The sense of coherence and resilience of HIV-positive students in the support group of a university in the Eastern Cape

by
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Assignment presented in fulfilment of the requirements for the degree of Master of Philosophy (HIV/AIDS Management) in the Faculty of Economic and Management Sciences at Stellenbosch University

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December 2014

Declaration

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December 2014

Abstract

Most research in South Africa with regard to HIV/AIDS focuses on the HIV counseling and testing of university students while little attention has been paid to how HIV-positive students cope in the support groups within the institutions of higher learning. The study aimed at determining and describing the sense of coherence and the resilience of HIV-positive students in a university in the Eastern Cape Province and exploring the differences between the demographics, using the subscale of the sense of coherence (SOC-29) and the resilience assessment questionnaire (RAQ). The students who were registered with the university were chosen as participants by means of non-probability purposive sampling technique. The sample consisted of 40 students (Males = 10; Females = 30).

A t-test analysis revealed statistically significant differences between demographics (language) and comprehensibility subscale of the sense of coherence (SOC). Furthermore, statistically significant differences between languages, interaction and problem-solving scales of RAQ were noted. The Cronbach's Alpha for SOC and RAQ yielded 0.74 and 0.94 respectively in this study. The results show that the participants were coping fairly well with a chronic disease like HIV/AIDS and that their resilience was also average. The main recommendation is that the university should increase HIV/AIDS coping programmes as the students had average mean scores. Additionally, another study should be done on a larger scale in an institution that has different race groups.

Key words: Sense of Coherence, resilience, university students, support group, HIV/AIDS

Opsomming

Die meeste navorsing oor MIV/Vigs in Suid-Afrika fokus op MIV-voorligting en toetsing. Baie min aandag word egter gegee aan die mate waartoe MIV-positiewe student waarde vind binne die ondersteuningsgroepe wat binne Suid-Afrikaaanse Universiteite bestaan.

Hierdie navorsingsprojek poog om ‘n beskrywing te gee van twee konstrukte naamlik “sense of coherence” en “resilience” en te beskryf hoe dit manifesteer binne ‘n groep MIV-positiewe studente aan ‘n Universiteit in die Oos-Kaap.

‘n Steekproef van 40 student (20 manlik en 20 vroulik) is vir die studie gebruik en die SOC-29 en Rao vraelyste is by hulle geadministreer ten einde onderskeidelik “sense of coherence” en “resilience” te meet.

Die t-toets is in die analise van data gebruik . Resultate toon aan dat deelnemers oor die algemeen goed vaar in hulle die hantering van kroniese siektes soos MIV/Vigs en dat hulle vermoë om hulle lewe te normaliseer (resilience) redelik goed is.

Die aanbeveling wat uit die studie gemaak word is dat universiteite MIV/Vigs hanteringsprogramme moet verbeter en dat daar gepoog moet word on beter ondersteuningsmeganismes vir studente met MIV/Vigs daar te stel.

Acknowledgements

It is a privilege for me to complete this study. I would like to extend my gratitude to the Almighty who has carried me through. It has not been an easy journey.

- My supervisor Prof Augustyn who has been nudging me by sending information that has helped me. It was a bumpy road.

- My family that has been the source of support by sacrificing to make sure that I'm able to finish this project

- My colleagues Dr. Alberts, Nkulie Sandlana, Tsholo Pitso, Sandie Nabo and Jabu Kheswa who continued to be a source of support for me through thick and thin. You have been a source of strength.

- Dr. P. Gutura for editing this document and

- Mrs. Rivca Marais for her technical skills.

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Chapter 1: Introduction

Human Immune Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) is a widespread disease throughout the world including in South Africa. It has been declared as one of the fastest growing epidemics in the world with an estimated 40 million people living with HIV/AIDS (UNAIDS, 2009). Furthermore, Sub-Saharan countries have the highest number of people living with HIV/AIDS in the world (UNAIDS, 2009). South Africa is hardest hit with over 6 million people living with HIV/AIDS (PLWHA) and an estimated 70% of young people being the most affected.

Many infections occur at colleges and universities and the forecast is that HIV/AIDS will have devastating effects on university students. The prevalence of HIV/AIDS in all the nine provinces of South Arica shows varying results. Given the high prevalence of HIV in South Africa and its increase in some provinces including the Eastern Cape, a number of young people living with HIV/AIDS are bound to be found in colleges and universities. Researchers predicted that HIV/AIDS will have disturbing effects on university students. According to Uys, Martin, Icharam, Alexander, Els & Eiselen (2002) a high number of HIV positive students are found in the Eastern Cape.

1.1 The background to the problem

The HEAIDS (2010) report shows that the HIV/AIDS prevalence rate for the Eastern Cape region was the highest at 6.4% with female students showing a higher HIV prevalence rate of 4.7% as compared to male students who showed a lower prevalence at 1.5%. The group with 18 to 19 year olds showed a lower HIV prevalence rate of 0.8% as compared to a

group which had 20 to 25 year olds (2.3%). For those who were over 25 years the HIV prevalence rate was reported at 8.3%.

The statistics show that university students are facing a major crisis, with the Eastern Cape universities the most affected. The researcher has noted that some students join HIV/AIDS support groups and that these students continue to survive, to cope and even thrive despite living with HIV. Some students are disheartened and drop out of the university in despair. Little is known about how these students who continue with the support groups maintain their resilience. Madiba and Canti-Sigaqa (2012) assert that support groups provide psychosocial support for people who live with HIV and AIDS (PLWHA). Support groups are formations where peers provide psychosocial care for students living with HIV/AIDS. The main aim of a support group is to address on-going emotional and social problems by providing a communal environment where PLWHA share approaches to their problems (Kalichman and Sikkema, 1996).

Institutions of higher learning in South Africa use support groups as a means of support for the students who have contracted HIV/AIDS. Many of these students join the support groups because they fear stigmatization as they may otherwise live in the closet and endure it alone (Nowell, 2012). These students suffer from emotional, social and psychological challenges that tend to disrupt their academic performance. The support group offers a therapeutic environment for such students (Mundell, Visser, Sikkema & Jeffery, 2005).

There is evidence that support groups for PLWHA provide a safe environment in which members talk about the virus, share experiences and learn from others who are infected

with HIV (Visser, Mundell, DeVilliers, Sikkema & Jeffery 2005). Furthermore, support groups for HIV positive people have been used as a strategy to enhance the quality of life, minimise isolation and feelings of shame, improve their behaviour and create a mutually empathetic relationship (Lennon-Dearing, 2008). An alarming proportion of students do not disclose their status for fear of stigmatization and tend to develop anxieties as they seek to improve their health (Nowell, (2012), whereas students who attend support groups feel capable of disclosing their status (Madiba and Cant-Sigaqa, 2012).

Not much is known about the sense of coherence and resilience of the students who take charge in the HIV/AIDS support groups. Such studies that exist focus mostly on knowledge, sexual behaviour and attitudes of university students. According to Banatao (2011) students at universities have to think critically, and require a sense of coherence to deal with their emotions and with HIV/AIDS which is a life changing experience that significantly impacts on their university life.

1.2 Preliminary Literature Review

1.2.1 Sense of coherence

Health was initially described not simply as an absence of disease but as, complete physical, mental, social and spiritual well-being (World Health Organization, 1958). Schafer (2000) states that health should move away from the pathogenic orientation that focuses on causes of diseases towards a salutogenic orientation which focuses on promotion of healthy lifestyles and stress management for the purpose of well-being. Antonovsky (1987) developed the concept of coherence to describe how an individual copes with various health stressors. His theory is in line with the chaos theory which states

that the human system is in a state of heterostasis, disorder and entropy to show that it is naturally imperfect. Human beings come across daily stressors (HIV/AIDS) that continue introduce entropy in ones' system (Antonovsky, 1993). Antonovsky (1987) is of the opinion that a strong sense of coherence is important for successful coping with "ubiquitous stressors of living" (p.164). Coherence is concerned with how individuals manage, understand and make meaning of the world around them as they resilient and to cope with the stressors they encounter in life.

1.2.2 Resilience

Many HIV positive students join support groups that provide social support for them. A sense of coherence includes resilience which helps an individual to cope with a crisis (Almedom, 2005). Everly, McCormack & Strouse (2012) describe resilient people as those people who are coping, and having a sense of coherence. Almedom (2004) found that the type, timing and level of social support available may decide what the outcome of the crisis will be. Nevertheless, Strümpfer (1995) defines resilience as follows:

> "a pattern of psychological activity which consists of a motive to be strong in the face of inordinate demands, which energizes goal-directed behaviour to cope and rebound (resilience), as well as accompanying emotions and cognitions… What constitutes an inordinate demand for a particular individual should always be viewed in context" (p. 81).

Human beings inevitably confront challenges throughout their lives. HIV positive students have to respond constructively to their condition in order to function optimally in difficult

situations (Hassim, Strydom & Strydom, 2013). Being a student at a university has its own challenges that must be met despite living with HIV. Wasonga, Christman & Kilmer (2003) affirm that students at universities need to be resilient to overcome academic difficulties. Students living with HIV face many challenges and experience new "stressors" (Pearlin, Schulman, Fazio & Meersman, 2005). Students experience emotional, physical and social stressors that endanger their ability to maintain good health, to be well adjusted and prevent their academic development (Banatao, 2011). They can only manage, understand and make meaning of the world around them if they cope effectively with their circumstances (Koen, Van Eeden & Wissing, 2011).

As resilience is fostered in students, they develop social competencies, problem solving skills and a sense of purpose as fully functioning beings (Banaota, 2011). Resilient students have the ability to bounce back from negative emotional experiences, including HIV/AIDS, by developing positive emotions that make them find positive meaning despite their illness (Tugade and Frederickson, 2004). It is against this background that Antonovsky's model of sense of coherence and construct of resilience will be used to conceptualize the theoretical framework of the study. Very few studies so far investigate both SOC and resilience among HIV positive university students.

1.3 The significance of the research

An understanding of how students cope and how they grow resilience in HIV support groups will inform universities of the quality of life and wellbeing of their HIV positive students. This in turn should lead to interventions that target these students and entice those that do not attend support groups to join these. Students themselves benefit at an individual

level as participation will contribute towards behavioural (sexual) change. This will enhance the quality of life of the student body and improve students' overall wellbeing.

1.4 Research Questions

The research questions for this study were the following:

- What is the sense of coherence of HIV positive students in HIV/AIDS support groups?
- What is the resilience of these students?

1.5 Aim of the study

The main aim of the study is to describe the sense of coherence and the resilience of a group of HIV positive students in a support group. The second aim is to determine the differences between the subscales of the sense of coherence and the subscales of the resilience questionnaires.

1.6 Objectives

The objectives that guided this study were as follows:

- To determine the sense of coherence of students in the HIV/AIDS support group.
- To determine the resilience of these students
- To determine the statistical differences between the demographics yielded by the subscales of the sense of coherence and the subscales of resilience and
- To provide guidelines for adaptation of programmes to be aligned with increased resilience to support the students within the university.

