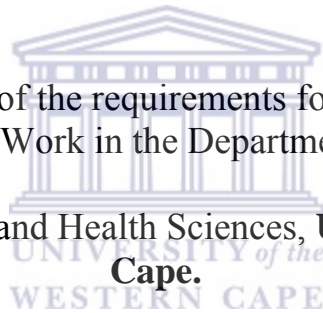


**EMPLOYEE KNOWLEDGE, ATTITUDE AND PRACTICES RELATING TO
HIV/AIDS AT MINING COMPANY IN NAMIBIA**

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Submitted in fulfillment of the requirements for the degree of Magister
Artium in Social Work in the Department Social Work.

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ABSTRACT

A global prospecting and mining leader recognizes HIV/AIDS as a threat to the company and its employees. The management has committed them to have a proactive approach trying to minimize the impact of this killing disease by putting in place effective workplace programmes. However, programmes can only be successful if the employees' needs regarding knowledge, attitudes and sexual practices have been thoroughly researched identified. The aim of this study was to do an explorative descriptive study of the knowledge, attitudes, perceptions and behaviours of the employees of a mining company in Namibia on HIV/AIDS.

The objectives were:

- ◆ To measure the overall knowledge levels as well as attitudes and sexual practices of DBMN employees on HIV and STD's.
- ◆ To determine whether there was a difference in the knowledge levels, attitudes and sexual practices of employees in different job categories, age groups, marital status, religion and education level.
- ◆ To measure risky sexual behaviours of participants.

All employees (550) of this mining company were invited to participate in the survey and 226 employees responded. A self-constructed questionnaire was used to collect data administered in a group setting. The questionnaire was regarded as having content validity and the SPSS program was be utilized for descriptive statistics. Utilizing the ratio data developed through the indexes, an analysis of variance (ANOVA) was conducted to determine significant difference between the means of the groups in comparison. Because multiple comparisons were done, a post hoc test (Fisher LSD) was used to determine significant differences between group means.

KEYWORDS

Attitude

Behaviour Change

Business Costs

HIV/AIDS

Human Capital Losses

Knowledge

Prevalence

Sexual Practices

Wellness

Workplace Programmes



DECLARATION

I declare that the study “*Employee Knowledge, Attitude and Practices (KAP) Relating HIV/AIDS at a Mining Company in Namibia*” is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Elsabé Grötzinger

May 2006

Signed:



ACKNOWLEDGEMENTS

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A word of appreciation goes to my family, especially to my husband Linley for their sacrifices and understanding.



ACRONYMS

| | |
|---------------|---|
| AIDS | Acquired Immune-deficiency Virus |
| ARRM | AIDS Risk Reduction Model |
| ART | Anti-retroviral Therapy |
| DBMN | De Beers Marine Namibia |
| DBGC | De Beers Group of Companies |
| BRM | Behavioural Risk Management |
| MRA | Behavioural Risk Assessment |
| EAP | Employee Assistance Programme |
| FHI | Family Health International |
| GBC | Global Business Coalition of HIV/AIDS |
| HBM | Health Belief Model |
| HIV | Human Immune-deficiency Virus |
| ILO | International Labor Organization |
| KAP | Knowledge, Attitude and Practice |
| PHA | People Living with AIDS |
| SCT | Social Cognitive / Learning Theory |
| STI'S | Sexual Transmitted Diseases |
| UNAIDS | Joint United Nations Programme on HIV/AIDS. |
| VCT | Voluntary Counselling and Testing |
| WPP | Workplace Programme |

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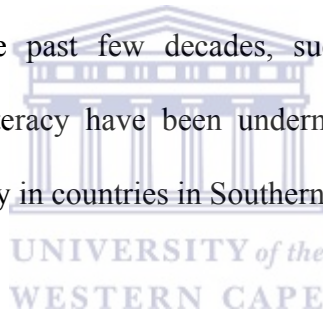
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CHAPTER ONE: CONTEXT AND ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Human Immuno-deficiency Virus (HIV) leading to Acquired Immune Deficiency Syndrome (AIDS) is the leading cause of death in many southern African countries (Bloom, Mahal, & River Paths Associates, 2002). HIV has globally been a threat to human development, destroying communities, businesses, and households. The impact of HIV/AIDS in Southern Africa is not just a health calamity, but it poses serious threats to African societies and to the economic development of countries in ways that are not always directly noticeable (Beresford, 2001). The economic and developmental growth of the past few decades, such as improved health, life expectancy, education and literacy have been undermined by the severity of the impact of HIV/AIDS especially in countries in Southern Africa.



