

**THE GENERAL HEALTH AND LIFE
ORIENTATIONS OF LEARNERS INFECTED
WITH HIV/ AIDS**

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SUMMARY

The aims of this research were to investigate the general health of learners infected with HIV/AIDS; assess how learners infected with HIV/AIDS see life; and make suggestions for helping learners infected with HIV/AIDS to generally develop a positive outlook on life.

From the literature study it emerged that HIV/AIDS wreaks havoc to both the physical and psychological well being domains of human beings and that such havoc causes a serious medical illness that causes shifts in a person's mood, energy and ability to function.

The empirical research revealed that the majority of the learner participants who formed the sample of this research are feeling ill, have been feeling nervous and strung-up all the time, were not doing things well, were not capable of making decisions about things, have been thinking of themselves as worthless persons, felt that life is entirely hopeless, have the thought of the possibility that they might make away with themselves, the idea of taking their own lives kept coming into their heads, do not expect the best in uncertain times, it is not easy for them to relax, if something can go wrong for them it will not, are pessimistic about their future, do not enjoy their friends a lot, it is important for them to keep busy, they always expect things to go their way, feel that they become upset too easily, rarely count on good things happening to them, and expect more bad things to happen to them.

Recommendations for further research and suggestions for helping HIV/AIDS infected learners enhance their health and optimism were also made.

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CHAPTER ONE

1.1 INTRODUCTION AND STATEMENT OF THE PROBLEM

Acquired immune deficiency syndrome (AIDS) is a disease caused by the human immunodeficiency virus (HIV) (Webber & Gostin, 2000:266). The world started to know about this disease in 1981 when the United States of America's doctors discovered the development of unusual conditions like a rare chest infection and skin disorders in gay men and special tests showed that their immune systems were damaged (Ashman, Dror & Levy, 2000:409; Johnson & Graham, 2004:23). Also, in 1983, French researchers identified a new virus, now known as HIV, as the cause of AIDS (Stratford, Ellerbrock, Keith Atkins & Hall, 2000:737; Mitchell & Smith, 2001:56). The type of HIV found in America and France, as stated above, became known as 'HIV-1'. In 1985, a second type of HIV called 'HIV-2' was identified in sex workers from Senegal, a West African country (Breyer, 2003: 343). HIV-2 seems to be less easily transmitted and slightly less harmful than HIV-1 (Weinstein & Sandman, 2002:512).

HIV/AIDS has since become a major worldwide epidemic. By killing or damaging cells of the body's immune system, HIV progressively destroys the body's ability to fight infections and certain cancers (Kiragu & Karungari, 2001: 12) and causes both psychological and physical illnesses. More than 700,000 cases of AIDS have been reported in the United States since 1981, and as many as 900,000 Americans may be infected with HIV by the year 2006 (Mitchell, 2000:21).

It is now generally known that HIV is spread most commonly by having sex with an infected partner and, also, through contact with infected blood, which frequently occurs among injection drug users who share needles or syringes contaminated with blood from someone infected with the virus (Mitchell *et al* 2001:56). Women with HIV also transmit the virus to their babies during

pregnancy, birth, or breast-feeding. However, if the mother undergoes antiretroviral therapy and takes the drug Azido-deoxythymidine (AZT) during pregnancy, she reduces the chances that her baby will be infected with HIV significantly (Carducci, 2000:61).

Many people do not develop any symptoms when they first become infected with HIV (Sherman & Bassett, 1999:109). Some people, however, have a flu-like illness within a month or two after exposure to the virus. More persistent or severe symptoms may not surface for a decade or more after HIV first enters the body in adults, or within two years in children born with HIV infection (USAID, 2002:115). This period of "asymptomatic" (without symptoms) infection is highly individual. During the asymptomatic period, however, the virus is actively multiplying, infecting and killing cells of the immune system and people are highly infectious (USAID, 2002:115; Ancahrd, 2000:15).

As the immune system deteriorates, Anderson (2003:5) posits that a variety of complications start to take over. For many people, their first sign of infection is large lymph nodes or "swollen glands" that may be enlarged for more than three months. Other symptoms often experienced months to years before the onset of AIDS include the following:

- lack of energy;
- weight loss;
- frequent fevers and sweats;
- persistent or frequent yeast infections (oral or vaginal);
- pelvic inflammatory disease in women that does not respond to treatment;
- persistent skin rashes or flaky skin; and
- short-term memory loss (Anderson, 2003:6).

Many learners infected with HIV are so physically, psychologically and spiritually debilitated by the symptoms of AIDS that they cannot perform well at school and could develop negative orientations towards life (Kadzamira, 2001:12; Garofalo, 1998:899). Other learners with AIDS may experience phases of intense life-threatening illness followed by phases in which they function abnormally (Githrie, 2000:267).

Over the past ten years, researchers have developed antiretroviral drugs to fight both HIV infection and its associated infections and cancers (Kiragu & Kirungari, 2001:3). Currently available drugs do not cure people of HIV infection or AIDS, however, and they all have side effects that can be severe. Because no vaccine for HIV is available, the only way to prevent infection by the virus is to avoid behaviours that put a person at risk of infection, such as sharing needles and having unprotected sex (National centre in HIV Epidemiology and Clinic Research, 2003:100).

From the foregoing paragraphs it can be deduced that it takes more than access to good medical care for persons living with HIV to stay healthy. According to the Human Rights Watch (2001:7), a positive outlook, determination, and discipline are also required to deal with the stresses of:

- avoiding high-risk behaviours;
- keeping up with the latest scientific advances;
- adhering to complicated medication regimens;
- reshuffling schedules for doctor visits; and
- grieving over the death of loved ones.

Since it became clear in the paragraphs mentioned above that HIV/AIDS wrecks havoc to both the physical and psychological well being domains of human beings and that such havoc causes a serious medical illness that causes shifts in a person's mood, energy and ability to function, it is necessary to investigate the general health and the optimistic and pessimistic life orientations of learners infected with HIV/AIDS. Such an investigation will

help the country and the Department of Education in particular to gauge the physical, psychological and social resilience of learners living with HIV/AIDS, as well as the way in which these learners view life. The following questions are answered by this research with regard to learners infected by HIV/AIDS:

- What is the general health of learners infected with HIV/AIDS?
- How do these learners see life?
- What can be done to help these learners to generally develop a positive outlook on life?

This research will, therefore, endeavour to answer these questions both theoretically, by means of a literature study, and practically, by means of an empirical research.

The next section provides the aims of this research.

1.2 AIMS OF THIS RESEARCH

In an effort to answer the questions raised in the above section of this chapter, this research has set itself the following aims, which are to:

- investigate the general health of learners infected with HIV/AIDS;
- assess how learners infected with HIV/AIDS see life; and
- make suggestions for helping learners infected with HIV/AIDS to generally develop a positive outlook on life.

The next section provides the methods which this research uses to investigate the existing knowledge of leading authors on general health, life orientations of learners, HIV/AIDS and the extent of the general health and life orientations of learners who form the sample of this research.

1.3 METHODS OF INVESTIGATION

This research consists of a literature review and empirical research methods.

1.3.1 Literature study

International and national educational journal articles, books, papers presented at professional conferences, dissertations and theses written by graduate learners and reports compiled by school researchers, university researchers and government agencies providing information on research in general health, optimism, pessimism, and psychological and physical wellness among learners will serve as both primary and secondary sources respectively.

1.3.2 Empirical Research

In addition to the literature study, empirical data were collected using the following measuring instruments:

- self-declaration of being HIV/AIDS positive;
- life Orientation Test - Revised (LOT-R) (Scheier, Carver - Bridges, 1994:12); and
- general Health Questionnaire (GHQ) (Goldberg - Hillier 1979:).

The first measuring instrument, that is, self-declaration of being HIV/AIDS positive, is a self-developed inventory which required participants to self-declare their HIV/AIDS status indicating yes or no to the following question: Are you HIV/AIDS positive? This was done in order to confirm that the researcher was indeed working with HIV/AIDS positive children and adolescents.

The other two questionnaires are standardized measuring instruments. Both these scales are satisfactory, reliable and valid for both Western and South African population groups ().

1.3.3 Target population

The target population includes school-going children and adolescents who have been diagnosed HIV/AIDS positive and are housed at children's homes in the townships of Harrismith, Bethlehem, Phuthaditjhaba, Senekal and Kestel. All these townships are situated in the Eastern Free State. These children's homes were established by church organizations in order to cater for children who are infected with HIV/AIDS or orphaned by it.

1.3.4 Accessible population

The reason for researcher to choose the above children's homes specifically is, although there is a large number of children's homes for the terminally ill children in the Free State Province, it would have been time-consuming to reach and would have unaffordable financial implications for the researcher. The target population was, therefore, limited to the school-going learners in the townships of Harrismith, Bethlehem, Phuthaditjhaba, Senekal and Kestel for economical reasons.

1.3.5 Sample

A random sample of N=324 learners infected with HIV/AIDS from thirty children's homes for terminally ill children and adolescents was drawn.

1.3.6 Analysis of data

In order to investigate the extent of the general health and life-orientations in learners who formed the sample of this research, the data obtained from the target population through empirical research were analysed with the aid of the SPSS - computer programme.

1.4 ETHICAL MEASURES

The researcher had to consider the ethical responsibilities associated with qualitative research (Berg, 2003:18), therefore involvement of participants was voluntary and they were clearly made aware of their right to withdraw from this study at any time, without explanation or prejudice.

The informed consent was obtained from the participants. The information shared in the interview sessions will remain confidential as it is regarded as the private property of the participants. The participants will remain anonymous and a guarantee of anonymity and confidentiality of records is laid out in the consent form. A pivotal ethical issue in research is informed consent. What makes this a principal issue is the fact that many other topics, such as deception and invasion of privacy, are encompassed. It is therefore crucial for the researcher to obtain informed consent from the subjects, who are taking part in the research.

1.5 STRUCTURE OF THIS RESEARCH

CHAPTER 1: Introduction, statement of the problem, aims of the study, methods of research and chapter divisions

CHAPTER 2: Literature review on HIV/AIDS, general health, optimism and pessimism life orientations.

CHAPTER 3: Empirical Design.

CHAPTER 4: Data Analysis and Results.

CHAPTER 5: Summary, Recommendations and Conclusion.

1.5 CONCLUSION

This chapter presented the introduction, statement of the problem, aims of the study, methods of research and the way in which this research is structured.

The next chapter discusses, by means of a literature review, the concepts of HIV/AIDS, general health and optimistic as well as pessimistic life orientations of individuals.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter provides the literature review on health, life orientations, HIV/AIDS and how the HIV/AIDS epidemic affects the psycho-physical health, that is, the physical and psychological wellbeing and life-orientations, that is, optimism and pessimism of learners.

The definitions of concepts which form the core meaning of this research such as HIV/AIDS, health and life orientations are first provided and secondly the effects of HIV/AIDS on general health and life orientations of learners are investigated.

2.2 DEFINITION OF CONCEPTS

It is necessary to define concepts such as HIV/AIDS and its history and related concepts such as the immune system and syndrome, in order to gain an insight of this disease.

2.2.1 HIV/AIDS and its history

HIV is an acronym for human immunodeficiency virus while AIDS is an acronym for acquired immune deficiency syndrome (Garber, Silvestri & Feinberg, 2004: 397; Idemyor, 2003:421). HIV is a very small germ or organism which infects people through contact with infected body fluids. It cannot be seen through the naked eye, but only under a microscope (Fleischman, 2003:15). It only survives and multiplies in body fluids such as sperms; vaginal fluids; breast milk; blood; and saliva (French, 2003:7).

HIV attacks the immune system and reduces the resistance of the body to all kinds of illness, including influenza; diarrhoea; pneumonia; tuberculosis (TB); and certain cancers (Moreno & Watts, 2000:254; Siegel, Rodin, Saligman & Dwyer, 1991:225). It eventually makes the body so weak that it cannot fight

sicknesses and causes death between five and ten years after a person became infected, but some HIV-infected people live longer if they receive the right psychotherapy and medication (Assavanonda, Anjira & Hutasingh, 1999:50). The latter statement means that HIV attacks the immune system that protects the body from illnesses; and damages the ability of the body to protect itself from tuberculosis, chest infections, sores, diarrhoea and other infections, so that the body loses its ability to fight infections after the immune system has been weakened by this death-causing virus (Heard, 2001:4).

After many years, the damages are serious and the person contracts serious illnesses which develop to a syndrome known as AIDS, which is the final stage of infection with HIV, and this is what causes the person to die (Hoffman, 1996:231).

The foregoing paragraph implies that HIV infects and destroys the white blood cells (called CD4+ T-lymphocytes or CD4 T-cells) of the body's immune system (Bunting, 1996:69). Thus, HIV reduces the ability of the immune system to respond to infection, increasing susceptibility to opportunistic infections and some types of cancer which impact greatly on the psychological and physical health of learners infected with HIV/AIDS. Learners whose physical and mental capacities are disconcerted by HIV/AIDS can develop a negative and pessimistic outlook in life (Weinstein & Lyon, 1999:289) because of the fact that they know that the disease will reduce their life span.

2.2.2 Immune system

This is the body's defence against infection (Kumar, Nikki, Larkin & Mitchell, 2001:35). It is a flexible and highly specific defense mechanism that kills micro-organisms and the cells they infect; and destroys malignant cells and removes the debris. It distinguishes such threats from normal tissue by recognizing antigens (substances that induce the production of anti-bodies called immuno-globulin when introduced into the body) (Garber & Feinberg, 2003:136).

