

THE PSYCHOLOGICAL WELL-BEING OF PERSONS LIVING WITH HIV/AIDS IN THE WORKPLACE

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REMARKS

The reader is reminded of the following:

- ❖ The references, as well as the editorial style as prescribed by the *Publication Manual* (5th edition) of the American Psychological Association (APA), were followed in this mini-dissertation. The practice is in line with the policy of the Programme in Industrial Psychology of the North-West University (Potchefstroom Campus) to use APA style in all scientific documents.

- ❖ The mini-dissertation is submitted in the form of one research article.

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TABLE OF CONTENTS

	Page
List of Tables	iv
Summary	v
Opsomming	vii
CHAPTER 1: INTRODUCTION	1
1.1 Problem statement	1
1.2 Research objectives	7
1.2.1 General objective	7
1.2.2 Specific objectives	8
1.3 Research method	8
1.3.1 Literature review	8
1.3.2 Research design	8
1.3.3 Participants	9
1.3.4 Measuring battery	9
1.3.5 Statistical analysis	11
1.4 Division of chapters	11
1.5 Chapter summary	12
References	13
CHAPTER 2: RESEARCH ARTICLE	18
References	
CHAPTER 3: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS	45
3.1 Conclusion	45
3.2 Limitations of this research	49
3.3 Recommendations	49
References	41

LIST OF TABLES

Table	Description	Page
	Chapter 1	
1	Coping Strategies	6
	Research Article	
1	Characteristics of the Participants	28
2	Descriptive Statistics and Cronbach Alpha Coefficients of the OLQ, WLCS, COPE and GHQ	32
3	Pearson Correlations between the Constructs	33
4	Results of the Canonical Analysis: Coping Strategies and Health	35
5	Results of the Canonical Analysis: Psychological Strengths and Coping Strategies	36

SUMMARY

Topic: The psychological well-being of HIV infected employees in the workplace.

Key terms: Psychological well-being, sense of coherence, coping, locus of control, and general health.

The history of HIV/AIDS dates back to 1985, when it was thought to be a disease affecting animals. Later, HIV/AIDS was regarded as an illness which affected gay individuals. However, research world-wide has shown that HIV/AIDS is a disease that affects everyone irrespective of race, gender, social status and sexual orientation. Research regarding the psychological well-being (coping, sense of coherence, locus of control and general health) of HIV infected persons in the workplace seems appropriate and relevant.

The objective of this study was to investigate the relationship between sense of coherence, locus of control, coping, and general health. A cross-sectional survey design was used to achieve research objectives. For the purpose of this study, an availability sample of ($n = 91$) HIV infected individuals in the workplace was used. Four questionnaires were employed in the empirical study, namely the General Health Questionnaire, the Coping Orientations to the Problems Experienced Questionnaire, the Work Locus of Control Scale, and the Orientation to Life Questionnaire. Descriptive statistics (means, standard deviations, skewness and kurtosis) were used to analyse the data. Pearson correlations and canonical analysis were used to assess the relationships between sense of coherence, locus of control, coping strategies and general health.

Approach coping strategies such as active coping, planning, seeking support for instrumental reasons, seeking support for emotional reasons, positive reinterpretation and growth, and acceptance were positively related to a strong sense of coherence and a low external locus of control. Avoidance coping strategies, such as focus on and ventilation of emotions, denial, behavioural disengagement, and mental disengagement were negatively related to sense of coherence and positively related to an external locus of control. HIV infected employees who measured high on planning, low on focus on and venting of emotions, and low on mental disengagement, experienced less anxiety and fewer somatic problems.

Recommendations for future research were made.

OPSOMMING

Onderwerp: Die psigologiese welsyn van MIV-geïnfekteerde werknemers in die werkplek

Sleutelterme: Psigologiese welsyn, koherensiesin, coping, lokus van beheer en algemene gesondheid.

Die geskiedenis van MIV/VIGS dateer terug tot 1985, toe daar gedink is dat dit 'n siekte is wat diere raak. Later het die persepsie ontstaan dat slegs homoseksuele persone MIV-besmetting sal opdoen. Tans het navorsing wêreldwyd getoon dat MIV/VIGS 'n siekte is wat almal raak, ongeag ras, geslag, sosiale stand of seksuele oriëntasie. Navorsing oor die verband tussen die komponente van psigologiese welsyn (coping, koherensiesin, lokus van beheer en algemene gesondheid) van MIV-geïnfekteerde persone in die werkplek lyk gepas en relevant.

Die doelstelling met hierdie studie was om ondersoek in te stel na die verband tussen koherensiesin, lokus van beheer, coping en algemene gesondheid. 'n Dwarsdeursnee-opnameontwerp is gebruik. Vir die doel van hierdie studie is 'n beskikbaarheidsteekproef van ($n = 91$) MIV-besmette individue in die werkplek gebruik. Vier vraelyste is in die empiriese studie gebruik, naamlik die Algemene Gesondheidsvraelys, die COPE, die Werk-lokus van Beheerskaal, en die Lewensoriëntasie-vraelys. Beskrywende statistieke (gemiddeldes, standaardafwykings, skeefheid en kurtose) is gebruik om die data te analiseer. Pearson-korrelasies en kanoniese analise is gebruik om die verband tussen koherensiesin, lokus van beheer, coping en gesondheid te bepaal.

Naderings-coping-strategieë soos aktiewe coping, beplanning, soeke na ondersteuning om instrumentele redes, positiewe herinterpretasie en groei, en aanvaarding het positief verband gehou met 'n sterk koherensiesin en 'n lae eksterne lokus van beheer. Vermydings-coping-strategieë soos fokus op en lug van emosies, ontkenning, gedragsontkoppeling en geestesontkoppeling het negatief verband gehou met koherensiesin en positief met 'n eksterne lokus van beheer. MIV-besmette werknemers met 'n hoë syfer vir beplanning, lae syfer vir fokus op en ventilasie van emosies en lae geestesontkoppeling het minder angs en somatiese probleme ondervind.

Aanbevelings is gemaak vir verdere navorsing.

CHAPTER 1

INTRODUCTION

This mini-dissertation focuses on the psychological well-being of HIV infected employees in the workplace.

Chapter 1 contains the problem statement, research objectives and research methodology employed. This chapter commences with a problem statement, giving an overview of previously related research conducted specifically on the definition of HIV/AIDS, the global experience of HIV/AIDS and the psychological well-being of infected employees, and linking it with this research project and its research objectives. A discussion of the research method follows, with details regarding the empirical study, research design, participants, measuring instruments and statistical analyses. It concludes with a chapter summary giving an overview of the chapters that comprise this mini-dissertation.

1.1 PROBLEM STATEMENT

The increasing number of HIV infected individuals in the 21st century is threatening the world as well as the workplace. This may be a result of the fact that the greatest percentage of infected individuals are working-age adults (<http://www.bsr.org/CSRRResources/IssueBriefDetails.cfm>). Consequently, Sunter and Whiteside (2000) state that extensive research has been undertaken to determine the causes of the pandemic and to provide continuous guidelines to organisations to prepare for the effects of HIV/AIDS.

According to Clark (2002), HIV/AIDS is a global pandemic. Clark (2002) further cites that never in history has there been such a widespread and fundamental threat to human development. Africa is the epicentre of this pandemic and it is estimated that two out of every three cases are diagnosed on this continent (Clark, 2002). The region which is most affected by this pandemic is Sub-Saharan Africa (Jackson, 2002), while countries like Botswana and South Africa have an infection rate of one in three adults (Clark, 2002). Due to this pandemic, millions of children are orphaned and the life expectancy rate is perpetually dropping, leaving severe marks on both the individual and the family structure. HIV/AIDS also threatens food security, productivity, human resources availability and development

(Jackson, 2002). This is a long-term development disaster on a scale never witnessed before, and Sub-Saharan Africa is already bearing the brunt of it (Evans, 2002).

In 2001, approximately 36 million individuals were living with HIV/AIDS (Barnett & Whiteside, 2002). These authors further cite that in December 2002, the number of people living with HIV/AIDS were estimated at 42 million by the UNAIDS and the World Health Organisation (WHO). Barnett and Whiteside (2002) also mention that, of the adults newly infected in 2002, 2 million (42%) were female and 2,2 million (58%) were male (Barnett & Whiteside, 2002).

Since the onset of the pandemic, HIV infection has mostly occurred in the developing world. In 2002, more than 95% of new infections occurred in developing countries. Of the 5 million cases reported, 3,5 million were from Sub-Saharan Africa (Barnett & Whiteside, 2002). Most, if not all of the 25 million people in Sub-Saharan Africa who are living with HIV/AIDS, will have died by the year 2020, in addition to the 13,7 million Africans already claimed by the pandemic (Barnett & Whiteside, 2002).

In 16 African countries, more than one tenth of the adult population aged between 15 and 49 are infected with HIV (Barnett & Whiteside, 2002). These authors mention that in the six countries of Southern Africa, AIDS is expected to claim the lives of 8% to 25% of practising doctors by the end of 2005. In seven countries, all located in the southern cone of the continent, at least one in five adults is living with HIV (Barnette & Whiteside, 2002). In countries where 10% of the adult population have been infected, almost 80% of deaths of young adults aged between 25 and 45 may be associated with HIV (Barnett & Whiteside, 2002).

In South Africa, the first reported cases of HIV/AIDS-related deaths occurred in 1982 (Togni, 1997) as far as homosexuals were concerned. Today, HIV in South Africa is mostly spread through heterosexual contact. Transmission through other modes such as intravenous drug use, blood-on-blood contact and homosexual contact, constitutes a very small proportion of all infections. In 2000, statistics revealed that HIV prevalence in South Africa increased thirty fold in a period of ten years (Kinghorn & Steinberg, 2000). According to Marais (2000), the prevalence rate of 0,76 % recorded in 1990 rose to 22,80% in 2000. This is an overwhelming issue, especially if one takes into account that other countries also had a 1% rate in 1990. In

comparison with Thailand, for instance, South Africa is facing a huge problem, as Thailand reported to have a prevalence rate of 1,5% after ten years (Marais, 2000). Unless major behavioural changes are adequately promoted and realised within South Africa, this figure is projected to more than double in the next decade (Shongwe, 2001).