1.7 Definition of key terms

1.7.1 Sense of coherence

Antonovsky (1987) defined SOC as the global orientation that articulates the extent to which one has a persistent, lasting and dynamic feeling of confidence that (a) the stimuli derived from the internal and external environments, in the course of living, are structured, predictable and explicable; (b) the resources are available to meet the demands posed by these stimuli; and (c) these decrease challenges, worthy of investment and engagement (p. 19).

1.7.2 Resilience

Resilience has been described as an active process of endurance, self-righting and growth of an individual in response to crises and challenges (Walsh, 2006).

1.7.3 University student

A university student is someone who attends an institution of higher learning/university (Wikipedia, 11:11:2013).

1.7.4 HIV

HIV is a threatening virus that is transmitted through body fluids from one person to another (Vika, 2006). Whiteside (2008) defines HIV as the virus that causes AIDS. The HIV initially stays in the human body as a host and the infected individual cannot notice that he/she has been infected. Initially, these individuals are healthy and strong. But, without treatment the virus ultimately wears down the immune system that helps the body to fight the disease and the individual develops AIDS (Gennrich, 2007).

1.7.5 AIDS

AIDS refers to Acquired Immunodeficiency Syndrome that develops in the later stages of the Human Immunodeficiency Virus infection (Weller, 2005).

1.7.6 Support groups

Support groups are psychosocial interventions in which students living with HIV and AIDS come together to provide peer support and to address the on-going psychological and social problems that they encounter (Madiba and Canti-Sigaqa, 2012). These support groups are used to deal with the alterations that accompany the illness (Shippy and Karpiak, 2005).

1.8 Chapter Outlines

Chapter one introduces the ideas and sets the context of the study. Chapter two explores sense of coherence and the resilience theories in order to explain the coping mechanisms of university students who are in the HIV support group. Chapter three focuses on the research design and methodology adopted in carrying out this study whilst chapter four presents the results and the discussion thereof. Chapter five presents the summary, limitations and recommendations while chapter six concludes the study.

1.9 Conclusion

Chapter one has presented the problem, explores the context and explains the theoretical and framework for the study. Key concepts were clearly defined and the dissertation's chapters were outlined. The following chapter reviews literature and highlights the main theories informing the study.

Chapter 2: Literature Review

2.1 Introduction

Antonovsky (1979) defines health not as the absence of diseases but as a salutogenic orientation that focuses on the promotion of health and well-being, stress and coping. Antonovsky (1996) looks at how the human system moves in the healthy/disease continuum. He postulates that there are salutary factors that are 'health promoting' and that these factors are responsible for the promotion of one's health. Salutogenesis, according to Antonovsky (1996), looks at how human beings survive in the presence of stressors or 'bugs', some highly sophisticated, like HIV/AIDS. This has caused health workers to examine factors that contribute to health maintenance.

2.2 Sense of coherence (SOC)

Sense of coherence was suggested by a medical sociologist, Aaron Antonovsky, to explain how individuals deal with life demands and regulate their performance for good health (Faltermaier, 2005). Sense of Coherence develops from childhood through adolescence and stabilizes around the age of 30. As a young person grows, he/she gains experiences which are comprehensible, manageable and meaningful (Antonovsky, 1987). Like Chaos Theory, Antonovsky (1996) suggests that the human system is inherently flawed and in a state of heterostasis, entropy and death. According to Antonovsky (1987) SOC is:

> …a global orientation that expresses the extent to which one has pervasive, enduring, though dynamic feeling of confidence that;
>
> a) The stimuli deriving from one's internal and external environments in the course of living, are structured, predictable and explicable;

b) Resources are available to meet the demands posed by these stimuli; these demands are challenges, worthy of investment and engagement (p. 19).

Antonovsky (1996) recognized that SOC has certain properties that empower one to cope with the stressors of human existence. Sense of coherence selects appropriate resources known as generalized resistance resources (GRR's) to deal with challenges (Antonovsky, 1996). The GRR's help the individuals to "make sense" of the world around them. The strength of one's SOC depends on the availability of the GRR's in both the individual and that individual's social environment (Mayer, 2011). He argues that when GRR's are insufficient one does not cope well and this may result in generalized resistance deficits (GRD's). Furthermore, the SOC is shaped by both GRR's (to be explained in the next paragraphs) and GRD's and one's own life experience. Mayer (2011) agrees that GRR's are vital to personality and that these impact on the SOC of an individual.

The presence of GRR's with HIV–positive students contributes positively to developing a healthy state. Such students can maintain their health by adhering to treatment regimens and by eating healthy food. According to Antonovsky (1985) money is an important resource that individuals can use to obtain food, shelter and clothing. This implies that food, shelter, clothing and medication should be readily available to HIV-positive students to maintain their health status. Another important GRR is the availability of knowledge and understanding about HIV/AIDS. Individuals who comprehend and understand the impact of HIV/AIDS will be able to understand and behave accordingly (HEAIDS, 2010).

A SOC is composed of three components namely: comprehensibility, manageability and meaningfulness. These are explained below:

2.2.1 Comprehensibility

Comprehensibility refers to the degree to which one is motivated to perceive the internal and external stimuli they are exposed to and to cognitively make sense of them clearly, in a structured, consistent and ordered way (Antonovsky, 1987). This allows individuals to have a sensible expectation about coming events. Participation in a support group leads to understanding of the tasks that must be dealt with cognitively and emotionally and creates a sense of belonging (Visser and Mundell, 2008).

2.2.2 Manageability

Manageability refers to a level of individuals' belief that the resources needed to meet the demands faced are readily available. These resources are known as the generalized resistance resources (GRR's). According to Antonovsky (1987) individuals who are high on manageability always cope well and are never victims. Persons under stress find methods to reinforce the belief that problems are solvable (Brieskorn-Zinke, 2002). The support group provides the needed resources for people living with HIV/AIDS (PLWHA) so that the members can face their responsibilities as challenges (Emlet, 2006).

2.2.3 Meaningfulness

Meaningfulness refers to the degree to which an individual experiences life demands as worthy of investing energy into. Individuals that are high on meaningfulness welcome life's demands as worthy of their commitment and engagement (Antonovsky, 1987). Brieskorn-Zinke (2002) found that meaningfulness is difficult to influence as it is

imprinted by cultural and life experiences. The participants in the support group interpret their world as comprehensive and meaningful as they take control of themselves in the face of HIV/AIDS (Heyer, Mabuza, Couper & Ongunbanjo, 2010).

Antonovsky (1987) postulates that the person's life experiences that strengthen the SOC are related to the components of the SOC namely: the consistent structured behavior, in different settings, that relates to the comprehensibility component which is cognitive in nature. One's life experiences contribute to the growth of the load balance which determines whether an individual has adequate or inadequate resources to meet the life's demands. Individuals who are overloaded experience lack of resources to pursue the demands of life. This is related to manageability (instrumental). Participation in socially respected decision-making contributes to meaningfulness and emotional aspects of the SOC (Antonovsky, 1987).

Antonovsky (1987) posits that SOC helps to explain how individuals successfully cope with stressors and become healthy. Sense of coherence helps individuals to mobilize the resources that help to cope with stressors and viruses (like HIV and AIDS) (Antonovsky, 1996). Human beings depend on available resources in coping with life demands. When individuals are able to deal with life demands, they develop a strong SOC that allows them to be confident in life. They are able to control and shape their destiny as they have a strong SOC. Conversely, individuals that have a weak SOC view themselves as victims (Antonovsky, 1985). That is why Huber and Mathy (2002) describe coping as how individuals who are faced with certain challenges and risk factors manage without experiencing any emotional harm and develop into healthy, self-reliant and compassionate

adults. Koen, Van Eeden & Wissing (2011) viewed constructive coping as a trait of tough people who try to manage situations that they perceive to be stressful.

It is agreed by Keyes (2006) that individuals who manage the situation properly tend to gain self-esteem, self-efficacy, independence and a change in the manner in which they perceive life. This in turn makes them stronger than they were before the adversity. These coping efforts allow individuals to manage the situations that have been evaluated as potentially harmful or stressful (Lazarus and Folkman, 1984). Lazarus and Folkman (1984) also outlined the coping process which includes the following:

- Primary appraisal which is when an individual decides whether one is in a threat or not. When one decides that he/she is not in a threatening environment the coping processes are stopped. When one decides that he/she is in a dangerous situation he/she engages in secondary appraisal.
- The secondary appraisal allows an individual to evaluate his/her resources depending on the type of stress that one is facing. When the individual feels in control over the situation the next step known as coping sets in
- Coping entails adjusting in the environment one finds him/herself in. This entails changing one's cognitive processes and redefining the situation at hand.

Antonovsky (1985) describes the three coping strategies that enhance the GRR's as:

1. Rationality: It entails the precise unbiased evaluation of the stressors as being stressful or not. The value of being rational allows one to be precise in defining what the consequence will be.

2. Flexibility: It involves making possible plans for eventuality and readiness of the individual to deliberate on them. Individuals should use dynamic processes for a positive outcome.
3. Farsightedness: It requires individuals to foresee how the responses will be in executing the imagined plan.

2.3 The sources of the sense of coherence

Antonovsky (1985) outlines that the basis from which SOC arises is comprised of combined structures and attitude towards life. Structures help in the development and formation of the SOC. These structures include mental, emotional, social, cultural and historical resources which enable one to construct GRR's that help build the SOC. The GRR's allow individuals to understand their internal and outside surroundings and makes them confident of success in dealing with stressors. The internal GRR's are known as hardiness and resilience. Psychological hardiness is composed of commitment, control and openness to challenge, which are discussed below.

2.3.1 Psychological hardiness

Maddi and Khoshaba (2005) have researched the concept of psychological hardiness and its relationship with physical health. Their findings on this relationship point out that hardiness has a collection of traits that increase physical health under demanding circumstances (like HIV/AIDS). Koshaba and Maddi (2005) recognized three dimensions of psychological hardiness that buffer the effects of stressors as:

2.3.1.1 Commitment

Commitment explains an individuals' psychological hardiness that helps their resolve and determination to see things through. These individuals conduct self-examination to find out what is important to them and find meaning in the tasks they perform and the circumstances they meet. They find meaning and make a commitment to behave in terms of it (Nevid, 2009).

2.3.1.2 Control

Students that have a sense of internal locus of control as compared to those that have an external locus of control demonstrate a psychological hardiness that helps them resolve their problems and achievement better academically (Sheard and Golby, 2007). These students are independent and take responsibility for their disappointments.

2.3.1.3 Openness to challenge

Psychologically, hardy students that are faced with stressors view them as challenges that are to be met. These students believe that change is part of life and not something to be feared (Nevid, 2009).