2.2.3 Syndrome

The concept “syndrome” means that several symptoms occur at the same time (Aderaye, Bruchfeld, Olsson & Lindquist, 2003:435). It is used to emphasize that people with AIDS have many signs and symptoms, because they suffer the effects of the pandemic’s associated opportunistic diseases, such as weight loss; dry cough; recurring fever or profuse night sweats; profound and unexplained fatigue; swollen lymph glands in the armpits, groin, or neck; diarrhoea that lasts for more than a week; white spots or unusual blemishes on the tongue, in the mouth or in the throat; red, brown, pink or purplish blotches on or under the skin or inside the mouth, nose or eyelids; memory loss, depression and other neurological disorders; tuberculosis; pneumonia; gastro-enteritis; meningitis; and cancer.

All of the above-mentioned syndromes affect both the physical and psychological well-being of people infected with HIV/AIDS (Kelly, 2002:12; Epston, 1998:22).

2.2.4 Theory

The concept “theory” is derived from the word “theoria” which in late Latin and Greek means to view, to examine, inspect and speculate. Most definitions of the word “theory” have in common the elements of reality and belief (Shay, 1999:382). “Belief” refers to the way in which theorists see and strive to explain and “reality” is the data or behaviour that theorists see and strive to explain. A theory may metaphorically be seen as a map (for the practice of educational psychology, in the case of this study) on which a few points are known and the road between points is inferred (Shay & Wright, 2000:73). A sound theory, according to Shay (1999:382), is:

- **consistent and clear**, in that there is agreement among its general principles (philosophy), and agreement of its with observation. It is clear in that it is communicable. It is like an easily read map and not too complex in contents;

- **comprehensive**, in that it has a wide scope, accounts for much behaviour and approaches all-purpose utility;
- **explicit** about its rules, terms and theories and it is precise. Concepts can be translated into denotative statements so that they can be checked against clear referents in the real world;
- **parsimonious** and does not overexplain phenomena. A theory should be precise about the limitations of its predictions; and
- **generates useful research**. Theories need to be continually tested.

The researcher needs to apply general principles for judging the appropriateness of a theory. The attributes of a good theory can also be utilised as criteria for the evaluation of social development theories.

This study adopted this definition of a theory in developing its theoretical framework (see 2.3).

2.2.5 Pathogenesis

Pathogenesis is a construct that deals with the origins of diseases. Its focus is mainly on risk factors, such as metabolic dysfunctions, infectious diseases, stress, negative affect (anxiety, depression, hostility), behavioural problems, substance abuse, lack of social support, dysfunctional families, high crime neighbourhoods and poverty (Bezabih, 2003:25; Corbett, 2002:177). The pathogenic orientation is very explicit in the psychopathology and clinical psychology as sub-disciplines in psychology.

2.2.6 Health and wellness

The constructs health and wellness, to a certain extent, have the same denotations and connotations, and can be used as synonyms (Gebbie, Rosenstock & Hernandez, 2003:31). However, for historical reasons they also seem to differ.

Traditionally, scientists defined health simply as "an absence of disease or illness." Typical indices of health in the Western world still focus on disease,

illness, vulnerability, and risks (Hay, 2002:87; Henry, 2002:56). This is an indication of the pervasiveness of the pathogenic paradigm, with a restricted focus on physical aspects. However, the following definition of health was established and implied in 1948, when the World Health Organization (WHO) was founded, and also by the Ottawa Charter (1986) on health promotion as well as by the Jakarta Declaration of 1997 on health priorities, and also by the South African national objectives for health promotion (White Paper, 1997), which is that:

"Health is a complete state of physical, mental and social well-being and not merely the absence of disease or infirmity."

Considering this definition, it can be realized that individuals can at once be relatively healthy in some aspects of life (such as , normal blood pressure of 120/80 mmHg), but unhealthy in others (for example, suffering from depression). Thus, being healthy is not an "all-or-nothing" principle (Masten & Coatsworth, 1998:211).

While physical health can be assessed by taking health status measurements of the body such as blood pressure, temperature, and cholesterol levels in order to precisely tell if the physical components of the body are healthy, psychological and social components of health are much more challenging to assess. Thoughts and perceptions of internal states are subjective and difficult to quantify. This is the reason that has led Ryff and Singer (2000:41) to define psychological health as the successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and cope with adversity. On the other end of the continuum is psychological illness, a term that refers to all psychological disorders. Psychological disorders being the health conditions that are characterized by alterations in thinking, mood, or behaviour (or some combination thereof) associated with distress and/or impaired functioning. This notion of a continuum sees psychological health on one end as 'successful psychological functioning' compared to psychological illness on the other end as 'impaired psychological functioning.' (Kenyon, Skordis & Boule, 2003:60).

In contrast, wellness is currently broadly construed as the upper-end of a continuum of holistic well-being in important life domains, including cognitive, emotional, spiritual, physical, social, occupational, and ecological components (Bazzani, Noronha & Sánchez, 2004:13). Wellness on the individual level is described in terms of positive traits such as the capacity for agency; a sense of coherence; emotional intelligence and optimism; resilience and courage; interpersonal skills and aesthetic sensibility and creativity; perseverance and initiative; forgiveness and spirituality; faith and future mindedness; hope and honesty; self-efficacy and emotional self-regulation; the capacity for love and vocation, and others (Boyden & Mann, 2000:41).

On a group level, wellness is about responsibility and altruism; civility and moderation; tolerance and work ethic. It is also about the promotion of communion reflecting virtues such as practical wisdom; creative improvisation; forgiveness; and justice (Bates, 1995:19; Colson, 1995:4).

A key to understanding psychological health and in contrast, psychological ailments is by defining these terms in cultural contexts. For example, the Eastern world views health in terms of bodily systems working in harmony. Imbalance or "disharmony" is regarded as the cause of illness and results from physical, psychological, nutritional, environmental or spiritual influences disturbing that balance (Tolfree, 1996:27).

2.2.7 Salutogenesis

Salutogenesis is a Latin term meaning the origin of health or wellness (Antonovsky, 1979:78). He contends that despite being besieged by multiple stressors in everyday living and undergoing severe traumatic experiences, there are individuals who are coping quite well and staying both mentally and physically healthy. With the development of this construct, he was trying to answer the question of why people stay healthy, instead of why people become ill, as in the case of the pathogenic orientation.

2.2.8 Fortigenesis

On the basis of Antonovsky's philosophy, Strümpfer (1995:81) argued that the salutogenesis approach to health or wellness is not embracing and holistic enough to include sources of strength and proposed an alternative term 'fortigenesis' which means the origin of strengths on individual, group and community levels in various contexts such as a sense of coherence; life satisfaction and optimistic expectations; positive self-esteem and humour; interpersonal skills and constructive coping skills; good quality parenting and positive role models; connection to value and faith systems; mentors in the world of work and education; and effective social policies.

The focus from a fortigenic perspective is mainly on protective factors of psychological and physical health, while the term resilience can be seen as more embracing and holistic than salutogenesis.

2.2.9 Resilience

Waltner-Toews, Kay, Neudoerffer and Gittau (2003:26) have conceived resilience as a buffering process, one that may not eliminate risks or adverse conditions, but does help individuals deal with them effectively. However, as Waller (200:4) suggests, resilience may also reflect the concept of 'reserve capacity.' That is, a resilient mindset helps us prepare for future adversity and enables the potential for change and continued personal growth throughout our lives. (Werner & Smith, 2001:34) have also highlighted certain antecedents to and consequences of resilience. One antecedent to the development of resilience is adversity itself. Another antecedent can also be the presence of at least one caring, emotionally available person at some point in an individual's life. The example of a caring individual, and his/her mirroring of the individual's inherent worth, is crucial to the development of resilience. On the other hand, consequences of resilience appear to have a "toughening" effect on the individual and a sense of having overcome one situation, which may foster the possible anticipation of active mastery over other situations. (Arntson & Knudsen, 2004:49) contend that although in some scientific circles, the word resilient has been applied only to individuals who

have overcome stress and hardship. It is a concept that should be expanded to become a primary focus of each person's life, whether or not that person has experienced great adversity. No one can predict which of us will at some point, experience unimagined adversity. Resilient individuals are those who have a set of assumptions or attitudes about themselves that influence their behaviours and the skills they develop. In turn, these behaviours and skills influence this set of assumptions in such a way that a dynamic process is constantly operating. According to (Boyden, 2003:38) this set of assumptions is called a 'mindset.' Possessing a resilient mindset does not imply that a person is free from stress, pressure and conflict, but rather that he/she can successfully cope with problems as they arise, which links with hardiness.

2.2.10 Hardiness

Sinclair and Tertric (2000:13) used the concept of "hardiness" to describe those people who underwent stressful life events, but did not succumb to illness. Hardiness, as a construct, evolved out of the stress and coping literature to explain individual differences in stress resiliency (Coatsworth & Duncan, 2003:82). The concept of hardiness is considered a personality style consisting of three interrelated factors, namely an experience of a sense of commitment, control and challenge in the face of difficult situations (Coatsworth *et al*, 2003:82). The commitment disposition is expressed as a tendency to involve oneself in (rather than experience alienation from) whatever an individual is doing or encounters. Committed individuals' relationships to themselves and to the environment can be described as involving actions and approach rather than being passive and avoidant. The control disposition is expressed as a tendency to feel and act as if they can influence the events shaping their lives. The challenge disposition is expressed as the belief that change rather than stability is normal in life, and that the anticipation of changes are interesting incentives to growth rather than threats to security. Individuals high on the challenge disposition therefore consider change not only as a threat, but also as an opportunity for development.

According to Baingana and Bannon (2004:95), hardy individuals have a general sense of purpose, meaning and commitment. In general, there is extensive evidence suggesting that hardiness is positively related to physical and mental health, as well as fortitude and that it mitigates negative health outcomes of stress (Baingana *et al* 2004:96).

2.2.11 Fortitude

Pretorius (1998:23) formally defines fortitude as the strength to manage stress and stay well and this strength derives from a positive appraisal of the self, the family and support from others. He also contends that fortitude is based within a theory of appraisal and is premised by the notion that people's evaluations of themselves, their abilities, and their support resources. Their family and environment influence their emotions and behaviour during transactions with the environment, and people who perceive these negatively, will have serious doubts about their ability to deal with a stressful encounter and consequently succumb to the effects of such a stressor. On the other hand, a positive appraisal of these issues by the individual should result in a greater belief in his/her ability to manage a stressful encounter. Fortitude can thus be regarded as a construct that could explain the way in which people manage to maintain psychological well-being as well as psychofortology (or cope) in the face of adversity or stress.

2.2.12 Psychofortology

Psychofortology means the science of psychological strengths. This is the concept that was coined by Wissing and Van Eeden (1997:22) who argued that the focus on well-being should not only be on origins of psychological strengths, as implied by the terms salutogenesis and fortigenesis, but also on the nature, dynamics and enhancement of psychological well-being. Wissing *et al* (1997:22) then suggest that the concept psychofortology be used for the domain of psychology in which psychological well-being is studied. Within this new domain, a better understanding of psychological strengths will point to new directions for capacity building, the prevention and enhancement of the quality of life of individuals, in their private as well as work.

2.2.13 Optimism and pessimism

The following two related concepts are defined here, which are that:

- dispositional optimism refers to generalized outcome expectancies that good things, rather than bad things, will happen; while
- situational optimism refers to the expectations an individual generates for a particular situation concerning whether good, rather than bad, things will happen (Pretzer & Walsh, 2001:321).

Pessimism, on the other hand, refers to the tendency to expect negative outcomes in the future (Pretzer *et al* 2001:322; Park, Moore, Turner & Adler, 1997:585).

Interest in dispositional optimism is fueled initially by a general model of behavioural self-regulation derived by Riskind, Sarampote and Mercier (1996:108) which assumes that goal-directed behaviour is guided by a hierarchy of closed-loop negative feedback systems. Optimism is judged to be a general and stable dispositional resource that influences whether an individual will stay focused on reducing discrepancies between present behaviour and a goal or standard selected for pursuit (Bachen, Manuck, Muldoon, Cohen & Rabin, 1991:5). Both generalized outcome expectancies (dispositional optimism) and specific situational expectancies (situational optimism, as detailed below) are believed to maintain focus and effort. Situational optimism is positive outcome expectancy for a specific situation. Because specific expectancies are more proximal to specific events rather than dispositional beliefs, they may be important predictors of psychological and physical responses to specific stressors.

Another approach to assessing dispositional optimism derives from Seligman's theoretical position on learned helplessness (Fontana & Rosenheck, 1998:194). It maintains that, to the extent that generalized expectancies are negative, internal, and global - bad health and mental health consequences will follow, a response style termed "pessimistic explanatory style."

The origins of optimism and pessimism are not altogether known. With respect to dispositional optimism, there appears to be some genetic role, in as much as the heritability factor, has been estimated at 0, 33 (Strassle, McKee & Plant, 1999: 191).

In the light of the above definition, optimism means reacting to setbacks from a presumption of personal power. Optimism is premised on the facts that:

- bad events are temporary setbacks;
- isolated to particular circumstances; and
- can be overcome by the person's effort and abilities.

Pessimism, on the other hand, means reacting to setbacks from a presumption of personal helplessness and is premised on the facts that:

- bad events will last a long time;
- will undermine everything a person does; and
- are the outcome of personal error.