It appears that HIV/AIDS has both a global and regional impact (Jackson, 2002). The Joint United Nations organisation that only deal with the HIV/AIDS pandemic, UNAIDS (2002), describes two dominant HIV-transmission patterns, namely heterosexual and homosexual relationships (i.e. sexually transmitted), and intravenous drug injecting, or through contact with contaminated blood syringe needles. There are, however, no exclusive patterns, but it is important to understand that the above-mentioned are the predominant modes of transmission.

Besides understanding how HIV/AIDS is transmitted, Gresak and Strachan (2000) asserted that there has been an improvement in the education of people on the subject. It appears that educational imperatives have changed to include gender and equity issues, empowerment, and skills enlistment projects. The rise of organisations such as Treatment Action Campaign (TAC) and National Association of People living with AIDS (NAPWA) has also catapulted the pandemic to the forefront of the media and communities (Gresak & Strachan, 2000), indicating that the pandemic, besides everything else, also affects the economy of the country. In his research, Muwanga (2004) found that in Swaziland there has been an increase in the number of employees taking sick leave in organisations as a result of HIV/AIDS. His results showed that, on average, private sector organisations lose 2,97 days per employee per year to HIV/AIDS-related absenteeism. The manufacturing sector loses 4,93 days per employee per year. Muwanga (2004) further highlights the fact that tuberculosis was the biggest contributor to prolonged absenteeism in the private sector, as it resulted in 70% of sick leave longer than thirty days. AIC Insurance recently conducted a case study on the effects of HIV on absenteeism at a Port Elizabeth manufacturing company. The study showed that HIV-positive employees who were not enrolled for a wellness programme exhibited an absenteeism rate of 3,86%.

Those with confirmed HIV-negative status showed an absenteeism rate of 3,21% during the same period. Other HIV-positive employees engaged in a wellness programme demonstrated an absenteeism rate of only 2,56% – the lowest in the study. It was therefore concluded that

HIV-positive staff on a wellness programme take sick leave less often than their HIV-negative colleagues. However, the study only measured absenteeism and not productivity. It could be that, although the HIV-positive staff on wellness programmes were attending work, they were not as productive at work as their HIV-negative colleagues. HIV/AIDS could reduce productivity due to illness, and may lead to absenteeism, early retirement, more compassionate leave and higher labour turnover.

As a result, Sunter (2001) states that organisations have to establish, as a means of survival, policies and guidelines on how to deal with daily issues that affect employees to ensure the smooth functioning of the organisation and to help employees cope with HIV/AIDS in the workplace. Organisations also have to try and keep the infected employee, who has to deal with numerous issues, committed to and productive in his/her respective tasks. According to Sunter and Whiteside (2002), productivity and profitability appear to be directly and negatively impacted by absenteeism (sickness and funerals), employee morale, increased costs of recruitment and retention of skilled staff, and loss of skill due to sickness and death (Muwanga, 2004; Sunter & Whiteside, 2001).

In order to improve the commitment and productivity of infected employees, their psychological well-being should be enhanced. For the purpose of this study, psychological well-being will refer to the sense of coherence, work locus of control, and coping of infected employees.

Sense of coherence (SOC) is seen as a dispositional orientation that describes how people stay well and manage stress. It is believed to engender, sustain, and enhance health, as well as provide strength in other areas, such as work (Strümpfer, Danana, Gouws, & Viviers, 1998). Antonovsky (1979; 1987) developed the construct, sense of coherence, and defines it as a global orientation that expresses the extent to which one has a pervasive, enduring, though dynamic feeling of confidence, in such a way that (1) the stimuli derived from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement. The definition of sense of coherence includes three dimensions which represent the various concepts, namely comprehensibility, manageability and meaningfulness (Antonovsky, 1987).

The concept of locus of control stems from the attribution theory and the social learning theory (Bothma & Schepers, 1997). It was developed by Rotter (1966) and is described as the extent to which individuals feel that they play a causative role in events in their lives. Spector (1988) defines locus of control as the generalised expectancy that rewards, reinforcements or outcomes in life are controlled either by one's own actions (internal locus) or by other forces (external locus). Spector (1988) states that the internal pole of this continuum refers to the individual's belief that outcomes are the result of internal attributes, whereas the external pole pertains to the individual's belief that outcomes are unrelated to behaviour (Rotter, 1966). Individuals with an internal locus of control will probably feel that they can manage situations in the context of work, because these situations are regarded as being within their sphere of personal control (Judge, Locke, Durham, & Kluger, 1998). Compared to individuals with an external locus of control, they will be less inclined to cope with frustrations in organisations by withdrawing or by reacting aggressively (Rahim & Psenicka, 1996; Spector, 1982). They are also more successful in personal relationships than individuals with an external locus of control (Mayer & Sutton, 1996). From the above it is evident that individuals with an internal locus of control will be inclined to cope better in the workplace and may therefore also cope better with the possibility of being HIV/AIDS positive.

In an environment where employees experience high levels of psychological safety, coupled with high levels of accountability, their performance is optimised (Lapin, 2005). Individuals who feel more accountable in the work environment will take more ownership of their output, which leads to an overall increase in productivity (Lapin, 2005).

In a study conducted by Cruess et al. (2002), change in coping was significantly correlated with lower anxiety, depression, anger, confusion and total mood disturbance, as well as reductions in depressive symptoms. According to Piko (2001), coping includes the cognitive and behavioural strategies which individuals use to manage a stressful situation as well as the negative emotional reaction elicited by that event. There is evidence that ways of coping with stress affect both the mental health and physical and social well-being of a person (Piko, 2001). Coping is also described as the person's cognitive and behavioural efforts to manage (i.e. to reduce, minimise, master or tolerate) the internal and external demands of the person-environment transaction that is appraised as taxing or exceeding the resources of the person (Folkman, 1986).

Coping has two essential dimensions, namely problem focussed coping and emotion focused coping. There is also a mixed coping function. Problem focused coping is aimed at doing something to alter the stressful situation for the better, whereas emotion focused coping is aimed at regulating emotional distress (Bouchard & Sabourin, 1997). Piko (2001) cites eight coping strategies that can be classified in three pertinent dimensions.

Table 1
Coping Strategies

Dimension	Coping Strategy
Problem Focused	Confrontative strategy Planful problem solving strategy
Emotion Focused	Distancing strategy Self controlling strategy Accepting responsibility strategy Positive reappraisal strategy Escape-avoidance strategy
Mixed Function	Seeking social support strategy

Coping strategies classified as active-behavioural (planning and seeking social support) or active-cognitive (finding meaning in an illness and reframing) are associated with more positive affects and higher self-esteem in various populations dealing with chronic illness (Billings & Moos, 1981; Hynes & Werbin, 1977; Spiegel, Bloom, & Yalom, 1981; Yalom & Greaves, 1977). Conversely, denial and avoidance coping strategies are associated with greater depression and distress (Billings & Moos, 1981; Fawzy, Cousins, Fawzy, Kemeny, Ellashof, & Morton, 1990; Namir, Wolcott, Fawzy, & Alumbaugh, 1987). However, traditional models of coping have been developed with consideration of gender and cultural differences. Women, for example, typically employ more varied coping strategies in response to stressful events as compared to men. They also use more expressive strategies, whereas men tend towards problem solving behaviours, particularly in controllable situations (Thoits, 1991).

The perceived inability to cope may produce a loss of self-esteem and self-efficacy, feelings of hopelessness, depression, and an increase in maladaptive, potentially self-destructive behaviours such as high risk sex and substance use/abuse. Kalichman and Stevenson (1997)

cite that interventions, which promote self-efficacy, have also demonstrated reductions in such behaviours amongst women at high risk of HIV infection; a theory which is supported by Murphy, Stein, Schlenger, & Maibach, 2001.

According to Sunter and Whiteside (2000), little research has been conducted to determine the psychological well-being of HIV-infected individuals in the workplace and the relationship thereof with their general health. Within the South African context, no research could be found in this regard. Therefore, the objective of this research is to determine the psychological well-being (i.e. sense of coherence, work locus of control, and coping) of HIV infected employees and to determine the relationship thereof with their general health.

Based on the above, this research will attempt to answer the following questions:

- How is HIV/AIDS in the workplace conceptualised in the literature?
- How are psychological well-being (i.e. sense of coherence, work locus of control, and coping) and general health conceptualised in the literature?
- What is the relationship between sense of coherence and locus of control, and coping strategies of employees infected with HIV/AIDS?
- What is the relationship between psychological well-being (i.e. sense of coherence, work locus of control, and coping) and general health of employees infected with HIV/AIDS?

1.2 RESEARCH OBJECTIVES

The research objectives of this study consist of a general objective and specific objectives.

1.2.1 General objective

The general objective of this study is to investigate the relationship between sense of coherence, locus of control, coping, and general health.

1.2.2 Specific objectives

The specific objectives of this study are:

- to conceptualise psychological well-being (i.e. sense of coherence, work locus of control, and coping) and general health from the literature;
- to conceptualise HIV/AIDS in the workplace from the literature;
- to investigate the relationship between sense of coherence and locus of control, and coping strategies of employees infected with HIV/AIDS; and
- to assess the relationship between psychological well-being (i.e. sense of coherence, work locus of control, and coping) and general health of employees infected with HIV/AIDS.

1.3 RESEARCH METHOD

The research method consists of a literature review and an empirical study.