2.3.2 Resilience

Various scholars have conceptualized resilience as an individual's positive adaptation to negative life events like trauma, disabling diseases like HIV/AIDS and as a positive outcome of successful coping with hardship (Green and Conrad, 2002; Saleebey, 2009; Tshiwula, 2011). These individuals develop the capability to handle significant changes that accompany potentially debilitating diseases. Santis, Florom-Smith, Vermeesch, Barrosso & DeLeon (2013) argue that resilience in the context of HIV/AIDS should be

viewed as a process by which the individual assesses the interior and exterior inspirations that offer one the ability to deal with the physical and emotional facets of HIV/AIDS. Resilience theory focuses on how individuals succeed rather than failing in dealing with distress and helps to suggest how HIV-positive individuals can assess their situation and the means of support available to them (Waller, 2001;Walsh, 2006).

Rutter (1987) suggests that resilience reflects protective personality traits exclusive to individuals in distress. Research on the resilience of adults living with HIV and AIDS has found that these individuals develop a process of dealing with life changes that confront them as they live with HIV/AIDS (Kylma, 2005). A study conducted by Farber, Schwartz, Schaper, Moonen & Daniel (2000) highlights that individuals who are resilient to HIV/AIDS have notably minor emotional distress levels, excellent quality of life and a positively optimistic outlook.

Folkman and Moskowitz (2004) are of the opinion that resilience and coping are linked because coping entails cognitive and behavioural strategies that individuals use to achieve positive outcomes when handling stressors, whilst resilience denotes adaptive capabilities in the face of hardships. Tugade and Fredrickson (2004) agree that resilient persons use positive feelings to rebound from adversities like HIV/AIDS. Campbell-Sills, Cohan & Stein (2006) found that university students who use problem-focused coping skills achieved better scholastically as compared to those who use emotionally-focused skills. They also note that resilient students will have a strong sense of self-efficacy and SOC.

According to Luthar and Cicchetti (2000) resilience includes being open to hardships (like diseases) and to positive changes required by that hardship. Tshiwula (2011) argues that the real test of a resilient person is not just ability to adapt during hardship, but a sustained determination to succeed. Saleebey (2009) suggests that all human beings have this innate urge to be daring to overcome all their hardships so that they are amongst the best. Resilience is said to be influential towards academic success (Tshiwula, 2011). Tugade and Fredrickson (2004) state resilience allows flexible adjustment to the shifting demands of stressful experiences. That is why Moleli (2005) describes resilience as:

> …overcoming difficulties successfully without any harm to others or self. It is a process and a characteristic that needs cultivation from the environment and is fostered by community, families, universities and students peer groups (p.6).

Prince-Embury and Saklofske (2013) observed that during the adjustment period, individuals with high levels of resiliency are more likely to undergo positive emotions and better psychological adjustment. Equally, individuals with low levels of resilience may continue in an anxious, improper and pretentious way. Rutter (1990) describes the resources that individuals use to defend themselves as inner and outer defensive factors that temper the undesirable effects of stressors. The inner resources are related to coping, hardiness, self-esteem and self-efficacy (Kamya, 2000).

In a university study of students in a support group students were found to have higher levels of hardiness, a component of resilience that is found to be associated with greater self-esteem. Those with more self-esteem perform better under pressure, also academically

(Clifton, Perry, Stubbs & Roberts, 2004). This further suggests the presence of a connection amongst these concepts and the inner resources of resilience. In addition, resilience relates to academic stress as a protective resource. The support group they are in provides the protective support in their academic work (Werner and Smith, 1992). Young HIV positive individuals develop resilience through social support and social networks (Evans, 2007).

Everly, McCormack & Strouse (2012) state that highly resilient people present the following characteristics:

- **Calm, innovative and non-dogmatic thinking**

Calm, innovative and non-dogmatic thinking involves thinking in a quiet, balanced manner in a stressful situation. This entails forming new ideas as to how to overcome threats and allow for innovative new explanations and decisions that are problem-attentive and safeguard accomplishments (Everly, McCormack & Strouse, 2012).

- **Decisive action**

Resilient people act in a firm manner and with certainty as they make decisions. They do not hesitate as do non-resilient individuals who are afraid to make mistakes. These individuals take responsibility for their decisions as a means to resolve their challenges (Everly, Strouse & Everly, 2010). According to Mellers, Erlen, Coontz & Lucke (2001) individuals who are faced with life challenges and who examine their purpose in life become endowed with power to make life changes and modifications to adapt to the effects of HIV.

- **Tenacity**

Tenacity entails being diligent in what one does to achieve desired outcomes. Resilient individuals endure with persistence and hopefulness in the face of any circumstances (Everly, et al., 2010). HIV-positive adults persevere with tenacity in spite of anxieties that accompany the disease (Mayers, Naples & Nilsen, 2005).

- **Interpersonal connectedness**

Interpersonal connectedness and support represent the people that one forms a bond with to maintain cohesion and resilience. This characteristic helps resilient individuals to live in relations that are mutually beneficial (Everly, et al., 2010). Access to group resources helps HIV-positive individuals to provide for their social relations and maintain their status (Nolte, 2010).

- **Honesty/uprightness**

Honesty is presented as the most important characteristic of resilient individuals (Everly et al., 2012). Integrity entails doing what is right for the benefit of others and it creates trust in the resilient individual. It makes others feel safe because they know that an honest individual will come to their rescue (Everly, et al., 2012). HIV-positive students who maintain congruency between their personal goals and available resources maintain a high level of well-being (Nolte, 2010).

- **Self-discipline and self-control**

Self-discipline and self-control are seen as trademark characteristics of resilient individuals (Everly, et al., 2010). These characteristics increase resilience as they help ensure health

promoting behaviour. They help individuals involved in health problems to be committed to proper behaviour. Knowledge and understanding help HIV-positive individuals to behave so as to prevent re-infection and exposing others to infection (Nolte, 2010).

- **Optimism and a positive perspective on life**

Optimism and positive perspective on life entails results in positive action. Optimistic individuals hope that everything will go well as they pursue life. They have high resilience. HIV-positive students who remain optimistic show a "fighting spirit" that will not accept failure (Schou, Ekeberg & Ruland, 2005).

2.4 Conclusion

This chapter introduced sense of coherence and resilience as crucial in dealing with debilitating diseases like HIV and AIDS and the characteristics of a resistant individual were highlighted. The study of SOC in HIV positive students will enhance their chances of being well-adjusted and able to cope with their studies and with university life. The resilience outcomes include adherence to HIV/AIDS treatment; mental well-being and positive self-efficacy and academic excellence (Lennon-Dearing, 2008). The next chapter will address the research design and methodology. This will discuss sampling, procedure, research instruments, data collection, data analysis and ethical considerations.

Chapter 3: Research Design and Method

3.1 Introduction

This chapter focuses on the research design and method employed in the study. The researcher used a quantitative research design and data was collected and analysed in line with the qualitative method.

3.2 Research Method

Blaikie (2009) proposed that designing a research includes giving attention to central fundamentals that have a number of selections and combinations that lead to a variation of likely research designs. The main aim of a research design is to ensure control over research and assess the appropriateness and compatibility of combinations of conclusions that are required to safeguard a successful result. Research design further includes the conclusions that are made and offer clarifications and explanation for these conclusions. Research method includes an outline of how the investigation was done and the operational implications to the final analysis of data (Bailey, 2005).

A quantitative approach was utilized as the aim of the study was to determine the sense of coherence and the resilience of HIV positive students in a support group. A descriptive design is employed to advance a specific construct of interest (Babbie, 2004). According to Kreuger and Neuman (2006) a descriptive study offers an image of the precise facts of a condition, communal setting or a relationship under study. The data was collected using standardized paper and pencil measurements, which identified the sense of coherence and resilience of HIV positive students in the support group. Therefore the research used survey, non-experimental research methods.

The advantages of this design include economy in terms of time and expenses as the participants are within the university. Participants completed the questionnaire anonymously and simultaneously. The recruitment of participants was facilitated by the head nurse who was the facilitator of the support group. An explanation about the research was provided so that participants could decide to participate voluntarily. The disadvantages associated with the non-experimental design method include lack of control over the environment and possibly biased sampling. This was circumvented by the fact that all respondents completed their questionnaires in the presence of the support group facilitator. However, the response rate remained difficult to control (Bailey, 2005).

3.3 Population and Sampling

The target population in this study comprised of male and female students who lived with HIV positive and attended the HIV support group at one university in the Eastern Cape. Sampling was conducted for explicit purpose of obtaining the best possible source of information to answer the research questions. Non-probability convenience sampling was used. Christensen et al., (2011) define convenience sampling as a method of selecting participants according their convenience and ready availability. A minimum of forty HIV-positive students were used as it is the permissible number of participants in conducting quantitative research (Gravetter and Forzano, 2012).

The aim of the research was to describe the SOC and resilience of HIV positive students in the HIV support group. The participants were readily available at the Health Care Centre of the university. The results may help improve policy of the university with regard to the

attention given to HIV positive students. The sample included participants of different age groups, gender, home language and race. Biographical information was gathered to contextualize the results.

3.4 Measuring Instruments

3.4.1 Biographical information

The biographical information gathered included age, gender, language and race. A biographical questionnaire was included in order to describe and interpret the results according to the demographics of the group. This information was used to contextualize the findings and to assist in the development of new programmes for the university to meet the needs of HIV-positive students.

3.4.2 Life Orientation Questionnaire (SOC-29)

Three measuring questionnaires were administered to the participants. The Orientation to Life Questionnaire (SOC-29) is a 29-item scale that is used to determine the participants' view of the sense of coherence. This scale has been used in a variety of languages. The Life Orientation Scale is a seven-point scale that is arranged from 1 to 7. All the items are worded differently. The SOC scale is composed of three dimensions, the comprehensibility subscale is composed of 11 items 1, 3, 5, 10, 12, 15, 17, 19, 21, 24 and 26. The manageability subscale is composed of 10 items 2, 6, 9, 13, 18, 20, 23, 25, 27 and 29. Finally, the meaningfulness subscale is composed of 8 items 4, 7, 8, 11, 14, 16, 22 and 28. The items 1, 4, 5, 6, 7, 11, 13, 14, 20, 23, 25 and 27 were reverse marked. The scores range from 29 to 203 (Antonovsky, 1987). The Cronbach's Alpha coefficient of the SOC varies between 0.85 and 0.91 (Antonovsky, 1993). Antonovsky (1996) maintains that the SOC is

reliable and valid for all cultures, social classes and ethnic groups for both men and women. Wissing and Van Eden (1997) have investigated the validity of this measurement and found it to be adequately valid for students in South Africa. Joost (2001) has found that the SOC-29 can be used for university students as a means to understand psychosocial health and wellbeing.