2.3 THE THEORETICAL FRAMEWORK OF THIS RESEARCH

Two broadly different theoretical frameworks in the approach to human health/wellness can be distinguished, namely:

- the traditional, positivist and modern pathogenic framework; and
- the post-modern and constructivist salutogenic or fortigenic framework (Wissing and Van Eeden, 1997:145).

The traditional pathogenic paradigm is founded on the medical perspective, also known as the biological perspective, which assumes that it is important to focus on illness and vulnerabilities. The medical perspective is founded on the belief that all, or at least most, psychopathologies can be traced to medical factors, usually affecting the brain in some way. This model assumes that all psychological disorders are diseases (Vince-Whitman, Aldinger, Levinger &

Birdthistle, 2001:3; Antoni & Goodkin, 1988:329). Those who embrace the medical perspective believe that the onset, distribution, course, treatment, and all related features of disorders should be viewed as parallel to what occurs in physical diseases. Possible causes of mental illness from the biological perspective are:

- genetics;
- neuro-anatomy;
- chemical imbalance; and
- infection (Mlamleli, Mabelane, Napo, Sibiya & Free, 2000:266).

The literature review highlights that mental illness can be approached in the same basic way, such as:

- First the patient is found to have a syndrome, which is a collection of symptoms that seem to occur at the same time.
- Once the syndrome has been identified, the etiological phase begins, where a search for a cause begins (Fleischman, 2003:14). The four possible causes listed above are then considered.
- Once etiology is established, then a way of preventing the illness, especially if it appears to be untreatable, or methods of treatment for those who already have the illness are identified (Mlamleli *et al* 2000:266).

According to the World Health Organisation (1999:93), from a pathogenic perspective the important questions on the theoretical and empirical levels in psychology as discipline, are amongst others:

- What are the (bio) psycho (social) origins of psychological illness?
- What are the symptoms and syndromes?
- How can we help people suffering from these illnesses?
- How can these illnesses be prevented?

The pathogenic paradigm has resulted in a great deal of insight into human experience and behaviour. However, as the focus is mainly on an understanding of physical and psychological illness and vulnerabilities, it is limited in scope, and sheds no light on human strengths and capabilities. The post-modern and constructivist salutogenic/fortigenic framework assumes that it is important when dealing with human beings health to, also, focus on their strengths, fortitudes, hardinesses, resiliences, capacities, well-being and wellness (Mitchell & Claudia, 2000:21; Carver, Scheier & Weintraub, 1989:267). From this perspective the important questions on a theoretical and practical level will be:

- How is it possible that people survive and some even grow despite all the stresses and traumas of life?
- What are the origins and manifestations of bio-psycho-social well-being and strengths, and how can these be enhanced?

As already stated above, the salutogenic framework of health is the brain-child of Antonovsky (1979, 1987, & 1993). Antonovsky (1987:36) proposed the construct salutogenesis (i.e. the origins of health), and suggested the study of health instead of disease (referring primarily to physical health and disease). He sought to “unravel the mystery of health” and learn how people manage stress and stay well. Strümpfer (1995:67) argued that Antonovsky actually struggled with a much more encompassing problem than that of factors that influence physical health, namely that of the sources of strength in general. Strümpfer (1995:67) then proposed the more embracing construct fortigenesis, which means the origins of strength, to indicate this broader focus. This theory emphasizes strengths, fortitudes, hardinesses, resiliences and resources or capacities of people.

As can be understood in the fore-going paragraphs, the pathogenic theoretical framework is based on the medical model of psychopathology and emphasizes diseases. Such a framework is modern and positivist (World Health Organisation, 2002:72). The post-modern theoretical framework of health has moved from the medical model of psychology which took into

consideration the limitations, shortcomings and diseases of people in its approach to health to a theoretical framework of psychological wellness which is post-modern and social constructivist in nature because of its regard for psychological strengths, fortitude, resilience, hardiness, and socio-cultural of people in its approach to health. Wissing and Van Eeden (1997:148) and Wissing (1998:12) have suggested the use of the term psychofortology for the psychological wellness theoretical framework following Strümpfer's lead of fortigenesis. This is also in line with the use of the term "fortitude" by Pretorius (1997:24) when he refers to strengths. From a pathogenic perspective the focus, in, for example, health-related preventative research and practice, is mainly on risk factors. From a fortigenic perspective, the focus is mainly on protective factors.

Since this study looks into the general health as well as optimistic and pessimistic life-orientations of learners infected with HIV/AIDS, both the psychopathological and psychofortological approaches to investigating diseases is applied. HIV/AIDS and pessimism are regarded as risk factors for the general health of learners infected with HIV/AIDS while optimism is regarded as a protective factor.

2.4 RELATIONSHIP BETWEEN OPTIMISM, PESSIMISM AND HEALTH

Some relation of dispositional optimism to biological conclusions have been uncovered through the Life Orientation Test (LOT). Schulz (1994:21) found that the pessimism items of the LOT were a significant predictor of early mortality among young patients with recurrent cancer, after controlling for hospital site and symptoms. In a study of cancer patients, Scheier *et al.* (1989:1029) found that pessimists (total score) were significantly more likely to have developed new Q-waves on their electro-cardiograms as a result of the surgery and were significantly more likely to have a clinically significant release of the enzyme, aspartate amino-transferase. Both are markers for MI, suggesting that the pessimists were significantly more likely than the optimists to have had an infarct during surgery - these relations persisted after controlling for number of skin grafts, severity of CHD, and a composite index of coronary risk factors. Optimism significantly predicted rate of recovery,

which indicated that optimists were faster to achieving behavioural milestones, such as sitting up in bed and walking, than the pessimists, and were rated by staff members as showing a better physical recovery. At a six-month follow-up, optimists continued to have a recovery advantage, reporting that they were more likely to have:

- resumed vigorous physical exercise;
- returned to work; and
- resumed normal activities (Fitzgerald, Tennen, Affleck, & Pransky, 1993: 16).

In a five-year follow-up, optimists were more likely to be working and, among those experiencing angina, reported less severe chest pain. According to Scheier *et al.* (1994:1063), optimists are less likely to be re-hospitalized for complications arising from the surgery.

Two studies of college learners conducted during the last weeks of the academic semester, found that optimists reported developing fewer physical symptoms than pessimists over time, taking baseline symptoms into account. In a study of optimism in middle-aged and older adults, Robinson-Whelen, Kim, MacCallum and Kiecolt-Glaser (1997:73) found that the pessimism scale of the LOT, but not the optimistically-worded items, predicted subsequent psychological and physical health for both stressed and non-stressed adults.

Dispositional optimism is correlated fairly highly with mastery (0.55), trait anxiety (-0.59), neuroticism (-0.50), and self-esteem (0.54) (Scheier, Carver, & Bridges, 1994:1065). The correlations appear to be higher for women than for men. The LOT is strongly correlated with reported use of particular coping strategies. An examination of its relation to the COPE, for example, found the LOT to be strongly positively correlated with active coping strategies and with emotional regulation strategies, and strongly negatively correlated with avoidant coping strategies (Scheier, Weintraub, & Carver, 1986:1031).

A major problem for interpreting the relation of dispositional optimism to health outcomes is that the term "pessimism" is sometimes used to refer to scores on the negatively-worded items and sometimes used to refer to scoring low on the overall scale. Re-analyses of existing datasets could help to clarify this issue, in as much as negative expectations may be more potent than positive ones in association with socio-economic status and in predicting disease outcomes. The chief disadvantages of situational optimism measures are that:

- they change from study to study, depending on the stressor, and to the extent that a stressor is differentially interpreted or experienced as stressful by virtue of social class; and
- the meaning of situationally optimistic expectancies may not be clear.

Although the literature is limited, investigations to date suggest considerable utility in exploring the relation of optimism/pessimism as a mediator or moderator of health. Because of its brevity, simplicity of administration and scoring, and widespread use in studies of psychosocial adjustment and illness, the LOT is currently judged to be the best measure of optimism/pessimism for use in studies of health.

A worthwhile hypothesis to pursue is that the negatively-worded items of the LOT assessing pessimism/negative expectations may be more potent predictors of adverse health outcomes than the positively-worded items of the LOT.

Not all studies show a protective relationship of optimism or a negative effect of pessimism on health. Chesterman, Cohen, and Adler (1990:14) found that optimism predicted birth complications in older women, and Cohen, Kearney, Zegans, Kemeny, Neuhaus, and Stites (1997:82) found evidence suggesting that optimists showed decreased immuno-competence in response to stress; however, in another study (Bachen, Manuck, Muldoon, Cohen, & Rabin, 1991: 9), pessimism was associated with decreased immuno-competence in response to stress.

In addition to its association with disease directly, dispositional optimism has been related to other routes to biological conclusions, including the use of more active and problem-focused coping strategies (Carver, Scheier, & Weintraub, 1989:56; Taylor, 1992:63), greater psychological well-being, and better health habits (Park, Moore, Turner, & Adler, 1997; Scheier & Carver, 1992:584).

Evidence relating situational optimism to health-related outcome measures also exists. For example, in the context of HIV infection, negative HIV-specific expectancies predicted immune decline (Kemeny, Reed, Taylor, Visscher, & Fahey, 1996:81), symptom onset and survival time for AIDS (Reed, Kemeny, Taylor, Wang, & Visscher, 1994:300), while dispositional optimism did not (although positive versus negative items were not examined separately). These findings are consistent with the view that pessimistic expectations may be more implicated in health than optimistic expectations. In the study on coping with law school, situational optimists had higher NKCC after controlling for the effects of mood. Leedham, Meyerowitz, Muirhead, and Frist (1995:74) found that situationally optimistic expectations were associated with faster recovery following heart transplant.

Studies that have used the pessimistic explanatory style as a measure of pessimism have also uncovered relations to health. Pessimistic explanatory style was associated with lower levels of two measures of cell-mediated immunity in a sample of elderly men and women (Kamen-Siegel, Rodin, Seligman, & Dwyer, 1991:232). A study of Harvard University graduates assessing pessimistic explanatory style at age twenty-five found that these men had significantly poorer health or were more likely to have died when they were assessed twenty to thirty-five years later (Peterson, Seligman, & Vaillant, 1988:26).

Conceptually related findings are also reported by Antoni and Goodkin (1988: 327), who found that, among women with atypical neoplastic cervical growth, those who were pessimistic (as assessed on the Millon Inventory) were more likely to have severe disease. Hopelessness has also been linked to all-cause mortality and cause-specific mortality (Everson, 1996:113).

2.5 THE EFFECTS OF HIV/AIDS ON GENERAL HEALTH

Good psychological, social and physical health, are crucial aspects of well-being (Scheier & Carver, 1991:4; Taylor & Aspinwall, 1990:3). Without them, people find it difficult to feel good about themselves; develop their potential; and develop positive life orientations which lead them to enjoy everyday life. Physical and psychological health problems are major causes of ill health, disability, and negative orientations towards life in general. Depression and anxiety are the most common psychological health problems (Riskind *et al* 1996:105). Depression and anxiety are serious medical conditions that affect thoughts, feelings, and the ability to function in everyday life (Gonzalez, 2004:413). Depression can occur at any age (Ancahrd, 2000:1). NIMH-sponsored studies estimate that six percent of nine to seventeen-year-olds in the United States of America and almost ten percent of American adults, or about nineteen million people aged eighteen and older, experience some form of depression and anxiety every year (Scheier & Carver, 1992:213).

Depression results from abnormal functioning of the brain (Bracken & Petty, 1998:3; De Jong, 2002:6). The causes of depression are currently a matter of intense research. An interaction between genetic predisposition and life history appear to determine a person's level of risk. Episodes of depression may then be triggered by stress, difficult life events, side effects of medications, or the effects of HIV on the brain. Whatever its origins, depression can limit the energy needed to keep focused on staying healthy, and research shows that it may accelerate the progression of HIV to AIDS (Ancahrd, 2000:1).

The social consequences of physical and psychological illness because of HIV/AIDS increase the stigma and social exclusion suffered by people with physical and psychological health problems. This in turn, makes the original condition worse leading to a negative orientation towards life, that is, pessimism (Nganampa Health Council, 1998:8).

It is generally accepted that the HIV/AIDS pandemic seriously affects the general health, that is, the psychological and the physical wellness and well-

being of learners. This is due to the effects of the pandemic's associated opportunistic diseases such as, *inter alia* weight loss and dry cough; recurring fever or profuse night sweats; profound and unexplained fatigue; swollen lymph glands in the armpits, groin, or neck; diarrhoea that lasts for more than a week; white spots or unusual blemishes on the tongue, in the mouth, or in the throat; red, brown, pink, or purplish blotches on or under the skin or inside the mouth, nose, or eyelids; memory loss, depression, and other neurological disorders; tuberculosis, pneumonia, gastro-enteritis, meningitis; and cancer (O'Connor, 2001:19). All these opportunistic diseases which are symptomatic of HIV/AIDS infection have an impact on the physical and psychological wellness of learners and could lead to their pessimistic orientations towards life.

Amogne and Abubaker (2002:397) posit that when a person is infected with the human immuno-deficiency virus, the body's immune system weakens and eventually breaks down. The weakening of the human body's immune system leaves the individual prey to the hazards of a multitude of opportunistic diseases such as those mentioned above. In the absence of the anti-retroviral therapy that can slow the progression of HIV infection, the infected individual eventually succumbs to the serious cluster of opportunistic illnesses (Bjørnstad, Finkenstadt & Grenfell, 2002:169; Community Reach Program 2003:81). This means that the course of HIV and AIDS in a human body system starts when HIV enters the system through unprotected sex or contact with infected blood; followed by weakening of the body as the virus multiplies, the breaking down of the immune system; and ends by opportunistic illnesses which make the immune system less able to fight off infections and illnesses with the person eventually dying.

