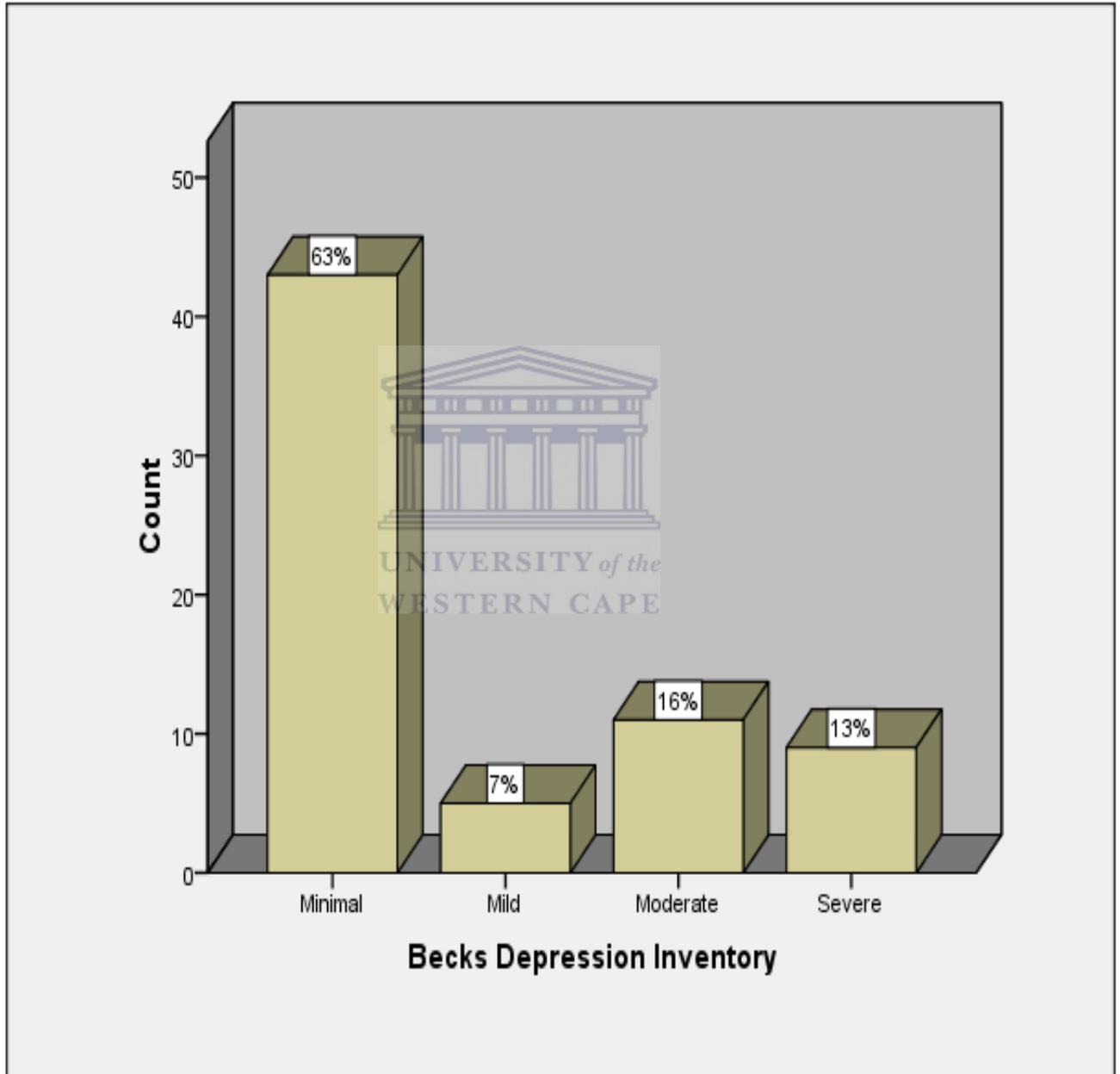
Figure 2B



2B. Bivariate Analyses of HIV/AIDS and Depression Categories (P. 67).