Numerous studies have been done to determine the differences of the SOC scales with biographical data like age, gender and home language and various significant and insignificant results were obtained. The t-test studies some show differences between the means of some of the subscale done over time (Antonovsky, 1993).

3.4.3 Resilience Scale

The second measuring instrument that was used in this study is the Resilience Assessment Questionnaire (RAQ). This is a resilience scale that was initially composed by Wagnild and Young (1993). Later on, in response to stressful situations Mowbray (2007) developed a RAQ that is composed of 35-items. It is a five-point Likert scale to determine resilience in the following dimensions: vision, determination, interaction, relationships, problem solving, organization and self-confidence. The scale ranges from 1 = *disagree* to 5 = *agree*. The items in the scale are worded positively. The range of the scores is from 25 which is the lowest scale and 175 which is the highest score that reflects the highest resilience of an individual (Koen et al., 2011). In this study, Cronbach's Alpha yielded 0.94 which corresponds with the reliability index of 0.89 reported by (Meredith, 2005).

The RAQ is composed of seven subscales, namely: the vision subscale that is composed of items 1, 8, 15, 22 and 29. Determination subscale is made up of items 2, 9, 16, 23 and 30. The interaction subscale contains items 3, 10, 17, 24 and 31. Relationships subscale consists of 4, 11, 18, 25 and 32. The problem solving scale is composed of items 5, 12, 19, 26 and 33. The organization subscale is composed of items 6, 13, 20 27 and 34. The last subscale is the self-confidence scale with the items 7, 14, 21, 28 and 35. It is interesting to note that all the subscales of the RAQ have an equal number (5) of items unlike those of the SOC questionnaire. Most studies that have been done were focusing on the coping of university students and their wellbeing. Few studies focused on university students that have been diagnosed with HIV/AIDS. In this research study, the Cronbach's Alpha of 0.74 was yielded for the sense of coherence.

3.5 Procedure of data collection

Permission was sought from the Dean of Students and the University Health Care Centre to conduct research of HIV-positive students in the support group. The questionnaires were distributed by the head nurse who was the facilitator of the HIV support group. The questionnaires were administered to those who volunteered and consented to partake in the research. A covering letter, consent form and the biographical questionnaire accompanied the SOC and Resilience questionnaires. The covering letter and consent forms were then reviewed with the staff in the Health Care Centre to prevent any misunderstandings.

3.6. The procedure of data collection

Since the researcher was using convenience type sampling, readily available students in the support groups were approached. The rights of the participants were explained in the covering letter for the nursing personnel.

3.7. Data analysis

The data that were collected were analyzed in terms of descriptive statistics which described the distribution and trends in the responses using SPSS 21.0. The mean, median, frequencies and the standard deviation were computed and described. The advantage of using the mean is that it estimates the population mean better than other measures such as the median and the mode (Gravetter and Forzano, 2012). The standard deviation as a measure of variability was used to describe the distance between each score and the mean. The standard deviation is considered as the best method to describe the variability of scores (Gravetter and Forzano, 2012). The distribution and trends were drawn and presented in tabular graphic forms. The information from these graphic representations was interpreted to make it clear to the reader. In order to achieve the first aim, descriptive statistics was calculated for the SOC-29 and the RAQ.

The second aim of the study was to determine the significant differences of the subscales of the sense of coherence and the variables of age, gender, and language. Another t-test was also done to determine the difference in the subscales of the resilience assessment questionnaire and the variables of age, gender and language. Significant differences will then be explained in terms of the effect size index. The effect size index determines the significance of the strength of the differences between the variables (Cohen, 1992).The effect size of 0.2 is reflected as small, a 0.5 is regarded as medium and an effect size of 0.8 as large (Cohen, 1988). A large value of the effect size index indicates a stronger effect size. The results of the effect size index help in meta-analysis of the study.

3.8. Ethical considerations

According to Gregory (2003) one idea above all discusses the issue of ethics about research involving human beings. Every code of ethics is designed to conduct research involving human beings and gives primacy to the requirement of fully informed voluntary consent on the part of the individual concerned. One of the ethical issues the researcher considered when conducting the research was the issue of informed consent.

3.8.1. Informed consent

Informed consent entails giving an explanation of the considerations for conducting the research and the goals of the research. The participants should base their participation on the understanding that there are no risks involved. The procedure is explained to the participants who are involved in the study as a means to show respect. They must also agree to participate in the study and they could withdraw if they wanted to.

3.8.2. Confidentiality

According to Babbie (2007) confidentiality refers to the protection of the information that has been obtained from the participants. It must not be divulged to third parties. The researcher must keep the information for his/her personal use and not breach the contract that he has entered into with participants. In addition, the participants might be harmed when the information they provided is inappropriately divulged (Bernard, 2009). In this study there was no information which was leaked to the third party. After the computation of data all the questionnaires were kept under lock and key.

3.8.3. Voluntary participation

The participants should participate voluntarily in a research project (Rubin and Babbie, 2005). Voluntary participation entails that the participants should decide to participate on their own free will (Gravetter and Forzano, 2012). The participants have an added advantage of a greater assurance of anonymity. There was no interviewer bias in the design that was employed for this research as the participants completed an identically worded self-report (Bailey, 2005).

3.8.4. Minimizing harm to the participants

The research was designed in such a manner that it did not jeopardize the psychological and emotional wellbeing of the participants (Babbie, 2007). In conducting this study the researcher weighed the risks involved in undertaking the study and found that the research would not cause harm and discomfort to the participants.

3.9. Conclusion

This chapter provided a comprehensive overview of the research design and methodology used for this study. The population and sampling employed by the researcher was also described. The measuring instruments, method of data collection and analysis were outlined. The ethical considerations that were specific to the study were highlighted. The results attained from the statistical analysis will be discussed in the following chapter using tables and figures.

Chapter 4: Results and Discussion

4.1 Introduction

The aim of the present study is to determine the sense of coherence and the resilience of HIV-positive students at a university in the Eastern Cape. Further, the study aims at investigating the differences between demographics of age, gender and language in terms of the subscales of the sense of coherence and subscales of resilience of these students and to provide guidelines for adaptation of programmes to be aligned with increased resilience to support the students within the university. The results are organized according to the total sample, the male and female samples and the mean differences.

4.2 Biographical information of the participants (Addendum A)

4.2.1 Age of respondents

The age group of the respondents ranged from 19 to 42 years. Table 4.1 illustrates the age distribution of respondents according to frequencies and percentages.

Table 4.1 Respondent's age distribution

Age groups	Frequency	Percentage
19 - 24	19	47.5
25 - 30	9	22.5
31 - 36	7	17.5
37 - 42	5	12.5
Total	**40**	**100**

The information presented in Table 4.1 accounts for 100 percent (n=40) of the age ranges of the sample. The results show that 47.5 percent (n =19) of the respondents were aged between 19 and 24 years, 22.5 percent (n = 9) were between 25 and 30 years. The 31 to 36

years age group accounts for 17.5 percent (n=7) and the 37 to 42 years age group had 12.5 percent (n=5) participants. The lowest number of participants was in the 37- 42 years age group which accounts for 2.5 percent (n=5). The minimum age was 19 and the maximum age was 42 with the mean age of 27.18 years. The standard deviation of age groups was 6.433 with a variance of 41.38.

4.2.1.1 **Discussion**

Globally, young people aged between 15 and24 years are the most affected by HIV/AIDS and Sub-Saharan Africa has 70% of young people living with HIV/AIDS. These young people are mostly found in schools, colleges and universities (Uys, et al., 2002). Antonovsky (1987) suggests that the SOC develops from early in childhood and stabilizes around 30 years of age. From Figure 4.1 most participants (47.5 %) were in the 19 to 24 years old group and this is within the stage of crystallization of the SOC. A possible explanation for the current sample is that most of the participants, though still young, are not overwhelmed by a chronic disease. Various studies (Bolognini, Plancherel, Bettwshart & Halfon, 1996; Frost and Mckelvie, 2004; Watkins, Dong & Xia, 1997) propose that resilience also crystalizes as an individual develops.

4.2.2 **Gender of respondents**

Table 4.2 shows the distribution of the respondents in terms of gender.

Table 4.2 Gender distribution of the respondents

Gender	**Frequency**	**Percentage**
Male	10	25
Female	30	75
Total	**40**	**100**

The males accounted for 25 percent (n=10) of the sample and the females were 75 percent (n=30). This means that a large percentage (75%) of the affected population that was under study consisted of females. The males represented a quarter (25%) of the sample. These findings are similar to the HEAIDS (2010) report suggesting that more females are affected by HIV/AIDS. This "similarity" may be purely incidental.

4.2.2.1 **Discussion**

The results of the questionnaires show that there were more females than males. These results support the HEAIDS report that female students showed a higher HIV prevalence of 4.7% as compared to male students who showed a lower prevalence at 1.5% (HEAIDS, 2010). This shows the trends of HIV/AIDS prevalence between males and females globally and in Sub-Saharan Africa (UNAIDS, 2009). Another factor that contributes to a highest number of females than men contracting HIV/AIDS is that women have a larger reproductive physiological area that tends to be exposed to HIV during a sexual encounter (Kganyago and Manzini, 2001). Hosken (2001) reinforces the above statement by stating that the women's anatomical structure and biological makeup predisposes them to contract HIV/AIDS more readily than men.

The greater number of females with HIV/AIDS in the support group could be due to, what Esu-Williams (2000) suggested, African women with HIV/AIDS finding support and strength by working together and sharing their experiences in HIV/AIDS support groups. Although the university support group is for both males and females, there were fewer males than females. This could be, as Madiba and Canti-Sigaqa (2012) suggested that males living with HIV/AIDS are unwilling to attend mixed gender support groups or

because females use coping factors more than males and more readily seek support from others (Hampel and Petermann, 2005).

4.2.3 Language distribution of respondents

Table 4.3 shows the language distribution of the participants.

Table 4.3 Language distribution of respondents.

Language	**Percentage**
IsiXhosa	87.5%
English	7.5%
Afrikaans & other	5%
Total	**100%**

The language of most participants was IsiXhosa at eighty seven point five (87.5%) while seven point five percent (7.5%) spoke English. Other languages accounted for five percent (5%). The majority of the student body was isiXhosa speaking.

4.2.3.1 Discussion

The results in Table 4.3 show that the university is composed of predominantly IsiXhosa speaking students. The results of HIV counseling and testing show that in the Eastern Cape universities, majority of students affected by HIV/AIDS (HEAIDS, 2010), were having IsiXhosa as a main language.

4.2.4 Race distribution of participants

All the participants in the study were black. The study was conducted in a predominantly black university. The HEAIDS (2010) report states that it is the universities of the Eastern Cape that present the highest percentage of HIV affected students.

4.3 The Sense of Coherence (SOC-29)

The descriptive data that reveals the mean, standard deviation, the minimum and the maximum scores of the sense of coherence for the total sample of HIV-positive university students in the HIV support group is presented in Table 4.4 (See also Addendum B).