The course of HIV/AIDS in the body takes the following form:

2.5.1 First signs of illness

For infection to take place, the virus causing AIDS enters the blood and quickly penetrates certain white cells (called 'CD4' cells or "T4 cells") in the body (Fleischman, 2003:23). The first thing that happens after infection is that

many people develop a flu-like illness. This may be severe enough to look like glandular fever with swollen glands in the neck and armpits, tiredness, fever and night sweats (Glynn, Auvert & Kahindo, 2001:51). Some of those white cells are dying, the virus is being released, and for the first time, the body is working hard to make correct anti-bodies (Gregson, 2002:1896; Glynn, Auvert & Kahindo, 2001:51). At this stage 'sero-conversion' (a process of converting the blood from negative to positive) takes place and the blood test will usually become positive as it picks up the tell-tale anti-bodies. Most people do not realise what is happening at this stage, although when they later develop AIDS they look back and remember it clearly. Most people have produced antibodies in about twelve weeks (Kumar, 2001:38).

2.5.2 Latent infection

After this acute period, everything settles down. The person now has a positive test, but feels completely well. The virus often seems to disappear completely from the blood again (Mitchell & Smith, 2001:56). However, during this latent phase, HIV can be found in large quantities in lymph nodes, spleen, adenoid glands and tonsils (Shariff & Verlaque-Napper, 2002:21). San Francisco studies show that in developed countries, without use of the latest therapies, 50% with HIV develop AIDS in ten years, 70% in fourteen years. Of those with AIDS, 94% have died in the five years period (Sherman & Bassett, 1999:109). The rate of progression can be much faster in those with weakened immunity from other causes, such as drug users or those in developing countries who have no access to anti-retroviral therapies. It can be far slower in those people who are on various treatments (Scott, 1997:16). The next stage begins when the immune system starts to break down. This is often preceded by subtle mutations in the virus, during which it becomes more aggressive in damaging white cells (Skov, Bowden, McCaul, Thompson & Scrimgeour, 1996:41). It is during this stage that early disease and persistent generalised lymphadenopathy (PGL) takes place, that is, several glands in the neck and armpits may swell and remain swollen for more than three months without any explanation (Ancahrd, 2000:15; Taylor & Aspiwall, 1990:45).

Gostin, Lazzarini and Jones (1997:61) say that, as the disease progresses, the person develops other conditions related to AIDS. A simple boil or warts may spread all over the body. The mouth may become infected by thrush (thick white coating), or may develop some other problem (Skov, Bowden, McCaul, Thompson & Scrimgeour, 1996:41). Dentists are often the first to be in a position to make this diagnosis. People may develop severe shingles (painful blisters in a band of red skin), or herpes (Scott, 1997:17). They may feel overwhelmingly tired all the time, have high temperatures, drenching night sweats, lose more than 10% of their body weight, and have diarrhoea lasting more than a month. No other cause is found at this stage and a blood test will usually be positive. This stage is called AIDS related complex (ARC) (Taylor & Aspinwall, 1990:48).

2.5.3 Late HIV illness (AIDS)

The final stage of HIV is AIDS. Most of the immune system is intact and the body can deal with most infections, but one or two more unusual infections become almost impossible for the body to get rid of, without medical help and usually intensive anti-biotics (Anderson, 2003:5).

These infections can be a nightmare for doctors and HIV/AIDS infected people. The desperate struggle for doctors is always to find the new germ, identify it, and prescribe the right drug in huge doses to destroy it (National centre in HIV Epidemiology and Clinical Research, 2003:21). (Gotesman, Grossman, Lorber, Levi, Shitrit, Mileguir and Chowers (1996a), say that the germ may be hiding deep in a lung requiring a tube (bronchoscope) to be put down the windpipe into the lung to get a sample for which a person should be sedated. It may be hiding in the fluid covering the brain and spinal cord, requiring a needle to be put into the spine (lumbar puncture). It may be hiding in the brain itself. It may hide in the liver or gall-bladder or bowel. In reality, it can hide anywhere.

2.5.4 Chest infections are common

The most common infection is a chest infection which causes a high temperature, short breath and flushes because of a rare germ only found in

the lungs of HIV/AIDS infected people called “pneumocystis carinii” which does not respond to anti-biotics (Garber & Feinberg, 2003:131). Eighty-five out of a hundred people infected with HIV/AIDS with these chest infections are infected with “pneumocystis carinii,” but many are infected with several things at once (Johnston, 2002: 419). Worldwide, the commonest HIV-related chest infection is tuberculosis (TB) (Johnston, 2002:132; Emini & Koff, 2004:113). As HIV spreads, the occurrence of TB is on the increase, with possibly a million extra cases a year at present as a result of HIV (Idemyor, 2003: 421). Latent TB infection is common in the general population. HIV damage to CD4 white cells allows re-activation, rapid deterioration and resultant death (Idemyor, 2003:421; Anderson & Simmons, 1999: 44).

2.5.5 Damage to nervous system

According to Honwan (2001:47), half of the people with AIDS develop signs of brain impairment or nerve damage during their illness. In one person out of ten, it is the first symptom. HIV itself seems to attack, damage and destroy the brain cells of the majority of people with AIDS who survive long enough. The virus is probably carried into the brain by macrophages, that is, special white cells of the body, which then produce more viruses in that vicinity. Brain cells have a texture on their surfaces similar to CD4 white cells which enables the virus to latch on and enter the brain (Wood, Hogg, Yip, Harrigan, O'shaughnessy & Montaner, 2003:711).

The damage happens gradually and often is not noticed until a significant part of the brain has been destroyed (USAID, 2002:12). A brain scan will always show a shrunken appearance with enlarged cavities. The signs can be threefold, namely:

- difficulties in thinking;
- difficulties in co-ordinating balance and moving; and
- changes in behaviour.

Sometimes the problems are caused by other infections spreading throughout the body, or by tumours, all brought on by AIDS (UNAIDS/UNICEF, 2001:98).

Brain damage affects children as well. In one study, sixteen out of twenty-one children with AIDS developed encephalopathy, that is, progressive brain destruction (Vince-Whitman, Aldinger, Levinger & Birdthistle, 2001:11). Any part of the nervous system can be damaged in adults or children, not just the brain, and AIDS can mimic just about any other disease of nerves (UNAIDS, 1999).

2.5.6 Skin rashes and growths

The majority of people with AIDS develop skin problems which are usually an exaggeration of things common to most people, such as acne and rashes of various kinds (Heyzer, 2003:4). Cold sores and genital herpes may develop, or warts. Athlete's foot in severe forms, ringworm and thrush are common (Kadzima, 2001:12). Rashes due to food allergy are also common and research has not yet provided reasons for that (Kiragu, 2001:4). Hair frequently falls out. Drug rashes frequently occur, often due to life-saving co-trimoxazole used for treatment or prevention of the pneumocystis carinii pneumonia (Kiragu, 2001:4; Schmidt & Peter, 1996:395).

Kaposi's sarcoma develops in about a quarter of the people with AIDS (depending on the country and route of infection) (United Nations Development Programme 2000:81). This produces blue or red hard painless patches on the skin, often on the face. In the majority of these people it is the first sign of AIDS (Meless, Messele & Dorigo, 2003:375). Tumours can spread to lymph nodes, the gut lining and lungs where they can be confused with pneumocystis pneumonia. The growths may be caused by a second virus that tends to grow more easily if a person has AIDS (Carducci, 2000:268).

People who develop Kaposi's sarcoma often feel especially vulnerable because it often affects the face or may be visible elsewhere on the body and is so distinctive. In fact, people usually live longer if they first develop this tumour than when they first develop pneumonia (Carducci, 2000:268).

The other common cancer is a lymphoma, that is, a tumour which develops in the brain or elsewhere in the body.

2.5.7 Problems in stomach, eyes and other organs

Almost all people with AIDS have stomach problems from rare infections and cancers caused by AIDS and HIV attacking the bowel directly. All three problems cause food to be poorly digested resulting in diarrhoea and weight loss (Guthrie, 2000:268). Stool samples are then examined or samples can be taken from within the intestines using endoscopy, that is, special tubing to see whether a second treatable infection in addition to HIV exists (Mitchell, 2000:22).

AIDS can also seriously affect sight in up to a quarter of all those with HIV who have an infection in the rear of the eye (retinitis). This is usually caused by cytomegalovirus and is sometimes amenable to treatment. In addition, the virus can cause damage to other organs of the body such as the heart (Githrie, Dore, McDonald & Kaldor, 2000:266; Kemeny, Reed, Taylor, Visscher & Fahey, 1996: 80).

2.6 OPTIMISTIC AND PESSIMISTIC LIFE ORIENTATIONS AMONG HIV/AIDS INFECTED CHILDREN AND ADOLESCENTS

Many of the HIV/AIDS infected learners firmly believe that there will never be enough medical progress to save them in time, or that there will never be a cure. Others “ride the crest” of optimism and hope. This indicates in what way the optimism of HIV/AIDS infected learners is continually and continuously challenged over and over again. This has led Pretzer and Walsh (2001:332) to come to the conclusion that some people are naturally pessimistic in life and that HIV/AIDS has given them a reason to “act out”. Pessimistic HIV/AIDS infected learners feel rejected in many ways. This shows how HIV/AIDS infected learners’ carefully constructed (either negative or positive) beliefs, hopes and faith in themselves and humanity are daily exhaustively put to the test.

Pessimistic learners cannot be blamed for their behaviour, because many of them could have led dismal lives, before and after contracting AIDS that could explain their fatalistic outlook on life (Aspinwall & Staudeinger, 2003:257; Schultz, 1994:17).

2.6.1 The health benefits of positive life-orientations

Studies show that learners' psychological well-being can influence their physical well-being. Personality life orientations, such as optimism or pessimism, can influence how well learners who infected with HIV/AIDS live and even how long long they are going to live.

HIV/AIDS infected learners who do not have psychological problems, but score very high on a personality test pessimism scale have a thirty percent increased risk of developing dementia later. The same is true of such learners who score very high on the test's depression scale. The risk is even higher, forty percent more, for learners who score very high on both anxiety and pessimism scales (Aspinwall & Staudeinger, 2003:257).

Being an optimist may help reduce the HIV/AIDS infected learners' risk of dying from heart disease and other causes. A study in the Netherlands found that people living with HIV/AIDS who described themselves as being highly optimistic, had lower rates of cardio-vascular death and less risk of any cause of death than people living with HIV/AIDS who said they were highly pessimistic (Sherman & Bassett, 1999:109; Scheier & Carver, 1985:219). This study included more than nine-hundred HIV/AIDS infected men and women, aged sixteen to twenty-five years, who completed a questionnaire on health, self-respect, morale, optimism and relationships. Those who reported high levels of optimism had a 55 percent lower risk of death from all causes and a 23 percent lower risk of cardio-vascular death, than people who reported high levels of pessimism (Tomakowsky, Lumley, Markowitz & Frank, 2001:577; Smith, Rhodewalt & Poulton, 1989:642).

The protective effect of being optimistic seemed to offer more forcible protection against all-cause death for men than for women. In conclusion, this study revealed that the trait of optimism was an important long-term

determinant of all cause and cardiovascular mortality in HIV/AIDS infected subjects, independent of socio-demographic characteristics and cardiovascular risk factors (Peterson, Seligman & Vaillant, 1988:26). A predisposition toward optimism seemed to provide a survival benefit in HIV/AIDS infected subjects with relatively short life expectancies.

Having negative thoughts, definitely could make the HIV/AIDS infected learner more prone to illness. A study in the journal *Proceedings of the National Academy of Sciences* (2000:127) links "negative" brain activity with a weakened immune system. Researchers from the University of Wisconsin-Madison studied people with high levels of brain activity in a region linked to negative thoughts. Those with the highest activity levels responded in an aggravated way to a flu vaccine. Scientists already knew that pessimists, that is, people rated as more sensitive to negative events, show more activity in a part of the brain called the right pre-frontal cortex. More activity in the left pre-frontal cortex is linked to positive emotional responses. The new study of Swartz (2002:14) is the first to demonstrate a link between positive feelings, or "positive affect," and reduced risk of AIDS mortality.

This study included information on the physical progression of HIV/AIDS and the emotional well-being of four-hundred-and-seven HIV-positive adolescents from the San Francisco area between 1984 and 1993 (Fineran & Larry, 1999:626). More than half of the adolescents died during the study. Dr. Moskowitz found that the men who scored highest on a scale used to measure positive affect, had a significantly reduced risk of dying from AIDS at any point during the study. The power of positive feeling remained strong even when other factors were considered, such as high white blood cell counts and the use of antiretroviral medicine (Kemeny, Reed, Taylor, Visscher & Fahey, 1996:81).

Measurements of negative feeling and interpersonal relationships were not significantly related to the risk of dying from AIDS, indicating that positive affect is the "active ingredient" in the association between emotional well-being and AIDS mortality.