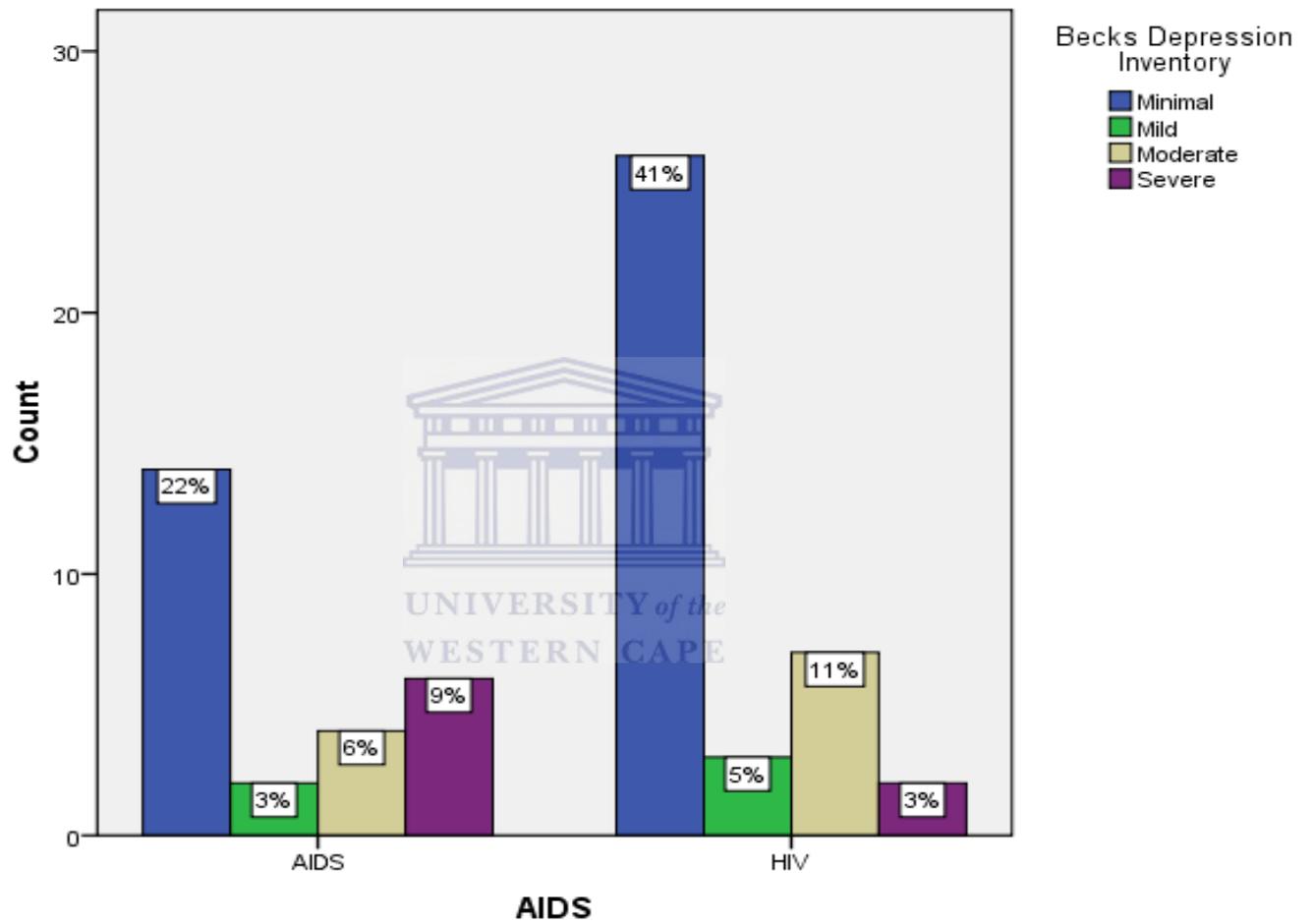
APPENDIX B

Graph 1



Graph 2:

Graph



Descriptive Statistics

Table 1:

Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	20	28.6	28.6	28.6
	Female	50	71.4	71.4	100.0
	Total	70	100.0	100.0	

Age Group

		Frequency	Percentage	Valid Percent	Cumulative Percent
Age	18-24yrs	12	17.6	17.6	17.6
	25-49yrs	52	76.5	76.5	94.1
	50yrs+	4	5.9	5.9	100

Language

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	English	2	2.9	2.9	2.9
	Xhosa	63	90.0	90.0	92.9
	Other	5	7.1	7.1	100.0
	Total	70	100.0	100.0	

AIDS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	AIDS	26	37.1	40.0	40.0
	HIV	39	55.7	60.0	100.0
	Total	65	92.9	100.0	
Missing	System	5	7.1		
	Total	70	100.0		