1.3.1 Literature review

A literature review regarding HIV/AIDS and the psychological well-being of infected employees will be conducted.

1.3.2 Empirical study

The empirical study comprises the research design, the participants, the measuring instruments, and the statistical analysis.

1.3.2.1 Research design

The purpose of a research design is to plan and structure a research project in such a way that it enhances the ultimate validity of the research findings (Mouton & Marais, 1992). A survey design is used to attain the research objectives, by means of which a sample is drawn from a population at a particular point in time. The information that is collected is used to describe the population.

1.3.2.2 Participants

An availability sample ($N = 91$) of HIV infected employees in different organisations is used. The participants consist mainly of black (67,80%) females (60,20%) between 20 and 35 years of age (42,00%), with an education of Grade 12 or lower (48,90%). The average number of years employed in the current organisation ranges from two to five (30,60%). The participants mainly occupied permanent (58,00%) and professional (29,50%) positions.

1.3.2.3 Measuring instruments

The Orientation to Life Questionnaire (OLQ) (Antonovsky, 1993) is used to measure the construct of sense of coherence. The questionnaire consists of 29 items. It contains items measuring the three components of sense of coherence, namely manageability, comprehensibility, and meaningfulness. The scale assesses an individual's global orientation towards coping. According to Antonovsky (1987), the consistently high level alpha coefficients, ranging from 0,84 to 0,93, are illustrative of a reputable degree of internal consistency and the reliability of the OLQ. Test-retest reliability studies indicate alpha coefficients between 0,41 and 0,97 (Antonovsky, 1993). In their study of a random sample of 234 consultants in a life insurance company, Strümpfer and Mlonzi (2001) found an alpha coefficient of 0,92 for the White sample, and 0,74 for the African sample. The three subscales demonstrated Cronbach alpha coefficients of 0,76, 0,80 and 0,86. Kalimo and Vuori (1990) conducted a study on 706 adults, and obtained a reliability coefficient of 0,93. In other South African research, alpha coefficients between 0,83 and 0,93 for the total sense of coherence score were obtained (Coetzer, Muller, & Van der Linde, 2005; Coetzee & Rothmann, 1999; Pretorius & Rothmann, 2001; Rothner, 2005).

The *Work Locus of Control Scale* (WLCS) measures participants' locus of control within the work environment (Spector, 1988). The WLCS consists of 16 items and the expatriates' responses were measured on a 6-point Likert scale, varying from 1 (*disagree very much*) to 6 (*agree very much*). The WCLS consists of two dimensions, namely External Locus of Control (e.g. '*Getting the job you want is mostly a matter of luck*') and Internal Locus of Control ('*A job is what you make of it*'). Spector (1988) reported Cronbach alpha coefficients for the WLCS varying between 0,75 and 0,85. Maram and Miller (1998), as well as Spector (1988), reported evidence of the construct validity of the WLCS. Spector (1988) argued that

the WLCS predicts work behaviour more precisely than general scales, which measure locus of control. Maram and Miller (1998), as well as Spector (1988), found that the WLCS has construct validity. Rothmann and Van Rensburg (2002) reported an alpha coefficient of 0,70 for the WLCS.

The *Coping Orientations to the Problems Experienced Questionnaire* (COPE) (Carver, Scheier, & Weintraub, 1989) was designed to measure both situational and dispositional coping strategies. In the present study, the dispositional version consisting of 53 items was used. Response choices range from 1 ('*I usually don't do this at all*') to 4 ('*I usually do this a lot*'). The COPE measures 14 coping strategies. According to Carver et al. (1989), the development of the COPE was more theoretical or rational than empirical. Theoretically, five scales of the inventory were established as the sub-dimensions of *problem-solving* (Active Coping, Planning, Suppression of Competing Activities, Restraint Coping and Seeking Social Support for Instrumental Reasons); another five scales as sub-dimensions of *emotional coping* (Seeking Social Support for Emotional Reasons, Positive Reinterpretation and Growth, Acceptance, Denial and Turning to Religion); and three as less useful (Focus on and Venting of Emotions, Behavioural Disengagement and Mental Disengagement) coping responses. Carver et al. (1989) submitted the COPE to a principal-factor analysis with oblique rotation, which yielded 14 scales: Active Coping, Planning, Suppression of Competing Activities, Seeking Social Support for Instrumental Reasons, Seeking Social Support for Emotional Reasons, Focus on and Venting Emotions, Denial, Mental Disengagement, Behavioural Disengagement, Acceptance, Restraint Coping, Positive Reinterpretation and Growth, Turning to Religion, and a single item scale, Alcohol/Drug Use. Evidence for the reliability of the COPE scales is mainly derived from the Cronbach alphas, which range from 0,39 (for Mental Disengagement) (Fontaine, Manstead, & Wagner, 1993) to 0,96 (for Alcohol/Drug Use) (Clark et al., 1995). Initial test-retest reliability findings showed that coping tendencies measured by COPE are relatively stable. In previous South African research, Storm and Rothmann (2003) found acceptable alpha values, with inter-item correlation coefficients varying between 0,25 (Acceptance) and 0,65 (Turning to Religion), showing acceptable levels of internal consistency for this questionnaire.

The *General Health Questionnaire* was developed by Goldberg and Hillier (1979) and is used to measure psychological well-being. The original version consists of 60 items (GHQ-60). The 12-item version has been recommended for use as indicator of mental health in

studies concerning work conditions. In this study, the 48-item version is used. Responses are provided on a 4-point Likert scale, which ranges from 0 to 36. A high value of GHQ represents a high level of distress. Reliability of the scale, as measured by Cronbach Alpha, is 0,86.

1.3.2.4 Statistical analysis

The statistical analysis is conducted by means of the SPSS programme (SPSS Inc., 2005). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) are used to describe and analyse the data. Cronbach alpha coefficients are used to assess the reliability of the measuring instruments (Clark & Watson, 1995). Coefficient alphas contain important information regarding the proportion of variance of the items of a scale in terms of the total variance explained by that particular scale.

Pearson product-moment correlation coefficients are used to specify the relationship between the variables. In terms of statistical significance, it was decided to set the value at a 95% confidence interval level ($p \leq 0,05$). Effect sizes (Steyn, 1999) are used to determine the practical significance of the findings. A cut-off point of 0,30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients.

Canonical correlation was used to determine the relationships between the dimensions of burnout, personality traits and coping strategies. The goal of canonical correlation is to analyse the relationship between two sets of variables (Tabachnick & Fidell, 2001). Canonical correlation is considered to be a descriptive technique rather than a hypothesis-testing procedure.

1.4 DIVISION OF CHAPTERS

Chapter 1: Introduction.

Chapter 2: Research Article.

Chapter 3: Conclusions, limitations and recommendations.

1.5 CHAPTER SUMMARY

In this chapter, the problem statement and objectives of the research were discussed. It was also highlighted that AIDS affects the working adult, and this results in the workplace being affected as well. A family structure which comprises children only (child-headed families) also stems from this pandemic. The measuring instruments and research method were explained, and the statistical analysis was described. Statistics reported that in Africa, two out of three people are infected with the AIDS virus, and in South Africa, one out of three is affected. These numbers refer to those who are vocal, and who have been tested. From the literature, it was revealed that absenteeism is also a contributory factor to the sustainability of business. Finally, it is evident that AIDS education is critical in this day and age, and companies should start developing strategies to protect the workplace. Elements of psychological well-being were also defined.

In Chapter 2, the psychological well-being of HIV infected employees will be discussed.

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CHAPTER 2

RESEARCH ARTICLE

THE PSYCHOLOGICAL WELL-BEING OF HIV INFECTED EMPLOYEES IN THE WORKPLACE

ABSTRACT

The objective of this study was to assess the relationship between psychological well-being, coping and general health of HIV infected persons in the workplace. A cross-sectional survey design was used. An availability sample of ($N= 91$) HIV infected persons in the workplace was taken. The following measuring instruments were administered: the General Health Questionnaire, the COPE, the Work Locus of Control Scale, and the Orientation to Life Questionnaire. The results showed that sense of coherence and a low external locus of control were positively related to approach coping strategies, and negatively related to avoidance coping strategies. HIV infected employees who measured high on planning, low on focus on and venting of emotions, and low on mental disengagement, experienced less anxiety and fewer somatic problems.

OPSOMMING

Die doelstelling van hierdie studie was om die verwantskap tussen psigologiese welstand, coping en algemene gesondheid van MIV geïnfekteerde persone in die werksplek te bepaal. 'n Dwaarsnee opname-ontwerp is gebruik. 'n Beskikbaarheidssteekproef van HIV geïnfekteerde persone in die werksplek ($N = 91$) is geneem. Die volgende meetinstrumente is aangewend: Algemene Gesondheidsvraelys, die COPE, die Werk-Lokus-van-Beheer Vraelys en die Lewensoriëntasievraelys. Die resultate het aangetoon dat koherensiesin en 'n lae eksterne lokus van beheer positief verwant was aan benaderings-coping-strategieë en negatief verwant was aan vermydings-coping-strategieë. MIV geïnfekteerde werknemers wat hoog gemeet het op beplanning, laag op fokus op en ventilasie van gevoelens en laag op verstandelike losmaking het angs en somatiese probleme getoon.

The Human Immunodeficiency Virus (HIV), as well as Acquired Immunodeficiency Syndrome (AIDS), poses the most formidable public health problem facing South Africa and has medical and social implications because it is incurable and leads to social problems in the lives of affected people. The pandemic poses a major challenge to everyone. The South African industry will be mostly affected, and therefore will have an important role to play in managing the problem in an appropriate manner. The AIDS pandemic threatens the workplace as it directly affects productivity in the workplace, competitiveness in the country's economy as well as communities and families (Muwanga, 2004). Worst of all, it affects the very existence of the company and all employees, from ordinary labourers to decision-makers (<http://www.unaids.org/en/Issues/Impact-HIV/HIV-in-workplace.asp>).