Although it not remains clear in what way emotional health could affect mortality, Hendrie (2003: 1) suggests that positive feelings could boost protective elements of the immune system or encourage healthy behaviours among adolescents with HIV. A study in the August issue of Mayo Clinic Proceedings (2002:23) reports that people who expect misfortune and who only see the darker side of life, do not live as long as those with a more optimistic view. Researchers evaluated results from a personality test taken by participants more than thirty years ago and compared them to subsequent mortality rates. They found that people who scored high on optimism had a 50 percent lower risk of premature death than those who scored more pessimistic. Besides a lowered risk of early death, researchers found other health benefits related to positive attitude (World Health Organization, 1999:341). In the study, optimists reported fewer problems with work or other daily activities because of physical or emotional health; less pain and fewer limitations due to pain; less interference from physical or emotional problems when engaging in social activities; increased energy; and feeling more peaceful, happier and calmer.

The researchers surveyed individuals in 1994 who previously had taken the Minnesota Multiphasic Personality Inventory (MMPI) at Mayo Clinic between 1962 and 1965. This 500-question personality test has an optimism-pessimism scale which grades the "explanatory style" of the participants, that is, how people explain the causes of life's events; and categorizes them as optimists, pessimists or mixed, based on their answers to certain questions (Mann, 2001:27; Scheier & Carver, 1985:237).

The results could lead to ways to help pessimistic people change their perceptions and behaviours and thereby improve their health and perhaps lengthen their lives. This confirms the common-sense belief that mind and body are linked and that attitude has an impact on the final outcome, which is death.

The researchers said they could not definitively explain the way a pessimistic outlook acts as a risk factor for decreased longevity. Ashman, Dror & Levy (2000: 412) asserts that optimists may be less likely to develop depression or

learned helplessness, a condition that occurs when someone is exposed to repeated punishment or negative conditions and perceives no chance of escaping. Optimists also might be more likely to seek and receive medical help, seeing bad events as specific, temporary and controllable (Miller & Pizollo, 1998:700). Pessimists, on the other hand, see life events negatively and expect the worst possible outcome. When bad events occur, pessimists often blame themselves and see problems as permanent and pervasive.

Positive attitudes about general health may influence the HIV/AIDS infected learners' quality of life. If they expect to live a long life filled with physical vitality, humour and social connections, those fundamental beliefs can shape their future for the better. But if they are convinced that illness will be a time of emptiness, depression and sickness, they will probably find themselves experiencing a mental and physical deterioration. In general, their negative expectations can accelerate their death to earlier than nature intended. This is a classic example of the self-fulfilling prophecy (Ashman, Dror & Levy, 2000:413).

Research suggests that ill people can increase their chances of living to a "ripe old age" just by being satisfied with their life. According to a study published in the November 2000 issue of the American Journal of Epidemiology, life satisfaction can increase the length of an ill person's life. Researchers from the University of Turku in Finland found that adolescents who reported high levels of satisfaction with their lives, were more likely to be alive twenty years later. Adolescents dissatisfied with their lives, were more than twice as likely to die within that time frame, regardless of cause and more than three times more likely to die of a disease. Life satisfaction, in this case, refers to a general sense of well-being and takes into account the ill person's interest in life and his/her feelings of happiness or loneliness. Although exercise, higher social class, not smoking and drinking moderate amounts of alcohol, may decrease the sick person's risk of early death, the association between feeling satisfied and living longer, may play an important role in living longer (National Centre in HIV Epidemiology and Clinical Research, 2003:97). In the March 2001 issue of American Journal of Psychiatry, the same

researchers reported that dissatisfaction with life can also lead to higher rates of suicide.

2.6.2 Ways in which HIV/AIDS infected children and adolescents can enhance their health

Life inevitably presents challenges and frustrations to children and adolescents infected with HIV/AIDS. It is, therefore, up to themselves to find ways to improve their life and enhance their overall well being. They can do a number of things to experience greater joy and pleasure in life such as:

- **Exercise.** Aerobic exercise releases endorphins, the feel-good substances, which reduce stress, depression and anxiety. Exercise can also produce a sense of mastery and accomplishment while reducing irritability and anger (Sabo, Miller, Farrell, Barnes & Melnick, 1998:5).
- **Eat properly.** Both body and mind, which are the targets of HIV, need good nutrition to function. Eating a diet rich in fruits, vegetables and grains and adding healthy oils (fish and olive), can improve the way HIV/AIDS infected learners feel. In a minimum of cases HIV/AIDS, infected learners need to take a high potency multiple vitamin daily (Simmons, Farmer & Schoepf, 1996:40).
- **Get plenty of rest.** Sleep refreshes HIV/AIDS infected learners. It improves their attitude and gives them energy for physical activity and coping with stress. An earlier bed-time or the taking of melatonin and/or 5-HTP before resting, is crucial for their well-being (Terefe & Mengistu, 1997:8).
- **Reduce stress.** Eliminating stress and conflict in their life can be rewarding. They need to identify the areas of their lives that cause them the most stress, then change and leave the stress behind (Ancahrd, 2000: 17).
- **Detoxify Body and Mind.** HIV/AIDS infected learners need to consider taking a colon cleanse to improve their digestion and elimination. This will

help them flush the toxic sludge from their body. Psychologically, they need to practise forgiveness for both themselves and others. They should not hold on to grudges. Grudges should be treated like "hot potatoes and should be dropped immediately" (Ancahrd, 2001:3).

They should also consider positive affirmations such as that they consider themselves in a positive way and that means that endless good now comes to me in endless ways; at peace with myself and the whole world; forgive everyone and everyone forgives me; am serene and peaceful; and release all negative thoughts and feelings; release all fear and anxiety; stress and tension; respond to stressful situations in healthy and healing ways; face every situation without fear; am naturally attracted to health-giving and foods; and take the supplements my body needs; am vital and energetic; and see myself at my healthy weight; enjoy eating less while getting all the nutrition I need; developing healthy eating habits gets easier and easier; and heart rejoices because God will heal me (World Health Organization, 2002:248).

Gonzalez (2004:417) studied a convenience sample of sixty-one men who have sex with men and twenty nine low-income, primarily ethnic minority women receiving highly active antiretroviral therapy (HAART). They discovered that better medication discipline was associated with greater perceived social support and with positive states of mind, while higher depression scores were associated with non-adherence. Their study showed as well that positive states of mind was ... "a significant mediator of the relationship between social support and medication adherence." Moreover, the relationship of positive states of mind to medication adherence was found to be "independent of depression, suggesting that positive states of mind represents more than the absence of depression" ... [, and] "that social support is related to medication adherence more specifically through positive psychological processes than through negative ones" (Cohen, Kearney, Zegans, Kemeny, Neuhaus & Stites, 1997:83).

Gonzalez (2004:417) and colleagues reason that social support, through the stability, predictability, and control it provides, may facilitate increases in positive states of mind in the support receiver. These positive factors may

provide psychological resources to help HIV positive individuals cope successfully with the stressful aspects of taking HIV medication and may increase motivation to take medication as prescribed. These findings may be useful in the development of intervention strategies aimed at improving medication adherence among HIV positive individuals.

While positive states of mind is a psychological "state" and therefore subject to change, a related positive psychological "trait" is optimism. According to Strassle, McKee, and Plant (1999:191), optimism has been found to be negatively correlated with depression, anxiety, anger, perception of daily hassles, physical symptoms, and job burnout. Optimism is thus positively correlated with life satisfaction, positive physical and mental health, lower frequencies of mental disorder, and self-esteem. With so many health advantages associated with optimism, the ability to induce optimism in pessimistic HIV/AIDS positive learners, could have powerful implications for the mental and physical functioning of people managing the ongoing stress of a chronic illness (Mann, 2001:26).

There are two major theoretical models of optimism in the psychological field, namely explanatory style optimism, which attributes negative events to external factors and relegates them to particular times or particular circumstances; and dispositional optimism, characterized by a general expectation of positive outcomes (Tomakowsky, Lumley, Markowitz, & Frank, 2001:580).

To date, very little is known about the way to either increase dispositional optimism, or decrease dispositional pessimism – and certainly many dispositional theorists would be pessimistic about change at this level (Norem & Chang, 2001:350). Nevertheless, some investigators have begun to explore ways of altering the way people think about the future in an effort to modify this seemingly stable personality trait of dispositional optimism (Mann, 2001:27).

Mann (2001:29) randomly assigned a racially and ethnically-diverse sample of forty low-income women living with HIV/AIDS and taking combination therapy

on one of two conditions which is reporting about a "positive" future or not reporting at all. Participants in the reporting condition were instructed to write for a minimum of ten minutes twice weekly over a four-week period. These women received the following instructions:

"You should write about a future in which you only have to take one tablet each day for your HIV. When you sit down to write in the journal, I want you to think very hard about that future. What will that future be like? In what ways will that time be different than now? Think very hard about that future time, which is probably not so very far off. And then write about that time. Every day you can write about different aspect of that time, or you can even repeat things if you need to. The important thing is that when you sit down for your ten minutes of writing, you should think for a little while about that time, in order for your mind to be clear and the ideas fresh in your mind - and then write it down. (Mann, 2001:27)..

Among the women who scored low on a measure of optimism, the writing intervention was associated with an increase in optimism, a trend toward increased medication adherence (based on self-report), and a reduction in distress from medication side effects in comparisons made with women who did not participate in the writing programme. Importantly, the opposite effects were found among women who scored well on the optimism measure prior to writing about a positive future. Thus, Mann (2001:31) concludes that dispositional optimism can be altered in a small but meaningful way and that a future-oriented writing intervention may be a promising technique to increase medication adherence and decrease symptom distress in pessimistic individuals.

Norem and Chang (2001:350) identify several key contexts to consider in understanding how optimism and pessimism serve the individual and contribute to emotional and behavioural outcomes. These include:

- the type of optimism/pessimism;
- their interface with other aspects of personality;

- the outcome variables being considered; and
- the specific interpersonal, social, cultural, and developmental contexts that serve as background for thoughts, feelings, and behaviour.

As an example, defensive pessimists, that is, people with low expectations who engage in extensive reflection on all possible outcomes, perform better if allowed to maintain low expectations and to reflect prior to initiating a task. Research suggests that anxiety increases and performance is impaired if the reflective process is disrupted (Welbourne, 1995:1).

2.7 CONCLUSION

This chapter presented the literature review of relevant concepts. The next chapter presents empirical design of this research.

CHAPTER THREE

EMPIRICAL DESIGN

3.1 INTRODUCTION

This chapter presents the aims on which this research is based and the empirical research methods which were used to investigate the extent of both physical and psychological pathologies in a sample of learners infected with HIV/AIDS, and to assess how these learners see life. The research was undertaken with the following aims in mind, namely to:

- investigate the nature and extent of physical and psychological pathologies in a sample of learners infected with HIV/AIDS;
- assess how these learners see life; and
- make suggestions, on the basis of both the findings of the literature review and the empirical research on what educators should do to help these learners develop a positive outlook in life.

To realize above aims, the following research design was used.

3.2 RESEARCH METHODS AND MOTIVATION FOR THE CHOICE OF THE MEASURING INSTRUMENTS.

This research employed the following research methods:

3.2.1 Quantitative research method

The researcher used the quantitative method to solicit information from the respondents on:

- self-declaration questionnaire on being HIV/AIDS positive;
- their optimistic and pessimistic orientations as tested in Life Orientation Test-Revised (LOT-R); and

- their psychological and physical wellness as tested in General Health Questionnaire (GHQ). The main concerns of the quantitative paradigm are that measurement is reliable, valid and generalizable in its clear prediction of cause and effect (Aspinwall & Clark, 2002:145).

The strengths of the quantitative research methods include:

- stating the research problem in very specific and set terms;
- clearly and precisely specifying both the independent and the dependent variables under investigation;
- achieving high levels of reliability of gathered data due to controlled observations, laboratory experiments, mass surveys, or other form of research manipulations;
- eliminating or minimizing subjectivity of judgment; and
- allowing for longitudinal measures of subsequent performance of research subjects.

The weaknesses of the quantitative research methods include:

- failure to provide the researcher with information on the context of the situation where the studied phenomenon occurs;
- inability to control the environment where the respondents provide the answers to the questions in the survey;
- limited outcomes to only those outlined originally due to closed type questions and the structured format; and
- not encouraging the evolving and continuous investigation of a research phenomenon.

3.2.2 Interviews (Qualitative)

The semi-structured interviews were conducted by the researcher with forty participants, as a follow-up research method after the results of the

quantitative research showed that participants could not have understood the questionnaires. The researcher felt that a qualitative form of research in the form of interviews could render valid and reliable results. Interviewees were volunteers who had already completed a questionnaire and indicated their willingness to be interviewed. Respondents were asked to answer questions on the GHQ and LOT-R questionnaires. A total of 40 interviews were carried out over two months. The interviews lasted between one hour and one hour and thirty minutes, and were conducted in Sesotho and were tape recorded.

3.3 DATA COLLECTION

The empirical research data were collected by means of the following research questionnaires:

3.3.1 Self-declaration questionnaire of being HIV/AIDS positive

This questionnaire was developed by the researcher in order to elicit self-declared information from participants on their being HIV/AIDS positive. This questionnaire has only one question which asked:

- **Are you HIV/AIDS positive?**

The participant had to indicate his/her status by means of yes or no.

The answer to this question was going to convince the researcher that she is working with the targeted group for this research.

3.3.2 General Health Questionnaire (GHQ).

This questionnaire was originally developed by Goldberg and Hillier (1979:139). It is made up of twenty-eight items, which measure the individual's inability to apply healthy behaviour. Furthermore the current level of psychological and physical wellness is measured and not the possibility that the individual might become psychologically and/or physically unwell in the future. The questionnaire focuses on the differences between psychological wellness and psychological distress and it distinguishes between psychiatric patients and individuals that see themselves as psychologically well.