CD4 Count

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Stage one	2	2.9	4.3	4.3
	Stage two	13	18.6	28.3	32.6
	Stage three	31	44.3	67.4	100.0
	Total	46	65.7	100.0	
Missing	System	24	34.3		
Total		70	100.0		

Employment status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed	10	14.3	14.3	14.3
	Unemployed	60	85.7	85.7	100.0
Total		70	100.0	100.0	

Marital status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never married	33	47.1	47.8	47.8
	Living with partner	8	11.4	11.6	59.4
	Seperated	4	5.7	5.8	65.2
	Married	20	28.6	29.0	94.2
	Divorced	2	2.9	2.9	97.1
	Widowed	2	2.9	2.9	100.0
	Total	69	98.6	100.0	
Missing	System	1	1.4		
Total		70	100.0		

Table 2: Prevalence of Depression

	Frequency	Percent	Cumulative Percentage
Depressed	25	36.8	36.8
Not depressed	43	63.2	100
Total sample	68	100.0	

Depression

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Minimal	43	61.4	63.2	63.2
Mild	5	7.1	7.4	70.6
Moderate	11	15.7	16.2	86.8
Severe	9	12.9	13.2	100.0
Total	68	97.1	100.0	
Missing System	2	2.9		
Total	70	100.0		

UNIVERSITY of the
WESTERN CAPE

Cross Tabulation

Table 2.1 Cross tabulation of overall depression and variables

Depression * AIDS		
	Frequency	Percentage
Depressed		
HIV	12	50
AIDS	12	50
Total	24	100
Not Depressed		
HIV	26	65
AIDS	14	35
Total	40	100

Depression * Age		
Age Group	Frequency	Percentage
Depressed		
18yrs-24yrs	5	20
25yrs-49yrs	19	76
50+ yrs	1	4
Not Depressed		
18yrs-24yrs	7	16.3
25yrs-49yrs	19	76.7
5+ yrs	3	7

Depression * Employment		
Depressed	Frequency	Percentage
Employed	9	50
Unemployed	11	18.9
Not Depressed		
Employed	5	50
Unemployed	38	65.5

Cross Tabulation

Table 2.2 Cross Tabulation of Demographic Variables and Depression

Sex * Depression Inventory

			Depression				Total
			Minimal	Mild	Moderate	Severe	
Sex	Male	Count	15	1	2	2	20
		% within Sex	75.0%	5.0%	10.0%	10.0%	100.0%
	Female	Count	28	4	9	7	48
		% within Sex	58.3%	8.3%	18.8%	14.6%	100.0%
Total		Count	43	5	11	9	68
		% within Sex	63.2%	7.4%	16.2%	13.2%	100.0%

Employment status * Depression

			Depression		
			Minimal	Mild	Moderate
Employment status	Employed	Count	5	3	2
		% within Employment status	50.0%	30.0%	20.0%
	Unemployed	Count	38	2	9
		% within Employment status	65.5%	3.4%	15.5%
Total		Count	43	5	11
		% within Employment status	63.2%	7.4%	16.2%

HIV or AIDS * Depression Crosstabulation

			Depression				Total
			Minimal	Mild	Moderate	Severe	
AIDS	AIDS	Count	14	2	4	6	26
		% within AIDS	53.8%	7.7%	15.4%	23.1%	100.0%
	HIV	Count	26	3	7	2	38
		% within AIDS	68.4%	7.9%	18.4%	5.3%	100.0%
Total	Count	40	5	11	8	64	

HIV or AIDS * Depression Crosstabulation

			Depression				Total
			Minimal	Mild	Moderate	Severe	
AIDS	AIDS	Count	14	2	4	6	26
		% within AIDS	53.8%	7.7%	15.4%	23.1%	100.0%
HIV	HIV	Count	26	3	7	2	38
		% within AIDS	68.4%	7.9%	18.4%	5.3%	100.0%
Total	Total	Count	40	5	11	8	64
		% within AIDS	62.5%	7.8%	17.2%	12.5%	100.0%

4.3.2 Quality of Life

Table 2.3 Mean QoL within Adults with HIV or AIDS

		% Max QHouse Duties	% Max QSchool Work	% Max QLeisure	% Max QSocial Relations	% Max QGeneral	% Max QWork	% Max QFeelings	% Max QPhysical
N	Valid	69	69	69	68	68	69	69	69
	Missing	1	1	1	2	2	1	1	1
	Mean	45.7609	7.7174	47.2826	59.4251	58.4296	10.3122	52.7433	48.63
	Std. Deviation	28.64368	23.76253	28.05866	22.28631	25.95981	25.16257	24.38580	22.364
	Minimum	.00	.00	.00	9.09	1.79	.00	.00	6
	Maximum	90.00	100.00	100.00	100.00	112.50	98.08	96.43	100