HIV causes a specific disease affecting the immune system by attacking the T-cells, those parts of the defence mechanism that cope with infection. AIDS is a viral disease that impairs the immune system of the human body, which subsequently falls prey to a great variety of infections that would normally be suppressed by a functioning immune system. AIDS causes the body to lose its ability to fight infections.

HIV/AIDS were first identified in 1979 and 1980 when doctors in the United States of America observed clusters of previously extremely rare diseases (Barnett & Whiteside, 2002). These diseases included a type of pneumonia carried by birds (*pneumocystis carinii*) and a cancer called Kaposi's sarcoma. According to Barnett and Whiteside (2002), the phenomenon was first reported in the *Morbidity and Mortality Weekly Report* of 5 June 1981, published by the U.S. Centre of Disease Control in Atlanta. This report recorded five cases of *pneumocystis carinii*. A month later it reported a cluster of cases of Kaposi's sarcoma in New York. Subsequently, the number of cases of both diseases, which were mainly experienced in New York and San Francisco, rose rapidly and scientists realised that they were dealing with something new (Barnett & Whiteside, 2002).

The first cases of HIV/AIDS were among homosexual men. As a result, the disease was initially called Gay-Related Immune Deficiency Syndrome (GRID) (Barnett & Whiteside, 2002). These authors further cite that the American epidemiologists began to identify cases among other groups, initially mainly haemophiliacs and recipients of blood transfusions. Subsequently, the syndrome was identified among injecting drug users and infants born to

mothers who used drugs (Sunter, 1992). It then became apparent that this was not a 'Gay' disease and was renamed 'Acquired Immunodeficiency Syndrome' (AIDS) (Sunter, 1992). This implies that the virus is not spread through casual or inadvertent contact such as flu or chickenpox. Sunter (1992) further states that the HIV/AIDS virus attacks the immune system and makes it less capable of fighting infections. This implies a reduction in a person's normal immune defence. AIDS is not acknowledged as a disease, but presents itself in a number of complicated illnesses that occur when the immune system fails; hence, it is regarded as a syndrome. According to Evans (2002), AIDS is a fatal illness caused by the gradual destruction of the human immune system through actions of the immunodeficiency virus, commonly referred to as HIV. The virus is transmitted through body fluids, foremost by blood, semen and vaginal secretions (Evans, 2002; Sunter, 2001).

The increase of HIV infection in the 21st century is threatening the world, and particularly the workplace, as it affects the working-class adult (<http://www.unaids.org/en/Issues/Impact-HIV/HIV-in-workplace.asp>). At the end of 2005, of the 40 million people living with AIDS worldwide, the vast majority were aged 15 to 49, and were therefore in the prime of their careers. This fact has critical implications for businesses and national economies, as well as for individual workers and their families (<http://www.unaids.org/en/Issue/Impact-HIV/HIV-in-workplace.asp>). Furthermore, the ratio of wage earners to dependents is growing alarmingly in the worst affected countries, as workers die of AIDS. In some places, financial needs are forcing children to work and older people to return to the labour force. According to Sunter (1992), extensive research has been conducted on the causes of the pandemic and guidelines are continuously provided to assist organisations in preparing for the impact of HIV/AIDS on their survival (Sunter, 1992).

All companies will therefore suffer the consequences of this pandemic. If the employees or their loved ones are suffering from HIV/AIDS, they experience problems such as stress and depression, loss of concentration and low productivity, which eventually result in low work quality and quantity, and affect their job performance negatively.

The International Labour Organisation has drawn up a Code of Practice on HIV/AIDS in the workplace. The loss of workers, skills and experience can increase the burden on the remaining workforce, may lower morale and reduce productivity. For companies, AIDS adds to the burden of training and of providing health, social benefits and pension to employees

(<http://www.unaids.org/en/Issue/Impact-HIV/HIV-in-workplace.asp>). HIV/AIDS creates skilled labour shortages and affects the sustainability of households (Yadavalli, 2001).

Of the more than 23 million people living with HIV/AIDS in the world, more than 94% live in Sub-Saharan Africa, and in South and South East Asia (Yadavalli, 2001). The impact of HIV/AIDS has been severe. It has caused a decrease in life expectancy in, for example, Botswana, Burundi, Cameroon, Congo, Kenya, Rwanda and Zimbabwe (Yadavalli, 2001). According to research conducted on AIDS in Analysis Africa, Volume 8 (1998), by 2010, life expectancy will have dropped to 33 years in Botswana, whereas it could have been 61 in the absence of AIDS. In Zimbabwe, life expectancy will be reduced by 25 years to 38,8 and by 16 years in Uganda. The infection is found to be predominant in poorer countries (7500 out of 10 000 people) and spreads faster due to a lack of education and information (Yadavalli, 2001).

This study emanates from the fact that the HI Virus and AIDS are a threat to society as well as the workplace. HIV/AIDS attacks people at all levels, irrespective of race, age, gender and social orientation. Sustainability of companies is threatened by the pandemic and both the government and businesses have to start developing ways in which to deal with it. In chapter one it is indicated that, due to the rapid dissemination of the disease, two in every three persons are living with the virus and this will affect the workplace stability due to absenteeism. Absenteeism may manifest in the attendance of funerals, caring for loved ones or being excessively sick. Ledwada (2003) argues that, during the first phase of the pandemic, the affected employee would normally be able to continue with his/her work with minimal disruption, even in physically demanding jobs.

The purpose of this study is to understand how HIV/AIDS is conceptualised in the workplace. The focus will be on how affected individuals cope, and this will be discussed by focusing on their psychological well-being in terms of sense of coherence, work locus of control, and coping. The study further aims to address ways in which HIV infected employees cope in their workplace, remain productive as well as concentrate on their psychological well-being after having disclosed their HIV/AIDS status as positive.

According to UNAIDS, AIDS is a critical workplace issue for many reasons. Stigma and discrimination can threaten the fundamental rights of employees living with AIDS. People

with HIV/AIDS experience stress, which may be alleviated by means of support, but they have an added difficulty in that their disease impacts directly on the support they receive. People infected with HIV/AIDS often find themselves alienated emotionally and geographically, especially from their own families (Green, 1983; Wolcott, 1986). In dealing with stigmatisation, companies have developed policies and procedures on how to conduct oneself in the workplace.

If employees are stressed, job performance is affected, and this will have a negative impact on business (Sunter, 2001). This scenario will affect the country's economy as the pandemic depletes the labour force, especially when skilled labour is affected. Productivity and profitability are directly and negatively impacted by absenteeism (sickness and funerals), employee morale, and increased costs of recruitment and retention of skilled staff as well as loss of production. These factors are all steeped in sickness and death (Sunter, 2001).

When employees are stressed and their job performance is poor, they become depressed. People suffering from depression feel sad and may cry often. Activities and people that used to bring them pleasure, fail to do so any longer. Miller and Bord (1998) stated that diagnosis and disclosure of HIV/AIDS status in itself result in major stress for the individual involved. The authors further cite that stress and depression as a result of HIV/AIDS can compromise functioning and well-being in all areas of family life. Depression also changes one's energy level. Furthermore, the authors cite that depressed people often experience feelings of worthlessness, helplessness, guilt and self-blame. They may interpret a minor fault on their part as a sign of incompetence, or interpret minor criticism as condemnation. Major depression can dramatically impair a person's ability to function in social situations and at work.

Finding out that one is infected with HIV (Human Immunodeficiency Virus) can be a frightening experience (Miller & Bord, 1998). One way to fight one's fears is to learn as much as possible about the disease. Knowing about HIV and AIDS will also help one to take good care of oneself. Results indicated that early treatment of HIV helps many people to live longer, healthier lives. It is normal to feel sadness, anxiety and fear when one first learns that one has tested positive for HIV (Miller & Bord, 1998). However, if one has trouble sleeping, eating or concentrating, or if one has thoughts of suicide, then it is wise to consult a doctor. According to Sikkema and Kelly (1995), if one is depressed or feels anxious, treatment may

also help the individual to feel better. Even though people know their HIV status and are exposed to more information regarding the pandemic, the critical issue is how they cope with their situation knowing that they contracted a disease that, at present, has no cure.

According to Pallant and Lae (2002), one of the key supporters of the salutogenic model is Antonovsky (1979, 1987), who proposed the construct sense of coherence (SOC), which he described as ‘a global orientation, a pervasive feeling of confidence that the life events one faces are comprehensible, that one has the resources to cope with the demands of the events, and these demands are meaningful and worthy of engagement’. The SOC has three components, namely comprehensibility, manageability, and meaningfulness, and these components constitute a person’s coherent understanding of the world (Antonovsky, 1979, 1987, 1993). It is important to ask how HIV infected employees comprehend their lives, how they manage, and how meaningful their lives are to them.

The issue of coping should be considered within and beyond the workplace (Folkman & Lazarus, 1984). Do HIV infected individuals physically cope with the daily tasks expected of them by their superiors and team members (colleagues)? Coping is the way in which we deal with or adapt to a threat, physically or mentally (Monat & Lazarus, 1991). According to Folkman and Lazarus (1984), coping encompasses the cognitive and behavioural strategies that individuals use to manage a stressful situation as well as the negative emotional reactions elicited by that event. Folkman and Lazarus (1984) define coping as the person’s cognitive and behavioural efforts to manage the internal and external demands that are appraised as taxing or exceeding the resources of the person. In terms of managing the demands, they refer to reducing, minimising, mastering or tolerating the demands (Aldwin, 1994).