Table 4.4 Mean and standard deviation of the sense of coherence (SOC-29)

Variable	Mean	Standard Deviation	Minimum mean score	Maximum mean score
Sense of Coherence (n=40)	142.55	19.89	107	178

4.3.1 Discussion

The main aim of the present study was to identify and describe the sense of coherence of a group of HIV-positive university students in a support group. The mean of 142.55 for the total sample in the present study is below the mean for post graduate students who obtained 145.47 (Smith, 2006). The mean for the present study is above the mean of (116.65) that was obtained by Katalan (2003) in a study of HIV-positive adult females. Antonovsky, (1993) reported an average mean score of 117-152.6 for the SOC for all the studies that have been done internationally. According to Mlonzi and Strümpfer (1998) the average mean score for black South African undergraduates was 131.9 with a standard deviation of 15.4. Research on the SOC of HIV-positive university students shows that few studies have been done using this category. The highest score for the sense of coherence found in a study by Madhoo (1999) was that of patients in cardiac rehabilitation. The score was 159.00. Wissing, De Vall & De Beer (1992) obtained a mean of 140.21 for a group of rural university students. It should be noted that those students were not suffering from a

chronic disease. These results meet the first objective of the study as they are comparable to those found in previous literature that shows moderate mean scores to good.

The results of this study suggest that the HIV-positive students who participated obtained a comparatively average score for sense of coherence. The minimum score obtained by any participant was 107 and the maximum score was 178. A minimum score of 107 is below the stipulated range of the average score for the SOC suggesting that some students were not coping with HIV/AIDS and studying at the same time. These findings also suggest that there were some students that were coping fairly well both physically and mentally whilst living with HIV/AIDS in a stressful academic environment. This is suggested by the high score of 178 that is above the highest average range suggested by Antonovsky (1993). It appears that there are some students that are able to use their general resistance resources (GRR's) to "make sense" cognitively, instrumentally and emotionally (Antonovsky, 1987).

As the SOC is shaped by both the GRR's (and GRD's) and the person's life experiences, one would speculate that some of these students organized themselves in the support group to satisfy their need for a consistent, stable and structured behaviour in order to develop comprehensibility. They utilize the support group to determine the load balance points that are used to perceive the available resources to meet the demands placed on them. These resources enable them to actualize their capabilities and in the process develop manageability. In addition, their participation in socially valued decision making in the support group allows them to experience meaningfulness, which is a third component of life experiences (Antonovsky, 1987). There were some that were unable to utilize their GRR's who for some reason were in the support group but were unable to utilize the group

support to determine their load balance to meet the challenges they face. These are the students that do not make use of other resources available to them like consulting student counseling and other university stakeholders for help. Griffiths (2010) posits that GRR's constitute knowledge, ego strength, cultural stability and social support, these factors can maintain and strengthen an individual's SOC; conversely General Resistance Deficits (GRD) such as a fickle immune system and poor support can result in a fragile or weak SOC.

4.3.2 T-test for the total SOC

Table 4.5 presents the t-test results and standard deviation for the total SOC.

Table 4.5 t-test mean and standard deviation for the total SOC

	Gender	**N**	**Mean**	**Standard deviation**	**p-value**
SOC	Male	10	148.90	21.304	0.249
	Female	30	140.43	19.301	

4.3.2.1 Discussion

No significant differences were established in terms of gender and the SOC. The males (M = 148.90, SD = 21.304) reported similar result to females (M = 140, SD = 19.43), t (38) = 0.249, p = > 0.05. This result suggests that males could have been more affected by HIV than females or that females have been empowered by attending support group. Antonovsky (1985) suggests that males have a stronger sense of coherence as compared to females. A study done by Hutchinson, Stuart & Pretorius (2007) shows that there were no significant differences in terms of gender and the sense of coherence.

4.3.3 The t-tests for the subscales of the SOC

To determine the differences between the demographics and the subscales of the SOC and the subscales of the RAQ a t–test was done. These demographics include the age, gender and the different language groups.

4.3.3.1 The age and comprehensibility

From Table 4.6 below, the mean for the below 30 years age group (M = 4.39, SD = 0.956) responded similarly to the 30 years age group and above (M = 4.08, SD = 0.793), $t(38)$ = 0.299, $p > .05$.

Table 4.6 The t-test for age and the subscales of the sense of coherence

	Age	N	Mean	Std. Deviation	p-value
Comprehensibility	19 years old to 30 years	28	4.39	.956	0.299
	31 years old to 42 years	12	4.08	.793	
Manageability	19 years old to 30 years	28	5.25	.752	1.000
	31 years old to 42 years	12	5.25	.965	
Meaningfulness	19 years old to 30 years	28	5.50	1.000	0.588
	31 years old to 42 years	12	5.75	1.422	

4.3.3.1.1 Discussion

SOC develops from late teenage years and crystallizes around the age of 30 years (Antonovsky, 1979; 1989). The age groups were such that 70 % of the participants were in the 19-29 years old range and 30 % were in the 30 years of and above age group. This result suggests that these results could not endorse the theory anticipated by Antonovsky

(1987) which states that there is age difference between the below 30 years age group and those that are 30 years old and above. These students are in a similar process in terms of crystallization of the development and a plausible explanation would be that the participants under the 30 years age group were in the process of crystallization and some could have already crystalized hence there were no differences.

In chapter 2 it was noted that comprehensibility entails being motivated to make sense cognitively in a structured logically clear manner that is not muddled (Antonovsky, 1979; 1987). The present study involved HIV-positive university students who attended the support group as a means to 'make sense' of their lives in the presence of HIV. It is therefore sensible to assume that these students are in a similar position as a result no differences in terms of age and comprehensibility were found. The implications of this finding could mean that HIV-positive students have the desire to achieve academically in order to provide for themselves and their families. These stimuli might be developed in these participants although in a similar manner.

No significant differences were found in terms of age and the manageability subscales. The age group that was below 30 years (M = 5.25, SD = 0.752) responded similarly to the 30 years and above age group (M = 5.25, SD = 0.965), t (38) = 1.000, p > .05. According to Antonovsky (1979; 1987) manageability includes the individuals' belief that the resources needed to meet the demands faced are readily available. The participants in this study would like to believe that the resources they need are available to them. Some of the resources might include psychologists, social workers, lecturers, among other professionals and even the SRC help desk and HIV/AIDS peer helpers. Also, the use of Anti-Retroviral

treatment (ART) depends on their determination to consult with the clinic doctor for the purpose of managing HIV/AIDS. All these professionals act as resources to help students cope effectively (Mahungu, Rodger & Johnson, 2009). It is reasonable to assume that these students are in a similar position as they all need the resources to survive and as such no difference in terms of age and manageability were found. This could also highlight the prevalence of stigma and discrimination around campus as these students might not be confident enough to come out and consult with other professionals with the fear of disclosing their status as they might be stigmatized.

Furthermore, with respect to meaningfulness there were no significant differences in terms of the age group below 30 years (M = 5.50, SD = 0.100) and the 30 years and above age group (M = 5.75, SD = 1.422), t (38) = 0.588, p > .05. Meaningfulness is the extent to which a person enthusiastically senses that his/her life is in the course that includes a motivation component of the SOC. This helps one to understand his/her purpose for one's survival (Antonovsky, 1987). The results of this study show that there were no significant differences in terms of age and meaningfulness. An assumption that can be made about the meaningfulness subscale is that both the under 30 years age group and the 30 years and over age groups responded in a related manner to the challenges posed by HIV/AIDS as they persist to survive in an academic environment. It is clear that the proportion of those below 30 years of age and the proportion of 30 years of age and above do not differ statistically significant with respect to comprehensibility, manageability and the meaningfulness.

Earlier studies done by Nilsson, Holmgren, Stegmayr & Wesrman (2003) in Sweden and Hutchison (2005) in South Africa respectively found that there were no significant differences in terms of age variable and comprehensibility, manageability and meaningfulness subscales of the SOC. Harry (2011) and Randall (2006) contend that there may be noteworthy age differences in terms of comprehensibility, manageability and meaningfulness.

4.3.3.2 The t-test for gender and the SOC subscales

Table 4.7 illustrates the t-test results for the difference between the means of gender and the SOC subscales.

Table 4.7 The t-test for difference between the means of gender and the SOC subscales

	Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error mean**	**p-value**
Comprehensibility	Male	10	4.50	1.080	.342	0.490
	Female	30	4.23	.858	.858	
Manageability	Male	10	5.60	.843	.843	0.144
	Female	30	5.13	.776	.776	
Meaningfulness	Male	10	5.80	1.229	1.229	0.504
	Female	30	5.50	1.106	1.106	

From Table 4.7 it is evident that no-significant differences were established in terms of the variable of gender and comprehensibility. Males (M = 4.50, SD = 1.080) responded similarly to females (M = 4.23, SD = 0.858), t (38) = 0.490, p> .05. On manageability subscale males (M = 5.60, SD = 0.843) responded similarly to females (M = 5.13, SD = 0.776), t(38) = 0.144, p >.05. The sample for this study was composed of 75 percent of women and 25 percent men.

4.3.3.2.1 **Discussion**

According to Antonovsky (1989) males perform better on the SOC scale than the females. These results indicate that males and females experiencing a similar chronic condition and female university students have matured as they are academically empowered to be on par with their male counterparts. Alternatively, the impact of HIV/AIDS support group that they are part of has played a role in empowering these women mentally and emotionally to deal with a chronic disease like HIV/AIDS. Consistent with previous researches done on SOC, Drory and Florian (1998), Harry (2011) and Hutchison (2005) claim that there were no gender differences regarding comprehensibility, manageability and meaningfulness.

4.3.3.3 **The t-test for language and the SOC subscales**

Table 4.8 illustrates the results of the t-test for the language and the SOC subscales.

Table 4.8 The t-test for the SOC subscales and the languages

	Language	**N**	**Mean**	**Std. Deviation**	**Std. Error**	**p-value**
Comprehensibility	IsiXhosa	35	4.14	.845	.143	0.00
	Others	5	5.40	.548	.245	
Manageability	IsiXhosa	35	5.23	.843	.143	0.56
	Others	5	5.40	.548	.245	
Meaningfulness	IsiXhosa	35	5.60	1.193	.202	0.72
	Others	5	5.40	.548	.245	

From Table 4.8 it can be derived that there is a significant difference in terms of language and comprehensibility subscale that is demonstrated by (M = 4.14, SD = 0.845) reported significant lower mean score of comprehensibility than English and other language groups (M = 5.40, SD = .548), $t(35) = 0.003$, $p < 0.05$ difference of the variable of language in participants in terms of other language speakers than IsiXhosa language group. This indicates that the IsiXhosa speaking individuals in the support group could not use their

internalized language of IsiXhosa to their advantage more than English language speakers and the other language group members to express their pent up emotions and share in the support group. The effect size index p-value 0.89 is above the required highest value of 0.64 and therefore this is the strongest effect size that shows that the difference is practically significant.