Table 2.4 Correlation Analysis on the Relationship between Depression and QoL



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2835/2283

APPENNDIX D

INFORMATION SHEET

Project Title: IMPLICATIVE PERSONAL DILEMMAS AND COGNITIVE CONFLICTS IN HEALTH DECISION-MAKING IN HIV POSITIVE ADULTS AND ADULTS WITH AIDS

What is this study about?

This is a research project being conducted by Professor Pamela Naidoo at the University of the Western Cape. We are inviting you to participate in this research project because you have tested positive for the HI Virus and you are already on a treatment programme, which includes anti-retro viral therapy. The purpose of this research project is to try and understand how you think about your life and the fact that you are HIV positive, and how you arrive at the decisions you make regarding your health. You are aware that you can infect others with the HI Virus if you do not take the necessary precautions, such as using protective devices (e.g. a condom) whilst you are involved with other individuals during periods of intimacy. You are also aware that you have to follow a particular life-style, such as not engaging in risky behaviour, which can compromise your health. Not taking the anti-retro viral therapy as the doctor or the nurse advises you to take it, for example, may lead you to suffer ill health.

Very often despite individuals knowing that, certain behaviours are bad for theirs and other individual's health, they make decisions that may endanger theirs and the lives of others. This study, therefore, focuses on the difficulties that individuals, who are HIV positive, face when making health decisions. The study also attempts to understand how HIV positive individuals arrive at making health decisions that are good for them and other individuals that form part of their lives.

Once we are better able to understand the way you think about your health and how this thinking influences the decisions you make about taking care of your health, we will try to use this understanding to make changes to your current treatment programme. Once these changes are made and you receive the newly developed programme we will monitor the programme to assess whether it works well. Only one of the two clinics that is involved in the study will provide the new programme because we still need to test whether the programme works better than the previous programme before all the clinics provide it.

What will I be asked to do if I agree to participate?

You will be asked to fill in a number of questionnaires in a language of your choice. You will be assisted and guided by a research assistant. There will be a special room where you will be able to sit comfortably and fill in all the questionnaires. Please do not hesitate to inform the research assistant if you are experiencing any discomfort or if you want to have a rest before completing the questionnaires. You

should be able to complete the questionnaires within one and a half (to two) hours. Light refreshments will be provided.

About 6 to 8 months after the new treatment programme is given to you at your clinic, we will ask you and the patients from the clinic that did not provide the programme to fill in another set of questionnaires, which should take an hour and a half to complete. This will be done at one of your follow-up visits. Once again, you will be given the questionnaires in a special room where light refreshments will also be provided.

If you are required to come in when it is not your clinic follow-up visit, then you will be given money for your transport.

Would my participation in this study be kept confidential?

We will do our best to keep your personal information confidential. To help protect your confidentiality, we will not write your name on each of the questionnaires but we will use a code so that the main researchers can identify you. This is important because we would like you to benefit from this study. We would like you to participate in the follow-up phase of the study, after the new programme is provided at the clinic. It is for this reason that the main researchers need to be able to identify you.

Please be assured that the questionnaires you answered will be locked in a safe place and only the main researchers will be able to access it. After we enter your answers on the computer, we will create a protected file that only the main researchers can enter with a pass-word.

If we write a report or article about this research project, your identity will be protected to the maximum extent possible.

What are the risks of this research?

There are no known risks associated with participating in this research project. However, you are at liberty to rest if you get tired whilst you are filling in the questionnaires.

What are the benefits of this research?

The benefits to you if you receive the new treatment programme include the fact that you will be able to express the way you think and feel about being HIV positive. You will be given the choice to have more counselling about your health status.

You and the patients who do not receive the new programme, will also be helping other people who are HIV positive, indirectly, to benefit. By testing the new programme, we will be able to advise all the health practitioners involved in your treatment what the best method of treatment is so that you can live a better life by making better decisions.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

Is any assistance available if I am negatively affected by participating in this study?