The twenty-eight items of this questionnaire have been, through factor analysis, divided into four sub-scales (Goldberg & Hillier 1979:139):

- items A1 - A7 measure somatic symptoms;
- items B8 - B14 measure anxiety and insomnia;
- items C15 - C21 measure social dysfunction; and
- items D22 - D28 measure severe depression (see Appendix A).

The questionnaire can be administered in groups or individually. The questions are relatively simple to understand and respondents need to respond to questions according to recent or current physical and psychological complaints. The responses may vary, for example, from not at all, no more than usual, rather more than usual, and to much more than usual.

The GHQ has a self-scoring system, which according to Goldberg and Hillier (1979:139) gives better results than the Likert-type scoring. For the purposes of this study, responses will be given on a 4-point likert scale ranging from 1 to 4. The maximum score is 112 and the minimum is 28. A high value on the GHQ represents a high level of both psychological and physical distress, whilst a low value represents a high level of psychological and physical wellness.

The reliability of this scale as measured by Cronbach alpha co-efficient is 0,86 (Flick, 1998:26). Creswell (2003:16) reports a Cronbach alpha co-efficient of 0,89 for the total scale and 0,76 for somatic symptoms, 0,83 for anxiety and insomnia, 0,78 for social dysfunction and 0,73 for depression. This means that GHQ is a reliable, valid and useful measurement of psychological well-being.

It was, therefore, necessary to administer this questionnaire to a group of learners who have been diagnosed to be HIV/AIDS positive in order to measure their psychological and physical well being.

3.3.3 Life Orientation Test (LOT-R).

The validity of the Life Orientation (LOT), which was developed before LOT-R, to measure optimism and pessimism has been studied in depth by various researchers and they found it to show that the positively and the negatively worded items of the scale split into two factors in a number of studies (Park, Moore, Turner and Adler (1997:23). The scale may measure two constructs of optimism versus pessimism instead of a single bipolar dimension of optimism and pessimism as claimed by Scheier and Carver (1985:27). Results from studies using confirmatory factor analyses tend to support the bi-dimensional view (Kemeny, Reed, Taylor, Visscher & Fahey, 1996:39). They found it to overlap substantially with tests that measure constructs such as neuroticism and self-mastery.

The relations between optimism and health-related variables become non-significant after the effect of neuroticism or negative affectivity has been statistically removed (Leedham, Meyerowitz, Muirhead & Frist, 1995:24). Nevertheless, this effect has not been replicated successfully by Scheier, Carver, and Bridges (1994:24). Controlling the effects of neuroticism and other possible constructs such as self-mastery or self-esteem only affects the relation between optimism and reports in physical symptoms, but not that between optimism and coping or depressive symptomatology.

The LOT-R is a revised version of the LOT (Scheier & Carver, 1985:28). Both of them measure dispositional optimism. The original LOT was a 10-item scale with two filler items, four positively-worded items, and four reverse-coded items. The LOT-R is, therefore, a revised, refined, but shorter version of LOT, which was later developed with the omission of items that could confuse optimism as a personality feature with coping mechanisms. The revised test (LOT-R) has been shown to be a reliable and valid measure of dispositional optimism (Scheier, Carver & Bridges, 1994:39). In addition, items of the LOT-R load on a single factor. This finding has been replicated in two recent studies (Aspinwall & Staudinger, 2003:146). Nevertheless, the question of whether the revised scale overlaps with tests measuring other constructs

such as neuroticism and self-mastery or not has not been addressed in these studies.

The Life Orientation Test-Revised (LOT-R) (Robinson-Whelan, Kim, MacCallum & Kiecolt-Glaser, 1997:39) was utilized to measure optimism and pessimism of learner participants who are infected with HIV/AIDS. The LOT-R consists of ten coded items, namely:

- three statements described in a positive manner;
- three statements described in a negative manner; and
- four non-scored items.

Participants responded to the statements by indicating the extent of their agreement along a five-point Likert scale, ranging from "strongly agree" to "strongly disagree." Cronbach's alpha for the total score is estimated at 0.82, which is an indication of reliability. It has been used extensively in studies of stress, both with adolescents and with people going through stressful events, such as medical populations facing or recovering from serious diseases or treatments. The LOT is somewhat confounded with negative affectivity, although this issue appears to be problematic primarily for associations between optimism and self-reported symptoms, rather than optimism and "harder" health outcomes (Scheier, Carver & Bridges, 1994:28).

Factor analyses indicate that the LOT-R can be constructed as unidimensional, with one score representing whether a person is an optimist or a pessimist. Scheier, Carver and Bridges (1994:39) originally developed the LOT-R to be unidimensional. To date however, factor analytic research of scores on the LOT-R reveal that optimism and pessimism may not be bipolar, but independent of one another. Everson (1996:79) states in the review of the optimism and pessimism literature that the LOT-R should analyse an overall scale score and two subscale scores. This was especially advisable in the light of the same evidence in outcomes.

Scheier and Carver's own original factor analysis incorporated two factors, which corresponded to the positive and negative items on the Life Orientation Test. The internal reliability (Cronbach alpha=0,78); and (test-retest reliability $r=0,68$ over a four-week interval, $r=0,60$ over 12 months, $r=0,56$ over 24 months, and $r=0,79$ over 28 months) for the unidimensional use of the LOT-R has been shown to be adequate.

Evidence of convergent validity is demonstrated by the significant correlations in the expected directions with other constructs, for example:

- depression;
- hopelessness;
- self-esteem;
- perceived stress; and
- locus of control (Scheier, Carver & Bridges, 1994:18).

Further construct validity comes from studies showing that the scores are strongly correlated with physical and psychological wellness and relatively unrelated to measures of social desirability.

3.3.4 Administration of questionnaires

These questionnaires were administered to learners who have been diagnosed and are known by their families and other people to be infected with HIV/AIDS, and are accommodated and taken care of at children's homes in Phuthaditshaba and Harrismith respectively.

Seeing that the children's homes in Phuthaditshaba and Harrismith which form the sample of this research are within the researcher's working area and thus could be accessible and that the personal presence of the researcher could eliminate unnecessary problems with regard to the filling in of the self-declaration questionnaire on being HIV/AIDS positive, LOT-R and GHQ, it was decided to personally visit the selected children's homes, during which

the Life Orientation Test-Revised and the General Health Questionnaire were filled in by the investigation group under the guidance of the researcher.

With the permission of heads of children's homes who agreed and were known by the participants not to have access to completed questionnaires, copies of the three measuring instruments were personally distributed by the researcher to a group of selected learners who are HIV/AIDS positive which comprised of both boys and girls of school going age. Written guidelines and open personal briefings were provided to learners to ensure, as far as possible, standardised administration, and to secure participants's guarantee of confidentiality.

3.4 POPULATION OF THIS STUDY

All the learners infected with HIV/AIDS and who are housed in the children's homes in the Free State were considered the study population.

The Free State Province has 73 such homes for children infected and affected by HIV/AIDS. The children who are housed in these homes have already been diagnosed HIV/AIDS positive by clinics, hospitals and medical doctors. Most of them have been abandoned by their parents because of being HIV/AIDS positive while others are orphans whose parent (s) died of HIV/AIDS.

The children's homes were established by church organizations with the sole purpose of taking care of these children and to also see to it that these children and adolescents attend schools. Many of them are situated next to schools for easy access for these children.

3.5 SAMPLE

Children who formed the sample of this study were from grades 8 to 12. In a covering letter to the heads of the 30 children's homes selected for this study, the purpose of the research was described and it was indicated to them that the researcher had the permission of the Free State Department of Education to administer the self-declaration questionnaire of being HIV/AIDS positive, LOT-R and GHQ to children and adolescents in their homes. The letter also

categorically stated that the participants had to be school-going and HIV/AIDS positive.

Both the heads of children's homes and participants were assured of confidentiality and were appealed to, to respond openly.

3.5.1 Method of random sampling

Samples like the unrestricted, stratified, systematical, cluster, quota, and multi-phased random sampling were considered for use in this investigation. After careful consideration of the advantages and disadvantages of each of these methods, it was decided on cluster random sampling. A cluster random sampling is done when members of the universum are grouped together in schools or classes and all the members of the group must be included in the random sample (Shank, 2002:13). This method is convenient, quick and economical to use with the selected respondents.

3.5.2 Random sample size

The size of the random sample of participants (N=324) from 30 children's homes comprised of 160 boys and 164 girls.

3.6 CONCLUSION

This chapter discussed the method of research which is used in this study. The next chapter analyses and interprets the results of the empirical research.

CHAPTER FOUR

RESULTS AND INTERPRETATIONS

4.1 INTRODUCTION

In this chapter, the results of the empirical research are analysed and interpreted. Firstly, the descriptive statistics for all scales and sub-scales for the total group are outlined and interpreted. Secondly, the factor structure of each scale and sub-scale is outlined and interpreted using confirmatory factor analysis, exploratory factor analysis, and second order factor analysis techniques. These are done in order to determine the reliability and validity of each scale. Thirdly, correlations among all variables are determined and a second order factor analysis on all scales is reported.

4.2 PRESENTATION OF QUANTITATIVE RESEARCH RESULTS

The results from the two standardized questionnaires are presented below. The questionnaires were part of the quantitative research.

4.2.1 Descriptive Statistics and Reliability Indices for all Scales and Sub-Scales.

The item responses were inter-correlated and factor analysed, using principal components with squared multiple correlations, as the commonality estimate and factors with eigenvalues values > or equal to 1 rotated to a varimax solution.

4.2.2 Correlation Matrix

Table 4.1: Correlation Coefficients Obtained Between Physical and Psychological Wellness on the one Hand and Optimism and Pessimism on the Other Hand (N = 324)

Variable	Somatic	Anxiety	Social Dysf.	Depression	LOTP	LOTN	TOTT
Somatic	1.00	0.48	0.32	0.41	0.17	-0.11	0.03

Anxiety	0.48	1.00	0.39	0.50	0.17	-0.11	0.03
Social	0.32	0.39	1.00	0.38	0.19	-0.06	0.08
Depression	0.41	0.50	0.38	1.00	0.18	-0.04	0.09
LOTP	0.17	0.17	0.19	0.08	1.00	-0.12	0.59
LOTN	-0.11	-0.11	-0.06	-0.04	-0.12	1.00	0.73
LOTT	0.03	0.03	0.08	0.09	0.59	0.73	1.00

In Table 4.1, the respondents revealed the following:

Optimism, Pessimism and Physical Wellness

Individual LOT-Rs optimism and pessimism scores were correlated with individual ratings of the General Health Questionnaire's physical (somatic) wellness variables (see A1 to A7 of appendix A). As Table1 shows, optimism correlated with physical wellness, as measured by somatic variables of the GHQ instrument (see A1 to A7 of Appendix A), at $r = 0.17$, $p < 0.05$. A significant correlation of $r = 0.03$, $p < 0.05$ was found between physical wellness and overall Life Orientation ratings. Pessimism shows a significant negative correlation of $r = -0.11$, $p < 0.05$ with the indices of physical wellness. This shows that there is a strong relationship between optimism and physical wellness.

Optimism, Pessimism and Psychological Wellness.

It is interesting to note that optimism, as indicated on Table 4.1, positively correlates with the psychological indices of anxiety, social dysfunction, and depression, while pessimism negatively correlates with all these indices. This could be an indication that the respondents did not understand the questions very well, especially that they were in English which is the third language of the sample group. This finding led to the researcher's decision to make a follow up empirical research with the interviews. The same two standardized questionnaires were used but had to be verbally translated to the Sesotho language during the interviews where participants did not understand.

In statistically comparing the correlations of the six variables with overall satisfaction only that of social ($r=0,08$, $p<0,05$) and depression ($r=0,09$, $p<0,05$) really differ at the 0,05 significance level.

4.3 EXPLORATORY FACTOR ANALYSIS

An exploratory factor analysis with a principal factor (maximum likelihood) method of factor extraction with varimax rotation was conducted. As indicated in Table 4.2, only 3 strong factors emerged with eigenvalues greater than 1, and explaining in total 41.80 % of variance (see Table 4.2).

Table 4.2: Exploratory Factor Analysis with Principal Factor Analysis (Maximum Likelihood) and Varimax Rotation LOT-R (N=324)

LOT-R Variables	Factor 1	Factor 2	Factor 3
R01	0.58	0.17	-0.03
R02	0.10	0.20	0.71
R03	0.30	-0.62	0.02
R04	0.53	0.03	0.25
R05	0.01	-0.09	0.80
R06	0.58	0.11	-0.10
R07	-0.17	-0.70	0.13
R08	0.15	0.50	0.12
R09	-0.23	-0.44	-0.23
R10	0.70	-0.01	0.14
Expl.Var	1.62	1.31	1.24
Prp.Totl	0.16	0.13	0.12

4.3.1 Analysis and Interpretation

Exploratory factor analyses on the items of the LOT-R revealed a less stable pattern of factors: an exploratory factor analysis with the maximum likelihood

method of factor extraction and varimax rotation produced three factors (see Table 4.2).

Items R01, R04, R06 and R10 of the original LOT-R loaded significantly on the first factor. Items R02, R05 and R08 did not cluster significantly on the first factor. Items R07 and R09 loaded negatively on the first factor.