4.3.3.3.1 **Discussion**

According to Austin and McGill (2012) the students who speak their language fluently dig deep within themselves and use their languages to enhance their guided sharing for the purpose of coping. Individuals living with HIV are confronted by unpredictable psychosocial stressors; they organize themselves around friends and others for social support (Kringlen, 1990). As they do this, they continue to comprehend their understanding of language and express their emotions and strengthen their support from others (Bals, Turi, Skre & Kvernmo, 2011). These results show that the IsiXhosa speaking individuals might not fully comprehend the language used in the support group and as such they are not verbalizing their emotions for their benefit, hence the differences. One might speculate that African people do not feel comfortable to express their emotions amongst others as a result they might appear as if they do not understand the language used in the support group. It is not easy to justify the issue of language scientifically as it is intertwined in the context of culture which is beyond the boundaries of this study.

These results are in contrast with other South African studies where language was not proven to be significant in coping with HIV/AIDS (Olley, Gxamza, Seedat, Theron, Taljaard, Reid, Reuter, & Stein, 2003). Likewise, Turner-Cobb, Gore-Felton, Mourouf, Koopman, Kim, Israelski and Spiegel (2002) are of the opinion that conveying feelings

might not have positive consequences. Surprisingly, 87.5% of the participants were IsiXhosa speakers and only 13 % of the participants spoke English and other languages. Participants who were English and other language speakers comprehended the use of their language as they used it to their advantage for coping. It is noted that the results in this study show what Antonovsky (1987) predicted that the SOC should be used as one tool rather than the subscale taken as tools themselves. It should be understandable that the SOC findings in this study endorse the tendency anticipated by Antonovsky (1987) that the SOC should be used as a single tool rather than subscales.

4.4 The Resilience Assessment Questionnaire (RAQ)

The results concerning the resilience of the students in the HIV-support group for the total sample as to the mean, standard deviation, minimum score and the maximum score are shown in Table 4.9.

Table 4.9 Mean and the standard deviation of the resilience questionnaire

Variable	Mean	Standard deviation	Minimum Score	Maximum score
Resilience (n=40)	131.90	22.88	61	164

4.4.1 Discussion

The resilience of HIV-positive university students in the support group indicates that these participants built a fairly substantial average amount of resilience in their lives. The mean score for the resilience questionnaire was 131.90. According to Mowbray (2007) a score of 131.90 shows that although some individuals can manage their stressors, they lack certain skills and need development for cognitive coaching for the purpose of fully adapting to stressors. These students are average on the resiliency scale as they manage HIV/AIDS and other demanding events that occur in their lives, although they remain uncertain at some

essentials for resilience need comprehensive consideration for the development of their lives (Mowbray, 2007). The highest score of resilience, according to Mowbray (2007), ranges between 141and175. This finding corresponds well with the study done by Koen et al., (2011) who found resilience among healthy professional nurses to be at 137.2 (SD 25.65) when using a 25-item scale of resilience. In comparison to the lowest score that has been presented by Mowbray (2007) that ranges from 35 – 105, the minimum score of 61 for this study could suggest that some of the participants employed some coping mechanisms despite the challenges they encounter

The maximum score of resilience that was obtained by the participants was 164. This falls in the highest range of resilient participants who can handle a chronic illness. The results of this study suggest that cognitive coaching and resilience training could benefit HIV–positive students. Santis et al., (2013) found that HIV-positive individuals who were resilient had close emotional contacts with their family members and friends. From the psycho-social support, this group derived enthusiasm to endure the emotional aspect associated with the chronic disease. This has important implications for university students as they are not only faced with academic stressors but, also, stigma and discrimination. Individuals that have resilience are able to adapt and regulate their lives in the presence of a stigmatizing long-lasting disease (Emlet, Tozay & Raveis 2010).

Table 4.10 Gender differences of the total RAQ

	Gender	**N**	**Mean**	**Std. deviation**	**p-value**
Resilience	Male	10	123.80	26.952	0.258
	Female	30	134.60	25.400	

No significant gender differences were established in terms of gender and the resilience scale. Males (M = 123.80, SD = 26.952) is similar to the female (*M* = 134, *SD* = 25.400), *t* (38) = 0.258, *p* = > 0.05. This finding suggests that the males and females were similar in responding to a chronic illness. According to the results of the resilience scale they were average. These results fulfilled the second objective of the study as the average mean score for the RAQ has been described.

4.4.2 The t-tests for biographical data in the RAQ subscales

4.4.2.1 The differences between the age and the subscales of the resilience

According to Table 4.11, it is evident that a significant difference was established between the variable of age and problem solving subscale of resilience.

Table 4.11 T-test for age and RAQ subscales

	Age	N	Mean	Std. Deviation	Std. Error	p-value
Vision	19 years to 29 years	28	4.25	1.175	.222	0.605
	30 years to 42 years	12	4.42	.793	.229	
Determination	19 years to 29 years	28	3.57	.879	1.66	0.666
	30 years to 42 years	12	3.67	.492	.142	
Interaction	19 years to 29 years	28	3.57	.997	.188	0.096
	30 years to 42 years	12	4.08	.793	.229	
Relationships	19 years to 29 years	28	3.68	.945	.179	0.117
	30 years to 42 years	12	4.17	.835	.241	
Problem solving	19 years to 29 years	28	3.75	1.041	.197	0.004
	30 years to 42 years	12	4.50	.522	.151	
Organization	19 years to 29 years	28	3.18	.819	.155	0.611
	30 years to 42 years	12	3.33	.888	.256	
Self-confidence	19 years to 29 years	28	3.64	.989	.187	0.316
	30 years to 42 years	12	3.92	.669	.193	

4.4.2.1.1. **Discussion**

4.4.2.1.1 **Problem-solving**

Interestingly, the problem-solving subscale was able to show that the significant mean differences between the below 30 years of age group and the 30 years and above age group in terms of age. The average score for the below 30 years old correspondents (M = 3.75, SD = 1.041) reported significantly less than mean score of problem-solving than 30 years and above age group average (M = 4.50, SD = .522), $t(38) = 0.004$, $p < .05$. One might hypothesize that the 19 to 29 years age group is not fully developed yet for the purpose of dealing with challenges and abstract thinking due to lack of experience. The experiences of the older group have helped them to gain the ability to apply rationally thought ideas that meet the demands posed by the role of being diagnosed with HIV/AIDS and challenged by academic demands as well.

Lazarus and Folkman (1984) conceptualized coping as mental and social drives to regulate and reduce the challenges brought about by stressful situations. This can be achieved through evaluation of the event by individual that has inadequate resources to overcome challenges in life. Lazarus (1991) postulates that, coping mechanisms can lead to instant effects which include physiological changes, psychological well-being and social functioning. The process of grouping events and its different features in relation to its consequence for one's health makes use of cognitive strategies to overcome the stressors (HIV/AIDS) (Lazarus and Folkman, 1984). Furthermore, coping strategies include mental and behavioural attempts employed to deal with intrapersonal and environmental stressors that are perceived as demanding or requires more than the individual can handle. These

cognitive and behavioural efforts are implemented with the objective to manage, master, minimise or tolerate stressors and demands (Dageid and Duckert, 2008).

It is plausible that adult HIV-positive individuals acquire problem-solving skills that make individuals to become resilient by resolving their problems through joining support groups where they acquired techniques to cope and be fruitful resilient individuals (Dyer and McGuinness, 1996). In addition, problem solvers are more likely to be logical in thinking, have listening skills and possess ability to think and accept the challenges they are faced with than those who do not have these skills. Social support could influence coping responses to stressors by encouraging more active problem solving coping which is the result of greater hope, self-esteem and self-efficacy, furthermore social support reduces the possibility of pondering on or being fixated on thinking about the illness as a form of negative coping (Casale, Wild & Kuo, 2013). The effect size index of p-value 0.001 indicates that these results are practically significant.

4.4.2.2 **Gender differences for RAQ**

Table 4.12 illustrates the t-test results for gender and resilience subscales.

Table 4.12 The t-test for gender and Resilience subscales

	Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**	**p- value**
Vision	Male	10	4.20	1.229	.389	
	Female	30	4.33	1.028	.188	0.601
Determination	Male	10	3.60	1.075	.340	
	Female	30	3.60	.675	.123	0.040
Interaction	Male	10	3.50	1.080	.342	
	Female	30	3.80	.925	.169	0.754
Relationships	Male	10	3.60	.843	.267	
	Female	30	3.90	.960	.175	0.772
Problem-solving	Male	10	3.80	1.317	.416	
	Female	30	4.03	.850	.155	0.136
Organisation	Male	10	3.00	.816	.258	
	Female	30	3.30	.837	.153	0.453
Self-confidence	Male	10	3.40	1.075	.340	
	Female	30	3.83	.834	.152	0.110

According to Table 4.12 there is a significant difference in the means of males and females in the determination subscale. Males (M = 3.60, *SD* = 1.075) reported significantly higher mean score of determination than females (*M* = 3.60, *SD* = .675), *t*(38) = 0.04, *p* < .05. The average mean score from male correspondents is greater than the average mean score from female correspondents.

4.4.2.2.1 **Discussion**

It is reasonable to assume that male participants remain resolute in identifying factors that increase their resilience through determination to attend a support group and find solutions to their challenges than females (Waller, 2001). According to Santis et al. (2013) exposure to adversarial experiences and the desire to succeed encourage HIV-positive adults to be determined to survive. Mowbray (2011) argues that determination is an inherent self-driven experience although it can be activated by a traumatic experience and it needs significant attention to goal and vision at hand. It would seem being male is more determined to cope than being female. The effect size index of 0.5 is regarded as practically significant.

4.4.2.3 **The t-test for the language and the resilience subscales**

Table 4.13 presents the t-test results of the language and the resilience subscales.

Table 4.13 The t-test of the language and the resilience subscales

	Language	**N**	**Mean**	**Std. Deviation**	**Std. Error**	**p-value**
Vision	IsiXhosa	35	4.40	.976	.165	0.071
	Others	5	3.60	1.517	.678	

Determination	IsiXhosa	35	3.66	.725	.123	0.058
	Others	5	3.20	1.095	.490	
Interaction Relationships	IsiXhosa	35	3.83	.857	.145	0.039
	Others	5	3.00	1.414	.632	
	IsiXhosa	35	3.89	.932	.158	0.976
	Others	5	3.40	.894	.400	
Problem-solving	IsiXhosa	35	4.11	.832	.141	0.030
	Others	5	3.00	1.414	.632	
Organization	IsiXhosa	35	3.17	.822	.139	0.884
	Others	5	3.60	.894	.400	
Self-confidence	IsiXhosa	35	3.77	.910	.154	0.892
	Others	5	3.40	.894	.400	

The average mean score under interaction skills from IsiXhosa speaking correspondents is less than the average mean score from non-IsiXhosa speaking correspondents. IsiXhosa speaking group (M = 3.83, SD = .857) reported significantly lower mean score of interaction than other language speakers (M = 3.00, SD = 1.414 $t(38) = 0.039$, $p < .05$.