Yes, the research assistants will be able to help you during the time that you are participating in the research. If you feel that you want to talk more about your experiences of being HIV positive, the research assistant will arrange for the appropriate professional person to see you. If this happens, you will have to provide permission for the research assistant to refer you.

What if I have questions?

This research is being conducted by Professor Pamela Naidoo of the department of Psychology at the University of the Western Cape. If you have any questions about the research study itself, please contact me at: the Department of Psychology at the University of the Western Cape. Tel: 021 959 2835/2283/2453.

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Head of Department: Professor Kelvin Mwaba

Dean of the Faculty of Community and Health Sciences: Prof R Mpofu

University of the Western Cape

Private Bag X17

Bellville 7535

This research has been approved by the University of the Western Cape's Senate Research Committee and Ethics Committee.



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959, Fax: 27 21-959
E-mail:

APPENDIX D

CONSENT FORM

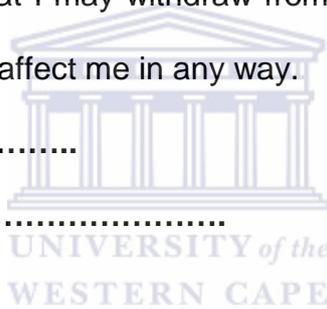
Title of Research Project: IMPLICATIVE PERSONAL DILEMMAS AND COGNITIVE CONFLICTS IN HEALTH DECISION-MAKING IN HIV POSITIVE ADULTS AND ADULTS WITH AIDS

The study has been described to me in language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

Participant's name.....

Participant's signature.....

Date.....



Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact the study coordinator:

Study Coordinator's Name: PROFESSOR PAMELA NAIDOO

University of the Western Cape

Private Bag X17, Belville 7535

Telephone: (021)959-2835

Cell: 083 776 1144

Email: pnaidoo@uwc.ac.za



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2835/2283

Appendix F

	Beck Depression Inventory	Baseline
V 0477	CRTN: _____ CRF number: _____	Page 14 patient initials: _____
		Date: _____

Name: _____ Marital Status: _____ Age: _____ Sex: _____
Occupation: _____ Education: _____

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today**. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

<p>1. Sadness</p> <p>0 I do not feel sad.</p> <p>1 I feel sad much of the time.</p> <p>2 I am sad all the time.</p> <p>3 I am so sad or unhappy that I can't stand it.</p> <p>2. Pessimism</p> <p>0 I am not discouraged about my future.</p> <p>1 I feel more discouraged about my future than I used to be.</p> <p>2 I do not expect things to work out for me.</p> <p>3 I feel my future is hopeless and will only get worse.</p> <p>3. Past Failure</p> <p>0 I do not feel like a failure.</p> <p>1 I have failed more than I should have.</p> <p>2 As I look back, I see a lot of failures.</p> <p>3 I feel I am a total failure as a person.</p> <p>4. Loss of Pleasure</p> <p>0 I get as much pleasure as I ever did from the things I enjoy.</p> <p>1 I don't enjoy things as much as I used to.</p> <p>2 I get very little pleasure from the things I used to enjoy.</p> <p>3 I can't get any pleasure from the things I used to enjoy.</p> <p>5. Guilty Feelings</p> <p>0 I don't feel particularly guilty.</p> <p>1 I feel guilty over many things I have done or should have done.</p> <p>2 I feel quite guilty most of the time.</p> <p>3 I feel guilty all of the time.</p>	<p>6. Punishment Feelings</p> <p>0 I don't feel I am being punished.</p> <p>1 I feel I may be punished.</p> <p>2 I expect to be punished.</p> <p>3 I feel I am being punished.</p> <p>7. Self-Dislike</p> <p>0 I feel the same about myself as ever.</p> <p>1 I have lost confidence in myself.</p> <p>2 I am disappointed in myself.</p> <p>3 I dislike myself.</p> <p>8. Self-Criticalness</p> <p>0 I don't criticize or blame myself more than usual.</p> <p>1 I am more critical of myself than I used to be.</p> <p>2 I criticize myself for all of my faults.</p> <p>3 I blame myself for everything bad that happens.</p> <p>9. Suicidal Thoughts or Wishes</p> <p>0 I don't have any thoughts of killing myself.</p> <p>1 I have thoughts of killing myself, but I would not carry them out.</p> <p>2 I would like to kill myself.</p> <p>3 I would kill myself if I had the chance.</p> <p>10. Crying</p> <p>0 I don't cry anymore than I used to.</p> <p>1 I cry more than I used to.</p> <p>2 I cry over every little thing.</p> <p>3 I feel like crying, but I can't.</p>
--	--



11. Agitation

- 0 I am no more restless or wound up than usual.
- 1 I feel more restless or wound up than usual.
- 2 I am so restless or agitated that it's hard to stay still.
- 3 I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest

- 0 I have not lost interest in other people or activities.
- 1 I am less interested in other people or things than before.
- 2 I have lost most of my interest in other people or things.
- 3 It's hard to get interested in anything.