Moos and Shaefer (1993) describe coping as a stabilising factor that could assist individuals to adapt psychologically during stressful situations. It involves the reduction or elimination of stressful events associated with emotional stress by changing behaviour and cognition. Aldwin (1994, pp. 188-214) refers to coping as ‘the use of strategies for dealing with actual or anticipated problems and their attendant negative emotions’. While individuals actively attempt to handle problems, their emotional responses and strategies may not always be fully conscious. The social and cultural environment can influence the appraisal of stress and the use of coping strategies in both direct and subtle ways. Thus, coping is an over-determined phenomenon. It is therefore imperative to learn more about the coping mechanisms that HIV

infected persons have or use to deal with their situations, especially in their daily interaction with other people within the environment they find themselves exposed to.

Strümpfer and Mlonzi (2001) remark that, since a large proportion of humanity spend much of their waking time at work, the world of work provides important endpoints of well-being. According to Strümpfer (1995), salutogenesis points to the broad paradigm, which investigates the human ability to manage stress, to stay healthy and to achieve optimality amidst a variety of stressors. The salutogenic orientation proposes that ‘...we all are, so long as there is breath of life in us, in some measure healthy’ and that all people, at any time, can therefore be placed on a health-ease/disease continuum (Antonovsky, 1987, p. 3).

Salutogenesis refers to the ‘origins of health’, whilst fortigenesis, which is an expansion of the salutogenesis construct and goes beyond the normal concerns of health, refers to the ‘origins of strength’. Thus, from a fortigenic orientation, it is necessary to consider the origins of strength when researching psychological well-being. Antonovsky (1979) is of the opinion that individuals develop ‘generalised resistance resources’ (GRRs) through life experiences, which are individual characteristics that allow for the avoidance or combat of stressors. A feedback loop exists between GRR’s and the salutogenic personality constructs, which is moderated by previous experiences of overcoming stressors. Although the salutogenic orientation initially included only Antonovsky’s sense of coherence concept, various other constructs have since been considered as salutogenic strengths, *inter alia* hardiness, potency, locus of control, self-efficacy and learned resourcefulness. For the purpose of this study (considering its limited scope), only sense of coherence, locus of control, coping and general health were selected as variables in the salutogenic construct, and will subsequently be addressed.

A strong sense of coherence is negatively related to measures of negatives such as anxiety and neuroticism (Carmel & Bernstein, 1989; Flannery & Flannery, 1990), and work stress (Feldt, 1997). Individuals with a strong sense of coherence should be able to make cognitive sense of the workplace, perceiving its stimulation as clear, orderly, structured, consistent and predictable.

Antonovsky (1987) asserts that there are three components of the sense of coherence construct, namely comprehensibility, manageability, and meaningfulness. Comprehensibility

is an indication of the extent to which individuals feel that their internal and external stimuli are clearly structured and consequential. Manageability refers to the extent to which individuals experience life events as manageable and even view these as challenges. Antonovsky (1987) defines manageability as the extent to which a person perceives that resources, which are adequate to meet the demands posed by the confronting stimuli, are at his/her disposal. Meaningfulness relates to the degree to which individuals feel that their lives make sense on an emotional level, rather than only on a cognitive level. Antonovsky (1987) views meaningfulness as the 'motivational element', noting that people with a strong sense of coherence view events as challenges worthy of emotional investment and commitment. In Antonovsky's opinion (1987, p. 111), meaningfulness in the workplace is affected by "a continued experience of participation in socially valued decision-making."

Frenz, Carey, and Jorgensen (1993) found that sense of coherence relates to anxiety, depression and physical symptoms. The question we have to ask ourselves is: how often do HIV infected persons feel anxious and how well do they cope with it? Moreover, how do they really cope with depression and these physical symptoms that are sometimes very visible and unsettling for an individual?

Most infected individuals believe that being HIV positive is a death sentence and means the end of the world, whilst others feel that they still have the strength to achieve goals they set for themselves. It is important for us to know what creates this differentiation. Is it inner strength that drives them to achieve, or does a lack thereof cause them to feel despondent?

Bothma and Schepers (1997) indicate that the concept of locus of control stems from the attribution theory and the social learning theory. The concept of locus of control was developed by Rotter (1966) and is described as the extent to which individuals feel that they play a causative role in events in their lives. Spector (1988) defines locus of control as the generalised expectancy that rewards, reinforcements or outcomes in life are controlled either by one's own actions (internal locus) or by other forces (external locus). Locus of control is conceptualised as a continuum with an internal and external extreme at either end. The internal pole of this continuum refers to the individual's belief that outcomes are the result of internal attributes, whereas the external pole pertains to the individual's belief that outcomes are unrelated to behaviour (Rotter, 1966).

Individuals with an internal locus of control will probably feel that they can manage situations in work context, because these situations are seen as being within their personal sphere of control (Judge, Locke, Durham, & Kluger, 1998). Compared to individuals with an external locus of control, they will be less inclined to cope with frustrations in organisations by withdrawing or by reacting aggressively (Rahim & Psenicka, 1996; Spector, 1982). They are also more successful in personal relationships than individuals with an external locus of control (Mayer & Sutton, 1996). Spector (1986) found that a high level of perceived control was associated with high levels of job satisfaction, commitment and involvement and low levels of stress, absenteeism and turnover.

According to the Code of Good Practice (2000, p. 22), an HIV infected employee cannot be dismissed from work due to having contracted the virus, but may be placed in a position where he/she can perform better, seeing that ill health has adverse effects on his/her performance. This does not mean that the employer guarantees the employee a job if he/she cannot perform due to declining health. This puts a lot of pressure on the infected person. There has to be a clear understanding of the quality of labour (skills, education and training) that exists in order to prepare the labour force for multi-tasking or transferring of skills to appropriate staff. By doing so, this will assist the infected person to cope easily, as he/she will be required to perform a task that is easily managed without feeling inferior. Also, there are no guidelines on what should be done if the infected employee's sick leave is depleted.

From the literature, it is evident that individuals have resources to cope with demands or events within their environment. However, in terms of people infected with HIV, we need to ask ourselves what resources they have, and how they cope with their daily tasks. Folkman and Lazarus (1984) cite that there are physical and mental coping strategies that people use. These can take the form of minimising or becoming tolerant in managing the demands posed by the environment (Aldwin, 1994). Moos and Shaefer (1993) support Aldwin's view that individuals can use strategies to attend to problems/stressors or anticipated problems, in order to find a way of dealing with their emotions. From the salutogenic perspective, Antonovsky (1987) argues that we are all healthy. People with a strong sense of coherence know exactly how to make sense of their environment. They know how they feel and view their life events as challenges, and they strive to make their lives meaningful. This paper aims to emphasise the fact that people experience stress and anxiety in the workplace irrespective of their health condition (inclusive of those who are HIV infected), but they also have well established

coping mechanisms. Moreover, if these employees are supported, they will perform better. As a strategy, coping refers to the different methods that a person may apply to manage his/her circumstances (Folkman & Lazarus, 1984). Individuals can play a critical role in both positive and negative events in their lives. With proper guidance, they will develop the ability to manage their jobs properly, have a positive relationship with their work environment, remain committed and still maintain high levels of job satisfaction, seeing that stress is managed.

Little research has been done to determine the psychological well-being of HIV-infected individuals in the workplace and the relationship thereof with their general health. Within the South African context, no research could be found in this regard. Therefore, the objective of this research is to determine the psychological well-being (i.e. sense of coherence, work locus of control, and coping) of HIV infected employees and to determine the relationship thereof with their general health.

Based on the above discussion, the following hypotheses are formulated:

- H1: There is a significant relationship between coping strategies and general health of HIV infected employees.
- H2: There is a significant relationship between sense of coherence and work locus of control on the one hand, and coping strategies of HIV infected employees.
- H3: There is a significant relationship between sense of coherence, locus of control, and general health of HIV infected employees.

METHOD

Research design

A survey design was used to achieve the research objectives. This design allows for the simultaneous measuring of a group of people of different ages (Kerlinger & Lee, 2000). The design can also be used for the description of the population at a specific point in time, and is suited to the development and validation of questionnaires (Shaughnessy & Zechmeister, 1997).

Participants

The participants could be defined as a randomly selected sample ($N = 91$) of HIV infected employees working in different organisations and hospitals. Descriptive information of the sample is provided in Table 1.

Table 1
Characteristics of the Participants

Item	Category	Frequency (Percentage)
Age	24 years and younger	22 (25,00%)
	25-35 years	37 (42,00%)
	36-45 years	16 (18,20%)
	45 years and older	11 (12,50%)
Gender	Male	33 (37,50%)
	Female	53 (60,20%)
Race	Black	59 (67,80%)
	White	22 (25,00%)
	Other	6 (6,80%)
Education	Matric and lower	43 (48,90%)
	Diploma	23 (26,10%)
	Degree and higher	19 (21,60%)
Years of Service in Current Organisation	Less than one year	22 (25,00%)
	2-5 years	27 (30,70%)
	6-10 years	12 (13,60%)
	11 years and more	14 (15,90%)
Category	Professionals	26 (29,50%)
	Semi- professionals	19 (21,60%)
	Skilled	25 (28,40%)
	Unskilled	11(12,50%)
	Permanent	51 (58,00%)
	Temporary	24 (27,30%)

The sample consisted mainly of black (67,8%) females (60,2%) between 20 and 35 years of age (42%), with an education of grade 12 or lower (48,90%). The average number of years employed in the current organisation ranged from two to five years (30,6%). The participants mainly occupied permanent (58%), professional (29,5%) positions.