4.4.2.3.1 **Discussion**

Interactions amongst support group members are used to express one's emotions attached to HIV/AIDS and other challenges they encounter around the university and make informed decisions about how they handle a chronic illness (Madiba, and Canti-Sigaqa, 2012). As it has been mentioned, the support groups offer emotional support and help in discussing problems encountered in dealing with HIV/AIDS. It is conceivable to assume that IsiXhosa speaking participants were unable to reciprocate and relate in a determined manner to resolve their problems through discussion and interaction in the support group. It should be understood that the issue of language has cultural implications and barriers and

culture was not included as a variable in this study. In a support group, one needs to understand what is communicated to one another and "read one's mind" to successfully interrelate with others (Mundell, Visser, Sikkema & Jeffery, 2005). The effect size index of 0.03 is below the minimum required value for the effect size to be described as practically significant denoting that this significance is minimal.

4.4.2.3.2 **Problem solving**

The average score under problem-solving skills from IsiXhosa speaking correspondents is less than the average score from non-IsiXhosa speaking correspondents. The problem-solving skills from IsiXhosa speaking group (M = 4.11, SD = .382) reported significantly lower problem-solving skills than English and other language groups (M= 3.00, SD = 1.414), $t(38)=0.030$, $p < .05$ in resolving their problems. It is plausible to resolve that the IsiXhosa speaking students did not understand some of the statements posed in the RAQ well. As it has been mentioned earlier, these students need cognitive coaching in challenges that need logical thinking and listening skills for the purpose of embracing challenges and explain to them how the support groups work for the purpose of adapting to HIV/AIDS and university life. The effect size index of .005 is below the recommended value of 0.04 which denotes that this significance is not practically significant. These results should therefore be explained with caution.

4.5 Conclusion

This chapter concentrated on the results and the discussion that used descriptive statistics and the t-test. As demonstrated by the results, the t-test revealed statistically significant result in terms of language and comprehensibility. No other differences were found in terms of the age and gender. The RAQ revealed statistically significant results on age and

problem-solving skills, gender and determination, language and interaction and language and problem solving skills. Chapter 5 presents the summary of the findings and the conclusions of the study.

Chapter 5: Summary and Conclusions

5.1 Introduction

This chapter offers a summary of findings and draws conclusions from the major findings in the study. The main objective was to determine the sense of coherence and resilience of HIV-positive students in the support group. The results show that the participants were coping fairly well enough even though there were participants that showed they were barely coping. The study sample showed that there were no significant differences between the age, gender and different racial groups in the sample. However, the IsiXhosa and English language speakers were likely to be more.

5.2 Summary

Chapter one presented the statement of the problem; the theoretical background and various concepts that were described. Chapter two outlined an in-depth literature survey on sense of coherence and resilience. Furthermore, Chapter three laid out the research design and methodology that was used in conducting the study and chapter four presented the descriptive results of the SOC-29 and the RAQ that were used. A t-test was done to determine the differences in the subscales of the SOC. The results showed significance in terms of language and comprehensibility subscale. A t-test that was done on the subscales of the RAQ showed that there were differences in the age and problem-solving skills, gender and determination, language and interaction and language and problem solving skills.

The first question in this study sought to describe the sense of coherence and the resilience of a group of HIV-positive university students in the support group. The empirical findings

of the study suggested that the students were coping fairly well as they were faced with challenges posed by HIV/AIDS and studying at the same time. Thus, HIV/AIDS had not impacted negatively on some of the participants in the current group. As mentioned in the literature review, the power of the SOC depends on the availability of GRR's to help individuals cope with social factors (Mayer, 2011). It would seem that some participants in the support group had mastered some coping skills to a certain extent. This means that they do not lack the ability to make objective decisions (rationality) with regards to their ability to determine whether HIV/AIDS is a threat or not and can use the available resources (flexibility) to manage the disease. Consequently, they have the ability to assess the environment around them in relation to their condition for the purpose of coping (Antonovsky, 1985).

On the question of determining the differences in the demographics of the SOC the current study found that there were no significant differences in terms of age and the subscales of the SOC suggesting that both age groups were coping fairly well in a similar manner. This pattern suggests that the students do not lack the reasoning ability or capacity to plan needed adjustment to a chronic disease. They seem to have developed the adaptive strategies as they encounter challenges (Folkman and Moskowitz, 2004). They therefore show some level of ability to flexibly adjust to the unstable difficulties and stressors that they encounter (Tugade and Fredrickson, 2004).

Similarly, no significant differences were found in terms of gender and the SOC subscales. Males and females were coping in a similar manner. As it has been alluded to, either males were affected more than males in terms of stress or females have been empowered to cope

as they might have mastered coping skills much better than males in the support group. Theory states that males perform better than females on the SOC scale (Antonovsky, 1987). However, statistically significant results were found on language and comprehensibility. The IsiXhosa speaking students were found to communicate less in the support group suggesting that they could be cautious in communicating their emotions.

A statistically significant result was found in the age and the problem-solving subscale of the RAQ. These results suggest that the students in the under 30 years age group were not grasping the problem-solving techniques very well for their benefit resulting in lower capabilities to be steadfast in resolving the challenges they were faced with. Significant gender differences were found on the determination subscale suggesting that males were driven than females to purposefully resolve whatever challenges they were faced with. This was statistically significant in relation to IsiXhosa and English, not the other language groups. These findings were unexpected and suggest that children should be taught in their own language to express themselves. This finding validates the ideas of Austin and McGill (2012) that language is used as a resource to express emotions and to improve participation as a coping mechanism.

The main questions addressed the mean scores of the sense of coherence and the resilience of university students in the HIV/AIDS support group. It was argued that the SOC and the RAQ had an important role to play with regard to how HIV/AIDS-positive students cope. This means that these students have to ensure that they attend the support group where they get psychosocial support, learn other coping mechanisms and function at optimal levels.

5.3 Conclusions

The conclusions drawn from this study have implications for psychosocial interventions by the university for the psychological well-being of its HIV-positive students in an academic environment. The institution is among the universities of the Eastern Cape which are most affected (HEAIDS, 2010). In response to the threat of HIV/AIDS, the institution must increase the implementation of HIV/AIDS psychosocial support programmes that help students to cope. As there are initiatives that have been implemented towards these programmes, they need to be augmented and be intensified as some students show that they are barely coping in the present circumstances. The following chapter presents limitations and recommendations.

Chapter 6: Limitations and Recommendations

6.1 Introduction

The study was designed to find out the sense of coherence and resilience of HIV-positive students in a support group in a university in the Eastern Cape. The main aims of the study were to determine the sense of coherence of HIV-positive university students using the SOC-29 and to determine the resilience of these students using the RAQ to explain how they cope and continue to be resilient in an academic environment. This chapter offers comments on the limitations of the study and suggests some recommendations.

6.2 Limitations of the study

The participants were all Black and predominantly IsiXhosa speaking. It would have been interesting to have other racial groups and more English speakers for the purpose of making comparisons. Another limitation was given by the small convenience sample. The potential for this study to be generalized is limited by the fact that only 40 HIV-positive students were used. The findings should be interpreted with caution. A smaller sample lacks the power to differentiate the differences in the subscales of the sense of coherence and the subscales of the RAQ. Nevertheless, the findings illustrate the importance of the use of one's language as a means of internalizing for HIV-positive students, to vent their emotions and interact with others. In particular, these results suggest a need for the institution to provide a supportive environment in support groups so that more HIV-positive students can attend without fear of being stigmatized.

6.3 Recommendations

The following recommendations were based on the limitations of the study:

6.3.1 Increasing the number of the sample size

As mentioned previously, the sample size was small. It will be important for future investigators to explore similar variables in institutions representing a broader range of racial and ethnic backgrounds, particularly given the potentially culturally based considerations surrounding the construct of HIV/AIDS. Another important factor that emanates from a smaller sample could be that HIV-positive students still experience issues of stigma and discrimination towards the support group and within the university at large. The university should take lead in discouraging discrimination so that other students will learn to accept those who are affected and infected by HIV/AIDS.

6.3.2 Increase of the available HIV/AIDS programmes

Based on the results it is recommended that the university should be rigorous in implementing the programmes that increase coping in students in the support group. The university's HIV/AIDS protocols that benefit students in the support group should be readily available to each student. These HIV/AIDS programmes that empower the students about their sexuality should also be increased.

6.3.3 Referrals to the student counseling

The Health Care Centre can refer students in the support group to student counseling so that they can be taught acceptance of their status. These referrals can also serve to strengthen resilience by providing more education about HIV/AIDS, especially if they do not understand the disease or do not accept their HIV/AIDS status. A similar study should be conducted at all other universities in South Africa determine how HIV-positive students cope in an academic environment.

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Addenda

Addendum A

Thank you for taking this time to complete this questionnaire.

Your response will be treated with strict confidentiality.

The questionnaire consists of 10 pages (including this one). Please notify the researcher of any omissions

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INSTRUCTIONS: PLEASE INDICATE YOUR RESPONSE BY MAKING A CROSS IN THE APPROPRIATE BLOCK

1. Age: ☐

2. Gender: ☐ Male ☐ Female

3. Language: ☐ IsiXhosa ☐ English ☐ Afrikaans ☐ Other

4. With which population group do you identify yourself? : ☐ Black ☐ White ☐ Coloured ☐ Asian ☐ Other

Addendum B

ORIENTATION TO LIFE QUESTIONNAIRE

This questionnaire is relating to various aspects of our lives. Each question has seven answers. Please mark the number which expresses your answer, with numbers 1 and 7 being the extreme answer. If the words under 1 are right for you, mark 1; if the words under 7 are right for you, mark 7. If you feel differently, circle the number which best expresses your feeling. Please only give **one** answer to each question.

1. When you talk to people, do you have the feeling that they don't understand you?

1	2	3	4	5	6	7

never have this feeling — always have this feeling

2. In the past, when you had to do something which depended upon cooperation with others, did you have the feeling that it:

1	2	3	4	5	6	7

Surely wouldn't Get done — surely would get done

3.Think of the people with whom you come into contact daily, aside from the ones to whom you feel closest. How well do you know most of them?

1	2	3	4	5	6	7

You feel that They are strangers — you know them very well

4.Do you have the feeling that you don't really care about what goes on around you?