13. Indecisiveness

- 0 I make decisions about as well as ever.
- 1 I find it more difficult to make decisions than usual.
- 2 I have much greater difficulty in making decisions than I used to.
- 3 I have trouble making any decisions.

14. Worthlessness

- 0 I do not feel I am worthless.
- 1 I don't consider myself as worthwhile and useful as I used to.
- 2 I feel more worthless as compared to other people.
- 3 I feel utterly worthless.

15. Loss of Energy

- 0 I have as much energy as ever.
- 1 I have less energy than I used to have.
- 2 I don't have enough energy to do very much.
- 3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern

- 0 I have not experienced any change in my sleeping pattern.
- 1a I sleep somewhat more than usual.
- 1b I sleep somewhat less than usual.
- 2a I sleep a lot more than usual.
- 2b I sleep a lot less than usual.
- 3a I sleep most of the day.
- 3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritability

- 0 I am no more irritable than usual.
- 1 I am more irritable than usual.
- 2 I am much more irritable than usual.
- 3 I am irritable all the time.

18. Changes in Appetite

- 0 I have not experienced any change in my appetite.
- 1a My appetite is somewhat less than usual.
- 1b My appetite is somewhat greater than usual.
- 2a My appetite is much less than before.
- 2b My appetite is much greater than usual.
- 3a I have no appetite at all.
- 3b I crave food all the time.

19. Concentration Difficulty

- 0 I can concentrate as well as ever.
- 1 I can't concentrate as well as usual.
- 2 It's hard to keep my mind on anything for very long.
- 3 I find I can't concentrate on anything.

20. Tiredness or Fatigue

- 0 I am no more tired or fatigued than usual.
- 1 I get more tired or fatigued more easily than usual.
- 2 I am too tired or fatigued to do a lot of the things I used to do.
- 3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex

- 0 I have not noticed any recent change in my interest in sex.
- 1 I am less interested in sex than I used to be.
- 2 I am much less interested in sex now.
- 3 I have lost interest in sex completely.

Subtotal Page 2

Subtotal Page 1

Total Score

3456789 10 11 12 ABCDE

APPENDIX G

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
 Tel: +27 21-959 2835/2283



Page 1 of 8

PHYSICAL HEALTH/ACTIVITIES

Circle the most appropriate answer

- 1 Not at all (never)
- 2 Rarely
- 3 Some of the time
- 4 Often or most of the time
- 5 Frequently or all of the time

With regard to your physical health, during the past week how much of the time have you ...

... been completely free of aches, pains, or discomfort?	1	2	3	4	5 (25)
... felt rested?	1	2	3	4	5 (26)
... felt energetic?	1	2	3	4	5 (27)
... felt in excellent physical health?	1	2	3	4	5 (28)
... felt in at least very good physical health?	1	2	3	4	5 (29)
... been free of worry about your physical health?	1	2	3	4	5 (30)
... felt you got enough sleep?	1	2	3	4	5 (31)
... felt able to be as physically active as needed?	1	2	3	4	5 (32)
... felt well coordinated?	1	2	3	4	5 (33)
... felt your memory was functioning well?	1	2	3	4	5 (34)
... felt good physically?	1	2	3	4	5 (35)
... felt full of pep and vitality?	1	2	3	4	5 (36)
... been free of visual problems?	1	2	3	4	5 (37)

Q-LES-Q (Self-Report)



UNIVERSITY *of the*
WESTERN CAPE

FEELINGS

Circle the most appropriate answer

- 1 Not at all (never)**
- 2 Rarely**
- 3 Some of the time**
- 4 Often or most of the time**
- 5 Frequently or all of the time**

During the past week how much of the time have you...