Only R08 loaded significantly on the second factor. Items R01, R02, R04, did not load significantly on the second factor, while items R03, R05, R07, R09 and R10 loaded negatively on the second factor.

Item R02 and R05 loaded strongly significant on the third factor. Items R03, R04, R07, R08 and R10 did not load significantly on the third factor. Items R01 and R06, and R09 clustered negatively on the third factor.

Table 4.3:

Value	Eigenvalue	% Total Variance	Cumulative Eigenvalue	Cumulative %
1	1.92	19.30	1.92	19.30
2	1.20	11.71	3.10	30.93
3	1.10	10.84	4.21	41.80

When we use the criteria of Zwick and Velicer (1986), which suggests that at least 3 loadings higher than 0.3 must be found for a major factor, only LOT-R variables (R1, R4, R6) emerged with significant loading.

Table 4.4: Explanatory analysis (maximum likelihood): GHQ-(N=324)

Variable	Factor 1	Factor 2	Factor 3	Factor 4
A1	-0.04	0.13	0.40	0.20
A2	0.07	0.70	0.02	0.04
A3	0.14	0.33	0.30	0.30
A4	0.14	0.61	0.10	0.13
A5	0.13	0.66	0.05	0.10
A6	0.13	0.56	0.10	0.21

A7	0.03	0.41	0.13	0.34
B1	0.07	0.12	0.20	0.63
B2	0.07	0.03	0.01	0.70
B3	0.08	0.20	0.22	0.50
B4	0.10	0.13	0.07	0.54
B5	0.22	0.05	0.51	0.48
B6	0.16	0.15	0.10	0.51
B7	0.22	0.12	0.23	0.41
C1	-0.05	0.03	0.48	-0.01
C2	0.20	0.05	0.50	0.06
C3	0.07	0.05	0.50	0.14
C4	0.20	-0.10	0.60	0.22
C5	0.10	0.80	0.50	0.00
C6	0.32	0.13	0.40	-0.60
C7	0.12	0.02	0.50	0.80
D1	0.51	0.10	0.25	0.16
D2	0.61	-0.01	0.10	0.30
D3	0.70	0.06	-0.02	0.24
D4	0.50	0.13	0.10	-0.10
D5	0.40	0.21	0.20	0.30
D6	0.70	0.10	0.03	0.30
D7	0.60	0.20	0.14	0.06
Expl. Var.	2.70	02.11	2.12	2.80
Prp. Total	0.09	0.10	0.10	0.10

Table 4.5: Second order factor analysis: GHQ-28 (N=324)

Value	Eigenvalue	% Total Variance	Cumulative Eigenvalue	Cumulative %
1	5.44	19.41	5.44	19.42
2	1.51	5.40	7.00	24.82
3	1.44	5.14	8.40	30.00
4	1.30	4.64	9.700	34.60

Table 5 indicates that only 4 strong factors emerged with eigenvalues greater than 1, and explaining in total 34.60% of variance.

The LOT-R scale that measured pessimistic life orientations among learners who participated in this study reveal the following mean values and standard deviations.

Descriptive statistics (Mean, SD and Cronbach Alpha) indices as obtained in the Total Group for LOT-R are given in Tables 4.6 and 4.7.

Table 4.6: Descriptive statistics

Variable	Mean	StDv.	Alpha
R03	7.61	2.00	0.02
R07	6.90	2.01	0.12
R09	6.69	2.00	0.18

4.3.2 Analysis and Interpretation

The majority of the respondents reveal that if something can go wrong for them, it will (M=7.61, SD=2.00); they hardly ever expect things to go their way (M=6.90, SD=2.01), and rarely count on good things happening to them (M=6.69, SD=2.00).

Table 4.7: Descriptive statistics

Variable	Mean	StDv.	Alpha
R01	3.20	1.80	0.41
R04	3.30	1.91	0.40
R10	3.20	1.65	0.32

4.3.3 Analysis and Interpretation

The majority of the respondents reveal that they are always optimistic about their future ($M=3.30$, $SD=1.91$), in uncertain times, they usually expect the best ($M=3.20$, $SD=1.80$); and overall, they expect more good things to happen to them than bad one.

Table 4.8: Mean Values and Standard Deviations of the Variables in the General Health Questionnaire

Variable	Mean	StDv.	Alpha
A1	12.00	3.80	0.64
A2	12.00	3.50	0.60
A3	12.00	3.53	0.60
A4	11.80	3.43	0.60
A5	11.53	3.41	0.60
A6	11.70	3.44	0.60
A7	12.04	3.53	0.60
B1	11.74	3.72	0.63
B2	11.90	3.83	0.65
B3	11.92	3.90	0.66
B4	11.74	3.87	0.66
B5	11.86	3.88	0.66
B6	11.78	3.88	0.66
B7	11.77	3.90	0.66

C1	11.79	3.07	0.56
C2	11.71	3.01	0.51
C3	12.00	3.01	0.51
C4	11.93	2.94	0.49
C5	11.65	2.98	0.51
C6	11.83	3.00	0.51
C7	11.83	2.94	0.50
D1	11.45	3.94	0.70
D2	11.25	3.86	0.70
D3	11.34	3.83	0.70
D4	11.00	4.10	0.74
D5	11.25	4.00	0.72
D6	11.40	3.82	0.70
D7	11.00	3.90	0.70

As indicated in Tables 2 to 4 the Cronbach alphas of the different sub-scales of the GHQ range between 0.49 and 0.72 whereas Goldberg et al. (1997) report the Cronbach alpha reliability indices varying from 0.82 to 0.86, while Wissing and Van Eeden (1997) report reliability indices varying from 0.77 to 0.84 for the sub-scales and 0.91 for the total scale score in a South African sample (Wissing & Van Eeden, 1997).

In a study by Wissing and Van Eeden (1994), a mean score of 5.25, S.D. of 5.99, and the range scores between 0 and 26 were obtained while Wissing and Van Eeden (1997) report a mean score of 5.25, a standard deviation of 6.00 and the range of scores between 0 and 26.

The range of scores obtained in this study (see above paragraph) are lower than those obtained by in the studies of the afore-mentioned studies, but the

mean GHQ score is clearly much higher. The latter can be explained by the historical circumstances of the participants.

The physical wellness scale of the GHQ suggests that the majority of the participants in this study are having difficulty in staying asleep ($M=12.04$, $SD=3.50$), feeling a need for a good tonic ($M=12.00$, $SD=3.80$), feeling run down and out of sorts ($M=12.00$, $SD=3.53$). It is interesting to note that in spite of their feeling these physical pathologies, they are still feeling perfectly well and in good health.

The anxiety (Table 2), social (Table 3) and depression (Table 4) scales of the GHQ measured the psychological wellness of the respondents.

4.3.4 Analysis and Interpretation

The anxiety scale reveals that the majority of the participants in this study feel constantly under strain ($M=11.92$, $SD=3.90$) and have difficulty in staying asleep ($M=11.90$, $SD=3.83$). This is an indication that they are experiencing anxiety.

The social scale reveals that the participants on the whole feel that they are doing things well ($M=12.00$, $SD=3.01$) and are satisfied with the way they have carried out their tasks ($M=11.93$, $SD=2.94$).

This scale reveals that the majority of the respondents feel that life is not worth living ($M=11.45$, $SD=3.94$) and find themselves wishing that they are dead and away from it all. (Mean= 11.40 , $SD=3.82$).

4.4 QUALITATIVE RESEARCH RESULTS

The GHQ and LOT-R questionnaires were used to conduct interviews with the learners infected with HIV/AIDS who formed the sample of this research. The interviews were conducted in Sesotho in order to facilitate understanding and meaningfulness of the interview sessions.

4.4.1 Results of GHQ

The results of the GHQ were as follows:

- 15% of respondents reported that they have been feeling perfectly well and in good health, whereas 75% of them reported that they have been feeling worse than usual.
- 23% of the respondents reported that they do not need any good tonic, while 77% reported that they need a good tonic.
- 79% of participants indicated that they have been feeling run down and out of sorts, and 21% reported that they do not feel run down and out of sorts.
- 5% of respondents reported that they are not feeling ill, 95% reported that they are feeling ill.
- 23% of learners reported that they have not been getting pains in their heads while 73% reported that they have been getting pains in their heads.
- 12% of respondents reported that they have not been getting a feeling of tightness or pressure in their heads, while 78% of them reported that they were getting a feeling of tightness or pressure in their heads.
- 72,5% of respondents reported that they have been having hot or cold spells and 27,5% reported that they have not been having hot or cold spells.
- When asked as to whether they have lost much sleep over worry, 2% of respondents reported that it does not happen to them, 98% reported that it happens.
- When asked whether they had difficulty in staying asleep, 1% said not at all, while 99% reported that they do have some difficulty in staying asleep.
- When asked whether they felt constantly under strain, 12% said not at all, but 88% reported that they are constantly under strain.

- 3% of participants reported that they have not been getting edgy and bad tempered, while 97% reported that they have been getting edgy and bad tempered.
- 5% of respondents reported that they have not been getting scared or panicky for no good reason, 95% reported that they do.
- 2% of respondents reported that they found nothing was getting on top of them but 98% reported that everything was getting on top of them.
- 4% of respondents reported that they have not been feeling nervous and stung-up all the time, whereas 96% of participants reported that they have been feeling nervours and strung-up all the time.
- When participants were asked whether they have ever been managing to keep themselves busy and occupied, 90% responded by saying that they have been the same as usual, while 10% responded by saying that they have not been the same as usual.
- When asked whether they have been taking longer over the things they do, 7% said that they doing things the same as usual, while 93% reported that they do not do things the same as usual.
- 11% of participants reported that they feel the same as usual, when asked whether on the whole they were doing things well, while 89% reported that they were not doing things well.
- When asked whether they have been satisfied with the way they have carried out their tasks, 2% said that they have been more satisfied, while 98% reported that they have not been more satisfied.
- When asked whether they felt they are playing a useful part in things, 19% reported that they felt more so than usual, while 81% reported that they did not feel more so than usual.

- When asked whether they were capable of making decisions about things, 5% of participants said that they felt more so than usual, while 95% reported that they did not feel more so than usual.
- 18% of respondents reported that they have been able to enjoy their normal day-to-day activities more than usual, while 72% of respondents reported that they have not been able to enjoy their normal day-to-day activities more than usual.
- 43% of participants reported that they have not been thinking of themselves as worthless persons, while 57% of them reported that they have been thinking of themselves as worthless persons.
- 49% of respondents reported that they did not feel that life is entirely hopeless at all, but 51% of them reported that they felt that life is entirely hopeless.
- 27% of participants reported that they felt that life is not worth living, but 73% of them reported that life is worth living.
- 31% of participants reported that they definitely do not think of the possibility that they might make away with themselves, while 69% of them reported that they have the thought of the possibility that they might make away with themselves.
- 83% of participants said that at times they found that they could not do anything because their nerves were too bad, although 17% of them reported that they do not have nerves problems.
- 48% of participants reported that they find themselves wishing they were dead and away of it all and 52% of them felt that they still need to live.
- 63% of repondents found that the idea of taking their own lives kept coming into their heads, but 37% of them reported that this does not definitely happen to them.

4.4.2 Results of LOT-R

The results of the GHQ were as follows:

- 7% of participants reported that they usually expect the best in uncertain times, while 93% of them do not expect the best in uncertain times.
- 33% of participants reported that it is easy for them to relax, but 67% of them reported that it is not easy for them to relax.
- 41% of participants reported that if something can go wrong for them it will, whereas the other 59% reported that if something can go wrong for them it will not.
- 17% of participants reported that they are always optimistic about their future, while 83% reported to be pessimistic about their future.
- 10% of participants reported that they enjoy their friends a lot and 90% of them reported that they do not enjoy their friends a lot.
- 53% of participants said that it is important for them to keep busy, but 47% reported that it is not important for them to keep busy.
- 48% of participants reported that they hardly ever expect things to go their way, but 52% of them reported that they always expect things to go their way.
- 15% of participants agree that they do not get upset too easily, although 85% of them feel that they become upset too easily.
- 84% of participants reported that they rarely count on good things happening to them, but 16% of them said that good things are happening to them every time.
- 27% of participants reported that overall, they expect more good things to happen to them than bad, while 73% of them reported that they expect more bad things to happen to them.

4.5 CONCLUSION

This chapter presented the analysis and interpretation of the empirical research results.

The next chapter presents summaries, conclusions and recommendations of the study.

CHAPTER FIVE

SUMMARIES, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In this chapter a summary of the findings from the literature as well as both quantitative and qualitative research and important conclusions are provided. Recommendations for further research and suggestions for helping HIV/AIDS infected learners enhance their health and optimism are also made.

5.2 SUMMARIES AND CONCLUSIONS

This section provides summaries and conclusions from both the literature review, quantitative and qualitative research.

5.2.1 Conclusions from the literature study

The aims of this research were to investigate the general health of learners infected with HIV/AIDS; assess how learners infected with HIV/AIDS see life; and make suggestions for helping learners infected with HIV/AIDS to generally develop a positive outlook in life (see 1.2).

From the literature study it emerged that HIV/AIDS kills or damages cells of the human body's immune system and thereby destroying the body's ability to fight infections and certain cancers and causes both psychological and physical illnesses. It also emerged that across the globe, AIDS is responsible for an increasing number of deaths each year. Of the 3.1 million killed in 2005, over half a million were children aged below 15 years. At the end of 2005, an estimated 2.3 million children globally were living with HIV and lack of HIV monitoring facilities in many less-developed countries mean that it is difficult to produce precise estimates, and the actual figures could be higher. The literature revealed clearly that very large numbers of children around the world are living with HIV and being killed by AIDS (see 1.1). Such a state of affairs is very hard for any adult to accept, harder still for a child who may still be too young to understand why they are dying.