1	2	3	4	5	6	7

Very seldom Or never — very often

5. Has it happened in the past that you were surprised by the behaviour of people whom you thought you know very well?

1	2	3	4	5	6	7

never happened — always happened

6. Has it happened that people whom you counted on disappointed you?

1	2	3	4	5	6	7

never happened — always happened

7. Life is:

1	2	3	4	5	6	7

full of interests — completely routine

8. Until now your life has had:

1	2	3	4	5	6	7

No clear goals Or purpose at all — Very clear goals or purpose

9.Do you have the feeling that you are being treated unfairly?

1	2	3	4	5	6	7

very often — very seldom or never

10. In the past ten years your life has been:

1	2	3	4	5	6	7

Full of changes Without your Knowing what will Happen next — completely consistent and clear

11. Most of the things you do in the future will probably be:

1	2	3	4	5	6	7

Completely Fascinating — deadly boring

12. Do you have the feeling that you are in an unfamiliar situation and don't know what to do?

1	2	3	4	5	6	7

Very Often — very seldom or never

13. What best describes how you see life?

1	2	3	4	5	6	7

one can always find a solution to painful things in life — there is no solution to painful things in life

14. When you think about your life, very often:

1	2	3	4	5	6	7

feels how good It is to be alive — ask yourself why you exist at all

15. When you face a different problem, the choice of a solution is:

1	2	3	4	5	6	7

Always confusing And hard to find — always completely clear

16. Doing the things you do every day is:

1	2	3	4	5	6	7

a source of deep pleasure and satisfaction — a source of pain and boredom

17. Your life in the future will probably be:

1	2	3	4	5	6	7

full of change Without your knowing what will happen next

completely consistent and clear

18. When something unpleasant happens in the past your tendency was:

1	2	3	4	5	6	7

"to eat yourself Up" about it

to say "ok that's that, I have to leave with it", and go on

19. Do you have very mixed-up feelings and ideas?

1	2	3	4	5	6	7

Very often

very seldom or never

20. When you do something that gives you a good feeling?

1	2	3	4	5	6	7

It's certain that you'll go on feeling good

it's certain that something will happen to spoil the feeling

21. Does it happen that you have feelings inside you would rather not feel?

1	2	3	4	5	6	7

very often

very seldom or never

22. You anticipate that your personal life in the future will be:

1	2	3	4	5	6	7

Totally without meaning or purpose — full of meaning and purpose

23. Do you think that there will always be people you'll be able to count on in the future?

1	2	3	4	5	6	7

you are certain there will be — you doubt there will be

24. Does it happen that you have the feeling that you don't know exactly what's about to happen?

1	2	3	4	5	6	7

very often — very seldom or never

25. Many people – even those with a strong character- sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way in the past?

1	2	3	4	5	6	7

very often — very seldom or never

26. When something happened, you have generally found that:

1	2	3	4	5	6	7

you overestimated or underestimated its importance — you saw things in the right proportion

27. When you think of difficulties you are likely to face in important aspects of your life, do you have the feeling that:

1	2	3	4	5	6	7

you will always succeed in overcoming the difficulties — you won't succeed in overcoming the difficulties

28. How often do you have the feeling that there's little meaning in the things you do in your daily life?

1	2	3	4	5	6	7

very often — very seldom or never

29. How often do you have a feeling that you are not sure you can keep under control?

1	2	3	4	5	6	7

Very often — very seldom or never

Addendum C

RESILIENCE ASSESSMENT QUESTIONNAIRE

INSTRUCTIONS: WHEN COMPLETING THE QUESTIONNAIRE THINK ABOUT YOUR DOMESTIC AND UNIVERSITY EXPERIENCES AS THEY ARE TODAY.

1= no never and 5 = Yes always

2, 3 and 4 are shades in between

1. I know what I want to achieve during my lifetime 1 2 3 4 5

2. I am ambitious to achieve certain things during my lifetime 1 2 3 4 5

3. I enjoy the company of other people most of the time 1 2 3 4 5

4.I share my innermost secrets with a select number of friends 1 2 3 4 5

5. I enjoy solving problems 1 2 3 4 5

6.I like to plan out my day and write down my list of things to do 1 2 3 4 5

7. I know what I want to get out of each day 1 2 3 4 5

8.I have a strong determination to achieve certain things in my life 1 2 3 4 5

9. I rely on others to help me achieve what I want 1 2 3 4 5

10. I have a unique personal brand that I frequently project to others 1 2 3 4 5

11. I have a strong relationship with those who can help me achieve what I want 1 2 3 4 5

12. I embrace challenge 1 2 3 4 5

13. I plan my holidays at the last minute 1 2 3 4 5

14.I know how to tackle most challenges I face 1 2 3 4 5

15. I can tell when I'm feeling good about the way my life is going 1 2 3 4 5

16. I have a get up and go approach to life 1 2 3 4 5

17. I know myself very well 1 2 3 4 5

18. I have good friends to provide me with the emotional support I need 1 2 3 4 5

19. I really enjoy exploring the causes of problems 1 2 3 4 5

20. I tackle big tasks in bite sizes 1 2 3 4 5

21. I like taking the lead 1 2 3 4 5

22. My current academic work is a step towards achieving certain Things in my lifetime 1 2 3 4 5

23. I know what to do in most situations 1 2 3 4 5

24. I always listen to and try to understand what others are talking about to me 1 2 3 4 5

25. I see my-self as self-sufficient 1 2 3 4 5

26. I can solve most problems that challenge me 1 2 3 4 5

27.I like making lists 1 2 3 4 5

28. I feel comfortable in new situations 1 2 3 4 5

29.I know what I have to do to achieve my aspirations in life 1 2 3 4 5

30. I have a powerful self-interests in achieving what I want 1 2 3 4 5

31. I have a curiosity about people 1 2 3 4 5

32. I like travelling on my own 1 2 3 4 5

33. I help others solve the problems and challenges they face 1 2 3 4 5

34. I review my achievements weekly 1 2 3 4 5

35. I know I'm a great person 1 2 3 4 5

Addendum D

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STELLENBOSCH UNIVERSITY

CONSENT TO PARTICIPATE IN RESEARCH

[*Insert title of the study.*] [*If the study involves using different consent forms for different populations, identify the population group as the subtitle of the study.*]

You are asked to participate in a research study conducted by [*insert names and degrees of all investigators*], from the [*insert department affiliation*] at Stellenbosch University. [*If student, indicate that results will be contributed to research paper, thesis or dissertation.*] You were selected as a possible participant in this study because [*explain succinctly and simply why the prospective subject is eligible to participate*].

1. PURPOSE OF THE STUDY

[*State what the study is designed to assess or establish.*]

2. PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

[*Describe the procedures chronologically using simple language, short sentences and short paragraphs. The use of subheadings helps to organize this section and increases readability. Medical and scientific terms should be defined and explained. Identify any procedures that are experimental.*]

[*Specify the subject's assignment to study groups, length of time for participation in each procedure, the total length of time for participation, frequency of procedures, location of the procedures to be done, etc.*]

3. POTENTIAL RISKS AND DISCOMFORTS

[*Describe any reasonable foreseeable risks, discomforts, inconveniences, and how these will be managed.*]

[*If there are significant physical or psychological risks to participation that might cause the researcher to terminate the study, please describe them.*]

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

[*Describe benefits to subjects expected from the research. If the subject will not benefit from participation, clearly state this fact.*]

[*State the potential benefits, if any, to science or society expected from the research.*]

5. PAYMENT FOR PARTICIPATION

[*State whether the subject will receive payment. If not, state so. If subject will receive payment, describe remuneration amount, when payment is scheduled, and proration schedule should the subject decide to withdraw or is withdrawn by the investigator.*]

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of [*describe coding procedures and plans to safeguard data, including where data will be kept, who will have access to it, etc.*].

[*If information will be released to any other party for any reason, state the person/agency to whom the information will be furnished, the nature of the information, and the purpose of the disclosure.*]

[*If activities are to be audio- or videotaped, describe the subject's right to review/edit the tapes, who will have access, if they will be used for educational purpose, and when they will be erased.*]

[If researcher is planning to publish results of study, describe how confidentiality will be maintained in publication]

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. [*If appropriate, describe the anticipated circumstances under which the subject's participation may be terminated by the investigator without regard to the subject's consent.*]

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact [i*dentify research personnel: Principal Investigator, Supervisor, Co-Investigator(s). Include day phone numbers and addresses for all listed individuals. For greater than minimal risk studies, include night/emergency phone numbers.*]

1. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact MsMaléneFouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to [*me/the subject/the participant]* by [*name of relevant person]* in [*Afrikaans/English/Xhosa/other]* and [*I am/the subject is/the participant is]* in command of this language or it was satisfactorily translated to [*me/him/her*]. [*I/the participant/the subject]* was given the opportunity to ask questions and these questions were answered to *[my/his/her]* satisfaction.

[I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.] I have been given a copy of this form.

_____

Name of Subject/Participant

_____

Name of Legal Representative (if applicable)

_____ _____

Signature of Subject/Participant or Legal Representative **Date**

I declare that I explained the information given in this document to _____ [*name of the subject/participant]* and/or [his/her] representative _____ [*name of the representative]. [H*e/she] was encouraged and given ample time to ask me any questions. This

conversation was conducted in [*Afrikaans/*English/*Xhosa/*Other*] and [*no translator was used/this conversation was translated into* _____ by _____].

_____ _____

Signature of Investigator **Date**

Addendum E

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Approval Notice

Response to Modification-(New Application)

16-Oct-2013
HOHO, Veliswa Nomfundo

Proposal #: HS9962013
Title: The sense of coherence and resilience of HIV positive students in the support group of a university in the Eastern Cape

Dear Ms Veliswa HOHO,

Your **Response to Modifications -** ***(New Application)*** received on **10-Oct-2013**, was reviewed by members of the **Research Ethics Committee: Human Research (Humanities)** via Expedited review procedures on **14-Oct-2013** and was approved.
Please note the following information about your approved research proposal:

Proposal Approval Period: **16-Oct-2013 -15-Oct-2014**

Please take note of the general Investigator Responsibilities attached to this letter. You may commence with your research after complying fully with these guidelines.

Please remember to use your **proposal number** (**HS996/2013**) on any documents or correspondence with the REC concerning your research proposal.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

Also note that a progress report should be submitted to the Committee before the approval period has expired if a continuation is required. The Committee will then consider the continuation of the project for a further year (if necessary).

This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki and the Guidelines for Ethical Research: Principles Structures and Processes 2004 (Department of Health). Annually a number of projects may be selected randomly for an external audit.

National Health Research Ethics Committee (NHREC) registration number REC-050411-032.

We wish you the best as you conduct your research.
If you have any questions or need further help, please contact the REC office at 0218839027.

Included Documents:
letter of response
Revised questionnaire
Revised informed consent form
Research Proposal
DESC form
REC Application
Permission letter
Informed consent form
Revised REC Application
REC letter

Revised research proposal
Revised DESC form
REC Coordinator
Research Ethics Committee: Human Research (Humanities)

Sincerely,
Susara Oberholzer