felt clearheaded?	1	2	3	4	5 (38)
felt satisfied with your life?	1	2	3	4	5 (39)
felt good about your appearance?	1	2	3	4	5 (40)
felt happy or cheerful?	1	2	3	4	5 (41)
felt independent?	1	2	3	4	5 (42)
felt content?	1	2	3	4	5 (43)
felt able to communicate with others?					
felt interested in taking care of your appearance (hair, clothing) and personal hygiene (bathing, dressing)?	1	2	3	4	5 (45)
felt able to make decisions?	1	2	3	4	5 (46)
felt relaxed?	1	2	3	4	5 (47)
felt good about your life?	1	2	3	4	5 (48)
felt able to travel about to get things done when needed (walk, use car, bus, train, or whatever is available as needed)?	1	2	3	4	5 (49)
felt able to deal with life's problems?	1	2	3	4	5 (50)
felt able to take care of yourself?	1	2	3	4	5 (51)



Q-LES-Q (Self-Report)

Page 3 of 8

WORK

Do you: have a job _____, work for yourself _____, do volunteer work _____?

If- NO to all 3 (Note reason & SKIP to Page 4) _____.

- YES to any of the 3 (COMPLETE THIS SECTION) (55)

Reasons 1. Too ill physically 2. Too emotionally upset 3. Retired 4 Other
 _____ (specify other reason) (56)

Circle the most appropriate answer

- 1 Not at all (never)**
- 2 Rarely**
- 3 Some of the time**
- 4 Often or most of the time**
- 5 Frequently or all of the time**

During the past week, how often have you...

enjoyed your work? 1 2 3 4 5 (57)

solved work problems or dealt with them without undue stress? 1 2 3 4 5 (58)

thought clearly about work? 1 2 3 4 5 (59)

been decisive about work, or made decisions when needed? 1 2 3 4 5 (60)

accomplished what you wanted to do? 1 2 3 4 5 (61)

been pleased with your work accomplishments? 1 2 3 4 5 (62)

worked well? 1 2 3 4 5 (63)

been interested in your work? 1 2 3 4 5 (64)

concentrated on work? 1 2 3 4 5 (65)

worked carefully? 1 2 3 4 5 (66)

kept up with expected work? 1 2 3 4 5 (67)

taken care of work by yourself when it was necessary? 1 2 3 4 5 (68)

communicated and interacted with ease with others while working? 1 2 3 4 5 (69)



HOUSEHOLD DUTIES

Are you responsible for any household duties/housework/homemaker activities (e.g., cleaning, shopping, doing dishes food shopping or preparation)

IF: 1 - NO (Note reason and SKIP to Page 5)
 2 - YES (COMPLETE THIS SECTION (70)

Reason: 1. Too ill physically 2. Too upset emotionally 3. Not expected to do anything for yourself or for other people? 4. Other _____ (71)

Circle the most appropriate answer

- 1 Not at all (never)**
- 2 Rarely**
- 3 Some of the time**
- 4 Often or most of the time**
- 5 Frequently or all of the time**

During the past week, how often have you...

kept your room/apartment/house cleaned to your satisfaction?	1	2	3	4	5 (72)
paid the bills, done the banking to your satisfaction?	1	2	3	4	5 (73)
shopped for food or other household items to your satisfaction?	1	2	3	4	5(74)
prepared food or obtained food to your satisfaction?	1	2	3	4	5 (75)
taken care of the laundry/cleaning to your satisfaction?	1	2	3	4	5 (76)
had a feeling of accomplishment with regard to household activities?	1	2	3	4	5(225)
concentrated and thought clearly about what household activities needed to be done?	1	2	3	4	5 (226)
solved household problems or dealt with them without undue stress?	1	2	3	4	5 (227)
been decisive or made decisions when needed with regard to household activities?	1	2	3	4	5 (228)
made repairs or taken care of household maintenance as needed?	1	2	3	4	5 (229)

SCHOOL/COURSE WORK

Have you in been taking any courses, going to class, or been involved in any type of course work, school or college studies during the past week?