Measuring battery

The following measuring instruments were used in the empirical study:

The Orientation to Life Questionnaire (OLQ) (Antonovsky, 1993) was used to measure the construct of sense of coherence. The questionnaire consists of 29 items. It contains items measuring the three components of sense of coherence, namely manageability, comprehensibility and meaningfulness. The scale assesses an individual's global orientation towards coping. According to Antonovsky (1987), the consistently high level alpha coefficients, ranging from 0,84 to 0,93, are illustrative of a reputable degree of internal consistency and the reliability of the OLQ. Test-retest reliability studies indicate alpha coefficients between 0,41 and 0,97 (Antonovsky, 1993). In their study of a random sample of 234 consultants in a life insurance company, Strümpfer and Mlonzi (2001) found an alpha coefficient of 0,92 for the White sample and 0,74 for the African sample. Ortlepp and Friedman (2001) used the OLQ in a study on 130 trauma counsellors, and obtained a Cronbach alpha coefficient of 0,91 for the total OLQ. The three subscales demonstrated Cronbach alpha coefficients of 0,76; 0,80 and 0,86. Kalimo and Vuori (1990) conducted a study on 706 adults, and obtained a reliability coefficient of 0,93. In other South African research, alpha coefficients between 0,83 and 0,93 for the total sense of coherence score were obtained (Coetzer, Muller, & Van der Linde, 2005; Coetzee & Rothmann, 1999; Pretorius & Rothmann, 2001; Rothner, 2005).

The *Work Locus of Control Scale (WLCS)* measures participants' locus of control within the work environment (Spector, 1988). The WLCS consists of 16 items and the expatriates' responses were measured on a 6-point Likert scale, varying from 1 (*disagree very much*) to 6 (*agree very much*). The WCLS consists of two dimensions, namely External Locus of Control (e.g. '*Getting the job you want is mostly a matter of luck*') and Internal Locus of Control ('*A job is what you make of it*'). Spector (1988) reported Cronbach alpha coefficients for the WLCS varying between 0,75 and 0,85. Maram and Miller (1998), and Spector (1988), reported evidence of the construct validity of the WLCS. Spector (1988) argued that the WLCS predicts work behaviour more precisely than general scales that measure locus of control. Maram and Miller (1998) and Spector (1988) found that the WLCS has construct validity. Rothmann and Van Rensburg (2002) reported an alpha coefficient of 0,70 for the WLCS.

The *Coping Orientations to the Problems Experienced Questionnaire* (COPE) (Carver, Scheier, & Weintraub, 1989) was designed to measure both situational and dispositional coping strategies. In the present study, the dispositional version consisting of 53 items was used. Response choices range from 1 ('*I usually don't do this at all*') to 4 ('*I usually do this a lot*'). The COPE measures 14 coping strategies. According to Carver et al. (1989), the development of the COPE was more theoretical or rational than empirical. Theoretically, five scales of the inventory were established as the sub-dimensions of *problem-solving* (Active Coping, Planning, Suppression of Competing Activities, Restraint Coping and Seeking Social Support for Instrumental Reasons); another five scales as sub-dimensions of *emotional coping* (Seeking Social Support for Emotional Reasons, Positive Reinterpretation and Growth, Acceptance, Denial and Turning to Religion); and three as less useful (Focus on and Venting of Emotions, Behavioural Disengagement and Mental Disengagement) coping responses. Carver et al. (1989) submitted the COPE to a principal-factor analysis with oblique rotation, which yielded 14 scales: Active Coping, Planning, Suppression of Competing Activities, Seeking Social Support for Instrumental Reasons, Seeking Social Support for Emotional Reasons, Focus on and Venting of Emotions, Denial, Mental Disengagement, Behavioural Disengagement, Acceptance, Restraint Coping, Positive Reinterpretation and Growth, Turning to Religion and a single item scale, Alcohol/Drug Use. Evidence for the reliability of the COPE scales is mainly derived from the Cronbach alphas, which range from 0,39 (for Mental Disengagement) (Fontaine, Manstead, & Wagner, 1993) to 0,96 (for Alcohol/Drug Use) (Clark et al., 1995). Initial test-retest reliability findings showed that coping tendencies measured by COPE are relatively stable. In previous South African research, Storm and Rothmann (2003) found acceptable alpha values, with inter-item correlation coefficients varying between 0,25 (Acceptance) and 0,65 (Turning to Religion), thus showing acceptable levels of internal consistency for this questionnaire.

The *General Health Questionnaire* was developed by Goldberg (1979), and is used to measure psychological well-being. The 12-item version has been recommended for use as indicator of mental health in studies of work conditions. In this study, the 48-item version is used, and responses are given on a 4-point Likert scale. The total scale ranges from 0 to 36. A high value of GHQ represents a high level of distress. Reliability of the scale, as measured by Cronbach Alpha, is 0,86.

A *biographical questionnaire* was developed to gather information about the demographical

characteristics of the participants. Information gleaned included age, gender, race, education, and years employed in current position.

Statistical analysis

The statistical analysis was conducted by means of the SPSS programme (SPSS Inc., 2005). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to describe and analyse the data. Cronbach alpha coefficients were used to assess the reliability of the measuring instruments (Clark & Watson, 1995). Coefficient alphas contain important information regarding the proportion of variance of the items of a scale in terms of the total variance explained by that particular scale.

Pearson product-moment correlation coefficients were used to specify the relationship between the variables. In terms of statistical significance, it was decided to set the value at a 95% confidence interval level ($p \leq 0,05$). Effect sizes (Steyn, 1999) were used to determine the practical significance of the findings. A cut-off point of 0,30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients.

Canonical correlation was used to determine the relationships between the dimensions of burnout, personality traits and coping strategies. The goal of canonical correlation is to analyse the relationship between two sets of variables (Tabachnick & Fidell, 2001). Canonical correlation is considered to be a descriptive technique rather than a hypothesis-testing procedure.

RESULTS

The descriptive statistics, alpha coefficients and inter-item correlation of the measuring instruments, namely the OLQ, WLCS, COPE, and GHQ are provided in Table 2.

Table 2

Descriptive Statistics and Alpha Coefficients of the OLQ, WLCS, COPE, and GHQ

Item	Mean	SD	Skewness	Kurtosis	α
OLQ					
Sense of Coherence	122,92	16,80	0,01	0,31	0,71
WLCS					
Internal Locus of Control	36,44	7,21	-0,66	0,52	0,84
External Locus of Control	25,13	9,64	0,29	-0,56	0,88
COPE					
Active Coping	9,41	2,14	-0,65	-0,58	0,65
Planning	9,80	2,13	-0,95	0,37	0,71
Seeking Support –Instrumental	9,48	2,84	-0,88	-0,35	0,88
Seeking Support – Emotional	11,88	3,57	-0,62	-0,58	0,83
Positive Reinterpretation and Growth	12,39	3,23	-0,66	-0,69	0,78
Acceptance	9,22	2,56	-0,54	-0,81	0,74
Turning to Religion	13,19	2,72	-0,89	0,29	0,73
Focus on and Venting of Emotions	7,39	2,56	0,13	-0,72	0,69
Denial	8,14	3,50	0,58	-0,46	0,76
Behavioural Disengagement	6,01	2,54	0,67	-0,12	0,63
Mental Disengagement	10,60	3,15	-0,37	-0,71	0,65
GHQ					
Somatic	14,00	6,50	0,67	-0,87	0,71
Anxiety	14,71	6,43	0,67	-0,78	0,75
Social dysfunction	14,73	5,08	0,70	0,04	0,73
Depression	11,56	6,51	1,13	-0,23	0,70

Table 2 shows that acceptable Cronbach alpha coefficients varying from 0,71 to 0,89 were obtained. Two sub-scales of the COPE, namely Restraint Coping and Suppressing Competing Activities, obtained alpha coefficients lower than 0,55 and these scales were therefore excluded from the subsequent analysis. The other alpha coefficients compare reasonably well with the guideline of 0,70 (0,55 in basic research), demonstrating that a large portion of the variance is explained by the dimensions (internal consistency of the dimensions) (Nunnally & Bernstein, 1994). It is evident from Table 4 that most of the scales of the measuring instruments have relatively normal distributions, with low skewness and kurtosis.

The product-moment correlation coefficients between psychological well-being (i.e. sense of coherence, work locus of control, and coping) and general health are provided in Table 3.

Table 3

Pearson Correlations between the Constructs

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Sense of Coherence	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Internal Locus of Control	0,03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. External Locus of Control	-0,38**	0,03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Active Coping	0,26	0,23*	-0,21	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Planning	0,22	0,43**	-0,38**	0,69***	-	-	-	-	-	-	-	-	-	-	-	-	-
6. Seeking Social Support (IR)	0,22	0,25*	-0,16	0,49**	0,54***	-	-	-	-	-	-	-	-	-	-	-	-
7. Seeking Social Support (ER)	0,26	0,24*	-0,20	0,45**	0,45**	0,85***	-	-	-	-	-	-	-	-	-	-	-
8. Positive Reinterpretation	0,37**	0,25*	-0,19	0,61***	0,56***	0,53**	0,58***	-	-	-	-	-	-	-	-	-	-
9. Acceptance	0,28*	0,27*	-0,25*	0,68***	0,64***	0,42**	0,46**	0,45**	-	-	-	-	-	-	-	-	-
10. Turning to Religion	-0,26	0,14	0,09	0,12	0,06	0,17	0,18	0,05	0,29*	-	-	-	-	-	-	-	-
11. Focus on and Venting of Emotions	-0,27*	0,16	0,02	-0,08	-0,03	0,28*	0,24*	0,08	0,08	0,29*	-	-	-	-	-	-	-
12. Denial	-0,41**	-0,22	0,34**	0,06	0,01	0,01	0,08	0,02	0,02	0,19	0,19	-	-	-	-	-	-
13. Behavioural Disengagement	-0,44**	-0,17	0,16	0,07	-0,22	0,07	0,06	-0,24*	-0,06	0,20	0,34**	0,24*	-	-	-	-	-
14. Mental Disengagement	-0,28*	-0,02	0,15	0,20	0,05	0,10	0,22	0,10	0,35**	0,28*	0,28*	0,37**	0,31**	-	-	-	-
15. Somatic Symptoms	-0,11	-0,10	0,27*	-0,37**	-0,26*	-0,13	-0,12	-0,00	0,22	-0,13	0,26*	0,22	-0,04	-0,01	-	-	-
16. Anxiety	-0,08	-0,05	0,18	-0,38**	-0,33**	-0,17	-0,20	-0,15	-0,23	0,16	0,37**	0,19	0,07	-0,01	0,80***	-	-
17. Social dysfunction	-0,05	-0,19	0,13	-0,24	-0,10	-0,17	-0,24*	-0,19	-0,14	0,09	0,14	0,29*	0,11	-0,03	0,76***	0,76***	-
18. Depression	0,07	0,01	0,24	-0,30**	-0,12	0,12	0,08	-0,05	-0,23	0,08	0,29*	0,18	-0,03	0,05	0,72***	0,79***	0,72***