The literature also highlighted that many of the HIV/AIDS infected learners firmly believe that there will never be enough medical progress to save them in time, or that there will never be a cure. Others ride the crest of optimism and hope. This shows how optimism of HIV/AIDS infected learners is continually and continuously challenged over and over again. This has led some researchers to come to the conclusion that some people are naturally pessimistic in life and that HIV/AIDS has given them a reason to act out. It also emerged from the literature that pessimistic HIV/AIDS infected learners feel dumped on a lot which is an indication of how HIV/AIDS infected persons' carefully constructed (either negative or positive) beliefs, hopes and faith in themselves and humanity are daily exhaustively put to the test.

5.2.2 Conclusions from the qualitative investigation

The predicted positive correlation between optimism and physical wellness of adolescents was confirmed. LOT-R variables of optimism significantly correlated with physical wellness variables as measured by somatic variables of the GHQ instrument (see paragraph 4.2.2.1). A significant correlation was also found between physical wellness and overall Life Orientation ratings (see Table 1). Pessimism had a significant negative correlation with the indices of physical wellness (see paragraph 4.2.2.1). The predicted negative correlation between pessimism and physical wellness was confirmed (see paragraph 4.2.2.1).

It is interesting to note that optimism, as reflected on Table 1, positively correlates with the psychological indices of anxiety, social dysfunction and depression, while pessimism negatively correlates with all these indices (see paragraph 4.2.2.2). This could be an indication that the respondents did not understand the questions very well, especially since they were in English, which is the third language of the sample group. This finding necessitated a follow-up empirical research by means of qualitative interviews which were held in Sesotho to facilitate more understanding and meaningfulness of the concepts used in the questionnaires.

The interviews based on the GHQ revealed that the majority of the learner participants who formed the sample of this research:

- have been feeling worse than usual;
- need a good tonic;
- have been feeling run down and out of sorts;
- are feeling ill;
- have been getting pains in their heads;
- were getting a feeling of tightness or pressure in their heads;
- have been having hot or cold spells;
- have lost much sleep over worry;
- have some difficulty in staying asleep;
- are constantly under strain;
- have been getting edgy and bad tempered;
- have been getting scared or panicky for no good reason;
- everything was getting on top of them;
- have been feeling nervous and strung-up all the time;
- have been managing to keep themselves busy and occupied, the same as usual;
- do not do things the same as usual;
- were not doing things well;
- have not been more satisfied with the way they have carried out their tasks;

- felt they are not playing a useful part in things;
- were not capable of making decisions about things;
- have not been able to enjoy their normal day-to-day activities more than usual;
- have been thinking of themselves as worthless persons;
- felt that life is entirely hopeless;
- feel life is worth living;
- have the thought of the possibility that they might make away with themselves;
- at times, they found that they could not do anything because their nerves were too bad;
- felt that they still need to live; and
- the idea of taking their own lives kept coming into their heads

The interviews based on the LOT-R revealed that the majority of the learner participants who formed the sample of this research:

- do not expect the best in uncertain times.
- it is not easy for them to relax.
- if something can go wrong for them it will not.
- are pessimistic about their future.
- do not enjoy their friends a lot.
- it is important for them to keep busy
- they always expect things to go their way.

- feel that they become upset too easily.
- rarely count on good things happening to them, and
- expect more bad things to happen to them.

5.3 IMPLICATIONS AND RECOMMENDATIONS FOR PRACTICE

In the light of the findings from both the literature review and the empirical research, the following recommendations are made for educational practice both at schools, families and communities:

- Schools need to provide HIV education along with education about sexuality, reproductive health, life skills, substance use and other important health education issues. Schools' effective intervention in the development of general health and optimistic outlook in life of learners infected with HIV/AIDS is needed to maximize educational investments in children and adolescents and bring about social improvements in equity, social and economic development and productivity. By responding strongly to the psycho-physical and social challenges of HIV/AIDS infected learners, the school system can help develop their psychological and social resilience which can lead to the strengthening of their physical well being and reduce the future impact of this disease on overall psychosocial development.
- Schools, families, communities and societies as both micro, meso and macro-systems respectively of the ecology of childhood and adolescence have to take care of learners infected by HIV/AIDS by working in collaboration and partnerships. In this regard, schools need to reciprocally and systemically work with families, community agencies such as non-governmental organizations that are oriented towards HIV/AIDS and government to determine the most appropriate and effective ways to help develop the psychological, physical and social resilience of learners infected with HIV/AIDS. Supporting schools is one way to invest in children and adolescents and prepare them to lead satisfying and productive lives.

Investment in children and adolescents benefits nations and communities, as well as individuals.

- The latter paragraph implies that South African schooling system now calls for an effective ecosystemic educational approach in concerted dealing with the impact of HIV/AIDS on the psychological and social development of children and adolescents. Schools, families, community agencies such as churches, non-governmental agencies, social workers, psychologists, occupational therapists, physiotherapists, medical doctors, nurses and so on should now more than ever before collaborate in helping to develop the psychosocial development and resilience of learners infected with HIV/AIDS. Multidisciplinary teams can be formed in communities to continually counsel these learners so that their positive outlook on life can be developed.

5.4 RECOMMENDATIONS FOR FURTHER RESEARCH

A comprehensive study is needed to investigate, in an in-depth manner, the general health of learners infected with HIV/AIDS and how this epidemic impacts on their general health and positive outlook in life. Such a study needs to be conducted in the language of the participants with measuring instruments that have been developed in South Africa. Such measuring instruments should be developed for South African children and adolescents and should also be piloted in South Africa in the African languages. This will be the researcher's project for her doctoral degree.

5.5 CONTRIBUTIONS OF THE STUDY

With regard to the general health of learners who are infected with HIV/AIDS, this study found that they:

- have been feeling worse than usual;
- need a good tonic;
- have been feeling run down and out of sorts;

- are feeling ill;
- have been getting pains in their heads;
- were getting a feeling of tightness or pressure in their heads;
- have been having hot or cold spells;
- have lost much sleep over worry;
- have some difficulty in staying asleep;
- are constantly under strain;
- have been getting edgy and bad tempered;
- have been getting scared or panicky for no good reason;
- felt everything was getting on top of them;
- have been feeling nervous and strung-up all the time;
- have been managing to keep themselves busy and occupied;
- have been taking longer over the things they do;
- were not doing things well;
- have not been more satisfied with the way they have carried out their tasks;
- felt they are not playing a useful part in things;
- were not capable of making decisions about things;
- have not been able to enjoy their normal day-to-day activities;
- have been thinking of themselves as worthless persons;
- felt that life is entirely hopeless;

- reported that life is worth living;
- have the thought of the possibility that they might make away with themselves;
- found that they could not do anything because their nerves were too bad;
- still need to live; and
- the idea of taking their own lives kept coming into their heads,

With regard to the optimistic and pessimistic life orientations of learners who are infected with HIV/AIDS, this study found that they:

- do not expect the best in uncertain times;
- feel it is not easy for them to relax;
- feel if something can go wrong for them it will not;
- feel pessimistic about their future;
- do not enjoy their friends a lot;
- feel it is important for them to keep busy;
- always expect things to go their way;
- become upset too easily;
- rarely count on good things happening to them; and
- expect more bad things to happen to them.

5.6 CONCLUSION

This research provided both the literature review on HIV/AIDS, health, and optimistic and pessimistic life orientations as well as both quantitative and qualitative research on the general health and optimistic and pessimistic life orientations of children and adolescents who are infected with HIV/AIDS.

Recommendations for further research and suggestions for helping HIV/AIDS infected learners enhance their health and optimism were also made.

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APPENDIX A

GENERAL HEALTH QUESTIONNAIRE (GHQ)

(Goldberg & Hiller, 1979)

Instructions

We would like to know if you have had any medical complaints, and how your health has been in general over the past few weeks. Please answer ALL the questions simply by underlining or marking the answer, which you think most nearly applies to you. Remember that we want to know about present and recent complaints not those that you had in the past: it is important that you try to answer ALL the questions. Thank you very much for your cooperation.

		1	2	3	4
A1	Been feeling perfectly well and in good health?	Better than usual	Same as usual	Worse than usual	Much worse than usual
A2	Been feeling in need of a good tonic?	Not at all	No more than usual	Rather more than usual	Much more than usual
A3	Been feeling run down and out of sorts?	Not at all	No more than usual	Rather more than usual	Much more than usual
A4	Felt that you are ill?	Not at all	No more than usual	Rather more than usual	Much more than usual
A5	Been getting pains in your head?	Not at all	No more than usual	Rather more than usual	Much more than usual
A6	Been getting a feeling of tightness or pressure in your head?	Not at all	No more than usual	Rather more than usual	Much more than usual

A7	Been having hot or cold spells?	Not at all	No more than usual	Rather more than usual	Much more than usual
B1	Lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
B2	Had difficulty in staying asleep?	Not at all	No more than usual	Rather more than usual	Much more than usual
B3	Felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
B4	Been getting edgy and bad tempered?	Not at all	No more than usual	Rather more than usual	Much more than usual
B5	Been getting scared or panicky for no good reason?	Not at all	No more than usual	Rather more than usual	Much more than usual
B6	Found everything getting on top of you?	Not at all	No more than usual	Rather more than usual	Much more than usual
B7	Been feeling nervous and strung-up all the time?	Not at all	No more than usual	Rather more than usual	Much less than usual
C1	Been managing to keep yourself busy and occupied?	More so than usual	Same as usual	Rather less than usual	Much less than usual
C2	Been taking longer over the things you do?	Quicker than usual	Same as usual	Longer than usual	Much more than usual
C3	Felt on the whole you were doing things well?	Better than usual	About the same	Less so than usual	Much less than usual

C4	Been satisfied with the way you've carried out your task?	More satisfied	About same as usual	Less so than usual	Much less than usual
C5	Felt that you are playing a useful part in things?	More so than usual	Same as usual	Less so than usual	Much less than usual
C6	Felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less than usual
C7	Been able to enjoy your normal day-to-day activities?	More so than usual	Same as usual	Less so than usual	Much less than usual
D1	Been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual
D2	Felt that life is entirely hopeless?	Not at all	No more than usual	Rather more than usual	Much more than usual
D3	Felt that life isn't worth living?	Not at all	No more than usual	Rather more than usual	Much more than usual
D4	Thought of the possibility that you might make away with yourself?	Definitely not	I don't think so	Has crossed my mind	Definitely has
D5	Found at times you couldn't do anything because your nerves were too bad?	Not at all	No more than usual	Rather more than usual	Much more than usual
D6	Found yourself wishing you were dead and away from it all?	Not at all	No more than usual	Rather more than usual	Much more than usual
D7	Found that the idea of taking your own life kept coming into your head?	Definitely not	I don't think so	Has crossed my mind	Definitely has

APPENDIX B

LIFE ORIENTATION TEST-REVISED (LOT-R)

(Scheier, Carver & Bridges, 1994)

Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your own feelings, rather than how you think "most people" would answer.

ITEMS	I agree a lot	I agree a little	I neither agree nor disagree	I disagree a little	I disagree a lot
1. In uncertain times, I usually expect the best.	A	B	C	D	E
2. It's easy for me to relax.	A	B	C	D	E
3. If something can go wrong for me, it will.	A	B	C	D	E
4. I'm always optimistic about my future.	A	B	C	D	E
5. I enjoy my friend a lot.	A	B	C	D	E
6. It's important for me to keep busy.	A	B	C	D	E
7. I hardly ever expect things to go my way.	A	B	C	D	E
8. I don't get upset too easily.	A	B	C	D	E
9. I rarely count on good things happening to me.	A	B	C	D	E
10. Overall, I expect more good things to happen to me than bad.	A	B	C	D	E



Enquiries : Mr W B van Rooyen
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2005-06-07

Ms. N.R. Matselane
P.O. Box 1546
Harrismith
9880

Dear Ms. Matselane


REGISTRATION OF RESEARCH PROJECT

1. This letter is in reply to your application for the registration of your research project.
2. Research topic: **The general health and life orientations of learners infected with HIV/AIDS**
3. Your research project has been registered with the Free State Education Department and you may conduct research in the Free State Department of Education under the following conditions:
 - 3.1 Educators and learners, participate voluntarily in the project.
 - 3.2 The names of all schools, educators, and learners involved remain confidential.
 - 3.3 The questionnaires are completed and the interviews are conducted outside normal tuition time.
 - 3.4 This letter is shown to all participating persons.
 - 3.5 Suggested changes are considered.
4. You are requested to donate a report on this study to the Free State Department of Education. It will be placed in the Education Library, Bloemfontein. It will be appreciated if you would also bring a summary of the report on a computer disc, so that it may be placed on the website of the Department.
5. Once your project is complete, you may be invited to present your findings to the relevant persons in the FS Department of Education. This will increase the possibility of implementing your findings wherever possible.
6. You are requested to confirm acceptance of the above conditions in writing to:

The Head: Education, for attention: CES: IRRISS
Room 1204, Provincial Government Building
Private Bag X20565, BLOEMFONTEIN, 9301

We wish you every success with your research.

Yours sincerely


WB van Rooyen
CES: IRRISS