IF: NO (Note reason and SKIP to Page 6)

YES (COMPLETE THIS SECTION) (230)

Reason:

1. Too ill physically 2. Too upset emotionally 3. Not expected to do anything 4. Other
 _____(231)

(write in reason)

Circle the most appropriate answer

- 1 Not at all (never)**
- 2 Rarely**
- 3 Some of the time**
- 4 Often or most of the time**
- 5 Frequently or all of the time**

During the past week how much of the time have you...

enjoyed the course/class work?	1	2	3	4	5 (232)
looked forward to getting to work on the course/class work?	1	2	3	4	5 (233)
dealt with the course/class work without undue stress?	1	2	3	4	5 (234)
thought clearly about the course/class work?	1	2	3	4	5 (235)
been decisive about the course/class work when needed?	1	2	3	4	5 (236)
been pleased with your course/class work accomplishments?	1	2	3	4	5(237)
been interested in your course/class work?	1	2	3	4	5(238)
concentrated on the course/class work?	1	2	3	4	5(239)
felt good while doing your course/class work?	1	2	3	4	5(240)
communicated and interacted with ease with others at your course/class?	1	2	3	4	5(232)



LEISURE TIME ACTIVITIES

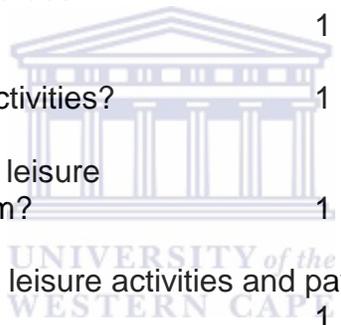
The following questions refer to leisure time activities such as watching T.V., reading the paper or magazines, tending house plants or gardening, hobbies, going to museums or the movies, or to sports events, etc.

Circle the most appropriate answer

- 1 Not at all (never)**
- 2 Rarely**
- 3 Some of the time**
- 4 Often or most of the time**
- 5 Frequently or all of the time**

During the past week...

When you had time, how often did you use that time for a leisure time activity?	1	2	3	4	5 (244)
How often did you enjoy the leisure activities?	1	2	3	4	5 (245)
How often did you look forward to the leisure activities before spending time at them?	1	2	3	4	5 (246)
How often did you concentrate on the leisure activities and pay attention to them?	1	2	3	4	5 (247)
If a problem arose in your leisure activities, how often did you solve it or deal with it without undue stress?	1	2	3	4	5 (248)
How often did the leisure activities sustain your interest?	1	2	3	4	5 (249)



SOCIAL RELATIONS

Circle the most appropriate answer

- 1 Not at all (never)**
- 2 Rarely**
- 3 Some of the time**
- 4 Often or most of the time**
- 5 Frequently or all of the time**

During the past week how often have you...

enjoyed talking with or being with friends or relatives?	1	2	3	4	5 (250)
looked forward to getting together with friends or relatives?	1	2	3	4	5 (251)
made social plans with friends or relatives for future activities?	1	2	3	4	5 (252)
enjoyed talking with co-workers or neighbors?	1	2	3	4	5 (253)
been patient with others when others were irritating in their actions or words?	1	2	3	4	5 (254)
been interested in the problems of other people?	1	2	3	4	5 (255)
felt affection toward one or more people?	1	2	3	4	5 (256)
gotten along well with other people?	1	2	3	4	5 (257)
joked or laughed with other people?	1	2	3	4	5 (258)
felt you met the needs of friends or, relatives?	1	2	3	4	5 (259)
felt your relationships with your friends or relatives were without major problems or conflicts?	1	2	3	4	5 (260)

GENERAL ACTIVITIES

Taking everything into consideration, during the past week how satisfied have you been with your...

Circle the most appropriate answer - OVERALL LEVEL OF SATISFACTION

- 1 Very Poor**
- 2 Poor**
- 3 Fair**
- 4 Good**
- 5 Very Good**

physical health?	1	2	3	4	5 (261)
mood?	1	2	3	4	5 (262)
work?	1	2	3	4	5 (263)
household activities?	1	2	3	4	5 (264)
social relationships?	1	2	3	4	5 (265)
family relationships?	1	2	3	4	5 (266)
leisure time activities?	1	2	3	4	5 (267)
ability to function in daily life?	1	2	3	4	5 (268)
sexual drive, interest and/or performance?*	1	2	3	4	5 (269)
economic status?	1	2	3	4	5 (270)
living/housing situation?*	1	2	3	4	5 (271)
ability to get around physically without feeling dizzy or unsteady or falling?*	1	2	3	4	5 (272)
your vision in terms of ability to do work or hobbies?*	1	2	3	4	5(273)
overall sense of well being?	1	2	3	4	5 (274)
medication? (If not taking any, check here _____ and leave item blank) (275)	1	2	3	4	5 (276)
How would you rate your overall life satisfaction and contentment during the past week?	1	2	3	4	5 (277)



**If satisfaction is very poor, poor or fair on these items, please UNDERLINE the factor(s) associated with a lack of satisfaction.*