* $p < 0,05$

+ $r > 0,30$ – practically significant (medium effect)

++ $r > 0,50$ – practically significant (large effect)

Regarding the relationships between sense of coherence, locus of control and coping strategies, Table 3 shows that Sense of Coherence is statistically significantly and negatively related to an External Locus of Control ($p < 0,05$; medium effect), Denial ($p < 0,05$; medium effect), and Behavioural Disengagement ($p < 0,05$; medium effect). Sense of Coherence is statistically significantly and positively related to Positive Reinterpretation and Growth ($p < 0,05$; medium effect). An Internal Locus of Control is statistically significantly and positively related to Planning ($p < 0,05$; medium effect). An External Locus of Control is statistically significantly and negatively related to Planning ($p < 0,05$; medium effect), and positively related to Denial ($p < 0,05$; medium effect).

Regarding general health and coping strategies, Table 3 shows that Somatic Symptoms is statistically significantly and negatively related to Active Coping ($p < 0,05$, medium effect). Anxiety is statistically significantly and negatively related to Active Coping ($p < 0,05$, medium effect) and Planning ($p < 0,05$, medium effect). Anxiety is statistically significantly and positively related to Focus on and Venting of Emotions ($p < 0,05$, medium effect). Depression is statistically significantly and negatively related to Planning ($p < 0,05$, medium effect).

The results of the canonical analysis of coping strategies and health are provided in Table 4. The first set of coping strategies included Active Coping, Planning, Seeking Support for Instrumental Reasons, Positive Reinterpretation and Growth, Acceptance, Turning to Religion, Focus on and Ventilation of Emotions, Denial, Behavioural Disengagement and Mental Disengagement. The health set included Somatic symptoms, Anxiety, Social Dysfunction and Depression.

Table 4

Results of the Canonical Analysis: Coping Strategies and Health

	First Canonical Variate	
	Correlation	Coefficient
Coping set		
Active Coping	0,28	0,36
Planning	0,55	0,59
Seeking Support for Instrumental Reasons	0,25	-0,43
Positive Reinterpretation and Growth	-0,13	-0,65
Acceptance	0,18	-0,10
Turning to Religion	0,14	-0,26
Focus on and Ventilation of Emotions	-0,51	-0,43
Denial	-0,01	0,53
Behavioural Disengagement	0,02	0,33
Mental Disengagement	-0,31	-0,61
Health set		
Somatic Symptoms	-0,48	-1,57
Anxiety	-0,31	-0,11
Social Dysfunction	0,16	1,20
Depression	0,05	0,36
Canonical correlation	0,77	

The first canonical correlation was 0,78 (60% overlapping variance). The other three canonical correlations were 0,40, 0,25 and 0,17 respectively. With all four canonical correlations included, $F(44, 109,08) = 1,60, p < 0,02$. Subsequent F-tests were not statistically significant ($p < 0,01$). The first pair of canonical variates, therefore, accounted for the significant relationships between the two sets of variables. Data on the first pair of canonical variates appear in Table 4. With a cut-off correlation of 0,30, the variables in the coping set that correlated with the first canonical variate were Planning (0,55), Focus on and Venting of Emotions (-0,51), and Mental Disengagement (-0,31). The variables in the ill health set that correlated with the first canonical variate include Somatic Symptoms (-0,48) and Anxiety (-0,31). Based on this finding, Hypothesis 1 was accepted as far as somatic symptoms and anxiety are concerned.

The results of the canonical analysis of psychological strengths and coping strategies are indicated in Table 5. The first set of psychological strengths included Sense of Coherence, Internal Locus of Control, and External Locus of Control. The coping set included Active Coping, Planning, Seeking Support for Instrumental Reasons, Positive Reinterpretation and Growth, Acceptance, Turning to Religion, Focus on and Ventilation of Emotions, Denial, Behavioural Disengagement and Mental Disengagement.

Table 5

Results of the Canonical Analysis: Psychological Strengths and Coping Strategies

	First Canonical Variate	
	Correlation	Coefficient
Psychological strengths set		
Sense of Coherence	0,97	0,89
Internal Locus of Control	0,17	0,16
External Locus of Control	-0,60	-0,17
Coping set		
Active Coping	0,43	-0,01
Planning	0,47	-0,04
Seeking Support for Instrumental Reasons	0,41	0,08
Seeking Support for Emotional Reasons	0,47	0,17
Positive Reinterpretation and Growth	0,56	0,35
Acceptance	0,51	0,36
Turning to Religion	-0,25	-0,10
Focus on and Ventilation of Emotions	-0,32	-0,07
Denial	-0,58	-0,40
Behavioural Disengagement	-0,53	-0,18
Mental Disengagement	-0,36	-0,46
Canonical correlation	0,84	

The first canonical correlation was 0,84 (71% overlapping variance). The other two canonical correlations were 0,70, and 0,55 respectively. With all three canonical correlations included, $F(33, 66,47) = 2,40; p < 0,01$. Subsequent F-tests were not statistically significant ($p < 0,01$). The first pair of canonical variates, therefore, accounted for the significant relationships

between the two sets of variables. Data on the first pair of canonical variates appear in Table 5.

With a cut-off correlation of 0,30, the variables in the coping set that correlated with the first canonical variate were Active Coping (0,43), Planning (0,47), Seeking Support for Instrumental Reasons (0,41), Seeking Support for Emotional Reasons (0,47), Positive Reinterpretation and Growth (0,56), Acceptance (0,51), Focus on and Ventilation of Emotions (-0,32), Denial (-0,58), Behavioural Disengagement (-0,53), and Mental Disengagement (-0,36). The variables in the psychological strengths set that correlated with the first canonical variate include Sense of Coherence (0,97) and External Locus of Control (-0,60). Based on this finding, Hypothesis 2 is accepted as far as sense of coherence and an external locus of control is concerned.

No statistically significant canonical correlation was found between psychological strengths (such as sense of coherence and internal locus of control) and health. Hypothesis 3 is therefore rejected.

DISCUSSION

The objective of this study was to assess the relationship between psychological well-being, coping and General Health of HIV infected persons in the workplace. The results show that there is a significant relationship between three coping strategies (low planning, high ventilation of emotions and high mental disengagement) and two aspects of general health, namely somatic symptoms and anxiety of HIV infected employees. A strong sense of coherence and a low external locus of control were related to higher approach coping strategies and lower avoidance coping strategies.

The results showed that coping strategies of HIV infected employees were related to aspects of their general health, including somatic symptoms, anxiety and depression. Somatic symptoms was negatively related to active coping. Anxiety was negatively related to active coping and planning, and negatively related to ventilation of emotions. Depression was negatively related to planning. Therefore, HIV infected employees who measured lower on planning and active coping, and higher on ventilation of emotions, were more inclined to show ill health symptoms.

HIV infected employees who showed a strong sense of coherence (compared to those with a weak sense of coherence) were less inclined to cope through denial and behavioural disengagement, and more inclined to reinterpret stimuli in a positive way. This might result because they cognitive sense of the workplace, perceiving its stimulation as clear, ordered, structured, consistent and predictable information. They should experience their work as consisting of experiences that are bearable, with which they can cope, and as challenges that they can meet by availing themselves of personal resources or resources under the control of legitimate others. Lastly, they should be able to make emotional and motivational sense of work demands as welcome challenges, worthy of engaging in and investing their energies in (Strümpfer, 1995). Although Fenz, Carey, and Jorgensen (1993) found that sense of coherence was related to depression and anxiety, no such relationships were found in this study.

HIV infected employees who have a low external locus of control (compared with those with a high external locus of control) were more inclined to use planning as a coping strategy and less inclined to use denial as a strategy. Furthermore, it was reported that the internal locus of control is significantly related to planning, and persons who attribute their success or failure to internal locus of control are good planners, as they can comprehend their problems and develop coping strategies in order to deal with those problems. This can be seen as a way of managing their well-being. Those who attribute their success and failure to the external environment will always turn out to be poor planners, as they can not see themselves as causes to their stress, but seek answers elsewhere within the environment. Due to poor planning, there will be low levels of acceptance and an increase in anxiety and depression (Monat & Lazarus, 1991).

The canonical analysis showed that coping strategies of HIV infected persons were strongly positively related to their sense of coherence and a low external locus of control. Approach coping strategies such as active coping, planning, seeking support for instrumental reasons, seeking support for emotional reasons, positive reinterpretation and growth, and acceptance were positive related to a strong sense of coherence and a low external locus of control. Avoidance coping strategies, such as focus on and ventilation of emotions, denial, behavioural disengagement, and mental disengagement, were negatively related to sense of coherence and positively related to an external locus of control. Therefore, it can be deduced that HIV infected employees who comprehend stimuli, who find challenges to be manageable and who find their lives meaningful, are inclined to use approach coping strategies. They are

also less inclined to use avoidance coping strategies.

Psychological strengths (such as a strong sense of coherence, internal locus of control and a low external locus of control) were not related to health outcomes. However, coping strategies were related to health outcomes of HIV infected employees. It was found that people who scored high on planning, low on focus on and venting of emotions, and who experienced low mental disengagement, experienced less anxiety and fewer somatic problems. There is a positive correlation between planning and venting of emotions on the one hand, and anxiety and somatic symptoms on the other hand. Therefore, it seems that psychological strengths strongly impact on coping strategies of HIV infected employees, which in turn affect anxiety and somatic symptoms.

This study had various limitations. The first limitation of this study was that a cross-sectional design was used, which implies that causal inferences cannot be made. The causality of relationships can therefore not be determined. Longitudinal designs could help to clarify the relationships between variables in this study with regard to the findings concerning ill health (physical and psychological) and organisational commitment (both from and towards the organisation). A second limitation was that data was collected through self-report questionnaires and thus have the potential to inflate the observed relationships spuriously; introducing what is termed 'method variance' or 'nuisance'. Thirdly, the sample size was small. It might also have been difficult for HIV infected employees to participate in the study because they might have feared stigmatisation.

RECOMMENDATIONS

Any research that pertains to HIV/AIDS should be conducted across all levels of the population, irrespective of employment status, as there are infected people who are unemployed but who can still contribute towards the best manner in which to deal with the issue.

- Access to more information regarding the subject should be created within companies and communities.

- Databases on the prevailing support structures for infected employees and their families should be created, and access should be readily available.
- Companies and institutions should let infected individuals decide if they want to participate in research or not.
- Future research could also differentiate between different ethnic groups and their experiences.
- Future research may use bigger samples or qualitative research methods, seeing that sampling might be biased.

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CHAPTER 3

CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

In this chapter, conclusions will be drawn on the literature review as well as the empirical study, limitations of the study will be highlighted and recommendations for further studies will be made.

3.1 CONCLUSION

The findings of this research will be summarised according to the objectives set for the research.

The first objective of the research was to conceptualise the definition of AIDS in the literature. The phenomenon of HIV/AIDS has been conceptualised as an acquired disease, a virus that affects an individual's immune system strongly. It is very clear from the literature that, from a statistical point of view, HIV/AIDS is a rampant killer throughout the world, particularly in sub-Saharan Africa. The complexities that plague this region, such as poverty, denial, poor leadership, illiteracy, women's vulnerability and disenchantment of intimacy, make responses that empower its people so vital and critical.

In South Africa, government institutions and Non Governmental organisations are trying their level best to educate the people about the disease itself, how is it contracted, how to stay negative, and for those who are already infected, how to conduct themselves in order to avoid re-infections. A stance which is also adopted by retail industry at the cost of insurance is continuously increasing. In Lesotho, the government's task is still at a primary level, where individuals are encouraged to have themselves tested and know their status. Botswana and Uganda have advocated the issue so well that the rate of new infections has drastically declined.

The second objective was to conceptualise psychological well-being, (i.e. sense of coherence, work locus of control, coping and general health). The concept of psychological well-being is broad, and for the purpose of this research, only four constructs were used. These are self-efficacy, sense of coherence, coping, and general health. In defining self efficacy, Orpen

(1999) states that it is not so much concerned with an individual's skills, but with whether or not he/she believes that he/she can use these skills to reach certain goals, such as performing exceedingly well. One should ask whether or not being HIV positive prevents a person from performing his/her duties properly, and whether or not the 'status' determines his/her success or general health.

This leads us to the next construct, namely locus of control, which is the extent to which individuals feel that they play a causative role in the events in their lives. People with an external locus of control believe that whatever happens in their lives comes from external factors, whereas those with an internal locus of control will be more likely to take responsibility for their own actions.

Sense of coherence has three core components, namely comprehensibility, manageability, and meaningfulness. In terms of comprehensibility, the issue is whether or not people understand the illness that affects them, and whether or not they have enough information to comprehend the situation as well as the implications they are facing.

Strümpfer (1995) summarises the basic argument that, in terms of the three components of sense of coherence, someone with a strong sense of coherence is more likely than someone with a weak sense of coherence to:

- comprehend the nature and dimensions of an acute or chronic stressor and define or re-define it as one to which that person need not succumb (comprehensibility);
- perceive stressors as manageable and therefore to select appropriate resources from those within that person's own sphere of control, or available from others, rather than to react with helplessness (manageability); and
- be motivated to approach stressors as challenges worthy of engagement and investment of energy, and as promising meaningful awards, rather than as paralysing threats that cause one to react with negative behaviour based upon self-fulfilling prophecies (meaningfulness).

It is important that individuals, whether they are HIV positive or not, are empowered with as much information as possible for them to make the right choices concerning their needs and values.

In terms of manageability, one is confronted with the issue of how to cope with or manage the situation. Do HIV infected employees go for counselling to cope? What forms of psychological interventions or therapies are available for them in order to cope? Do they join support groups or have any other strategy that helps them to cope better? Individuals may join support groups, irrespective of whether or not the organisation provides such a service, seeing that it is important for one's growth to surround oneself with people who share a common problem, as they may be more knowledgeable than oneself. In these groups, people face the same challenges and assist each other on how to handle those challenges. Furthermore, support groups provide a sense of security, and individuals know they can be 'themselves' in the presence of other members and uplift other members when their spirits are dampened.

Most organisations have developed their wellness programmes or outsourced those services to external agencies that handle the Employee Awareness Programme (EAP) or AIDS helpline. Others have linked up with Medical Aid Schemes. Discovery Health, for example, provides a lifestyle programme (Vitality) where health matters are taken seriously. Moreover, employees can join a gym to keep healthy and fit.

For individuals whose health is deteriorating, the company should be flexible in terms of the hours that an employee has to work, and should provide sufficient breaks. Most companies in the pharmaceutical industry, for example, subsidise medication costs for their employees and family members, and others provide a canteen to ensure an excellent diet plan.

The third objective was to investigate the relationship between sense of coherence, locus of control, and coping strategies of employees infected with HIV.

HIV infected employees who showed a strong sense of coherence (compared to those with a weak sense of coherence) were less inclined to cope through denial and behavioural disengagement, and more inclined to reinterpret stimuli in a positive way. Those who had a low external locus of control (compared with those with a high external locus of control) were more inclined to use planning as a coping strategy and less inclined to use denial as a strategy.

Furthermore, it was reported that the internal locus of control is significantly related to

planning, and persons who attribute their success or failure to internal locus of control are good planners, as they can comprehend their problems and develop coping strategies in order to deal with those problems. This can be seen as a way of managing their well-being. Those who attribute their success and failure to the external environment will always turn out to be poor planners, as they can not see themselves as causes to their stress, but seek answers elsewhere within the environment. Due to poor planning, there will be low levels of acceptance and an increase in anxiety and depression (Monat & Lazarus, 1991).

Coping strategies of HIV infected persons were strongly positively related to their sense of coherence and a low external locus of control. Approach coping strategies such as active coping, planning, seeking support for instrumental reasons, seeking support for emotional reasons, positive reinterpretation and growth, and acceptance were positive related to a strong sense of coherence and a low external locus of control. Avoidance coping strategies, such as focus on and ventilation of emotions, denial, behavioural disengagement, and mental disengagement, were negatively related to sense of coherence and positively related to an external locus of control. Therefore, it can be concluded that HIV infected employees who comprehend stimuli, who find challenges to be manageable and who find their lives meaningful, are inclined to use approach coping strategies. They are also less inclined to use avoidance coping strategies.

The fourth objective of this study was to assess the relationship between psychological well-being (i.e. sense of coherence, work locus of control, and coping) and general health of employees infected with HIV/AIDS.

It can be concluded that coping strategies of HIV infected employees are related to aspects of their general health, including somatic symptoms, anxiety and depression. Somatic symptoms is negatively related to active coping. Anxiety is negatively related to active coping and planning, and positively related to ventilation of emotions. Depression is negatively related to planning. HIV infected employees who measured lower on planning and active coping, and higher on ventilation of emotions, were more inclined to show ill health symptoms.

Psychological strengths (such as a strong sense of coherence, internal locus of control and a low external locus of control) were not related to health outcomes. However, coping strategies were related to health outcomes of HIV infected employees. It was found that

people who scored high on planning, low on focus on and venting of emotions, and who experienced low mental disengagement, experienced less anxiety and fewer somatic problems. There is a positive correlation between planning and venting of emotions on the one hand, and anxiety and somatic symptoms on the other hand. It can be concluded that sense of coherence and locus of control impact on coping strategies of HIV infected employees, which in turn affect their anxiety and somatic symptoms.

3.2 LIMITATIONS OF THE STUDY

This study had the following limitations:

- A cross-sectional design was used, which implies that causal inferences cannot be made. The causality of relationships can therefore not be determined. Longitudinal designs could help to clarify the relationships between variables in this study with regard to the findings concerning ill health (physical and psychological) and organisational commitment (both from and towards the organisation).
- Data was collected through self-report questionnaires and thus has the potential to inflate the observed relationships spuriously; introducing what is termed 'method variance' or 'nuisance'.
- The sample size was small. Furthermore, it might have been difficult for HIV infected employees to participate in the study because they might have feared stigmatisation.

3.3 RECOMMENDATIONS

The following recommendations are made to solve the research problem:

- Access to more information regarding HIV/AIDS should be created within companies and communities.
- A database on the prevailing support structures for infected employees should be created, and access should be readily available.

- It is important for infected individuals to tell their own stories; this will help companies and individuals to stop thinking of what infected people need. Instead, they should tell us what is going on in their minds and what activities add meaning to their lives. The company should endeavour to link those issues with organisational values.
- Organisations can contribute to the development of employees' sense of coherence by giving information in a consistent, structured, ordered and understandable format (comprehensibility) , by ensuring supervisor and social support (manageability), and by ensuring fit between the infected employee and the tasks expected of him or her.

The following recommendations for future research are made:

- Future research may use larger samples or qualitative research methods, seeing that sampling might be biased.
- Future research could also differentiate between different ethnic groups and their experiences.

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