The impact of HIV/AIDS in Namibia is multi-fold. According to the 2001 Population and Housing Census conducted by the Ministry of Health and Social Services (MHSS), “the number of deaths has increased 80% in the three preceding years”. The MHSS estimates that between 50 – 70 % of hospital admissions are HIV/AIDS related (Ministry of Health and Social Services, 2004). The biannual surveys of HIV prevalence among pregnant women attending antenatal

clinics conducted by MHSS indicate that the highest infection rate falls among the ages of 25 – 39. That includes the most skilled, experienced and productive age group of the population. A marine mining company in Namibia conducted an HIV prevalence survey amongst its employees in 2002, and concurred that the 29 – 39 year age bracket, whilst representing the most productive years of a person’s life, is also the highest infected age group within the company, reflecting the national trend. (Internal Communication, De Beers Marine Namibia Intranet, 2005)

Namibia, a country with a very small population of approximately 1.9 million people, has been among the countries with the highest HIV prevalence rates in the world following Swaziland, Botswana and South Africa. The 2004 prevalence rate of Namibia was 19.7%, which indicates a decrease from the 2002 survey of 22.3% (MHSS, 2004). In Namibia, the infection rate ranges between 9% and 43%. The following map (Fig. 1) reflects the distribution of HIV/AIDS through the country as measured by the Ministry of Health and Social Services (MHSS) at pre- and antenatal clinic sites in 2002. The map indicates that the northern regions of the country (mostly rural) has the highest population densities and the highest prevalence rates (from 20-24% to >40%). The high HIV infection rate of more than 40% in the north-eastern region is in part contributed to it being an entry point for multiple transportation companies, and being surrounded by four neighboring states with the consequential social influences (MHSS, 2004). The capital city and surrounding areas in the centre of the country had a rate of 25-29%

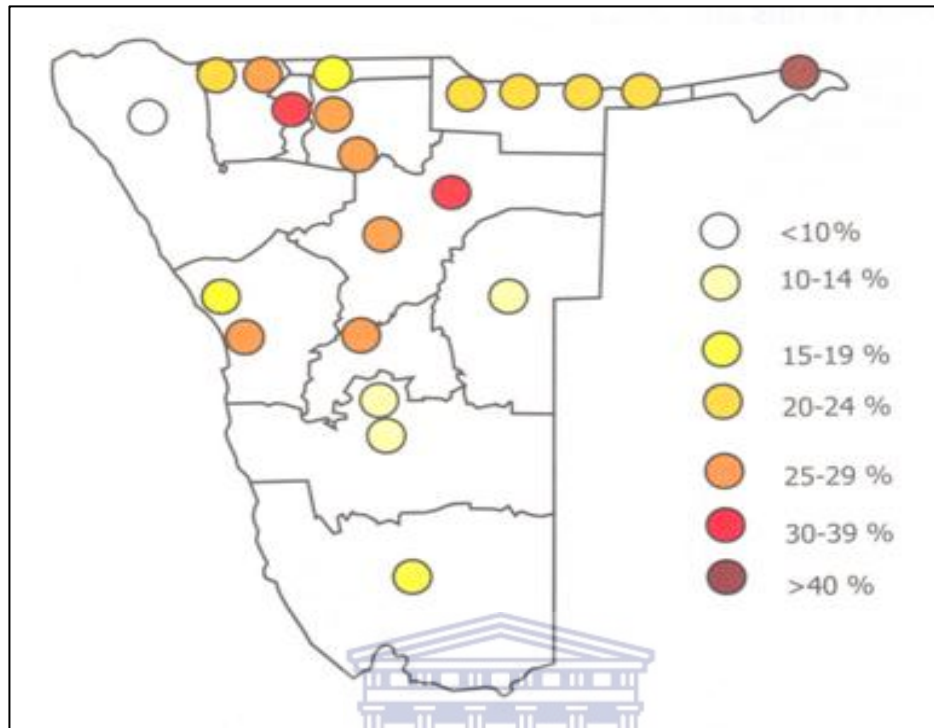
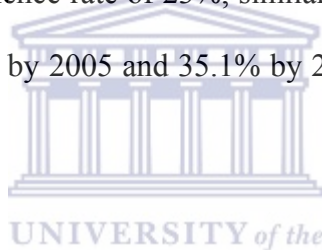


Fig. 1 Map of HIV prevalence among pregnant women in different sentinel sites, Namibia 2002. (Source: MHSS, 2004:4)

HIV/AIDS is one of the leading diseases affecting human health and economic growth in Namibia. Life expectancy in Namibia has dropped from 67 years of age in 1991 to 47 in 2004 (WHO, 2004; United States Government Emergency Plan for AIDS Relief: Namibia, 2004). Looking at the trends of HIV in Namibia over the past decade (1992 – 2002) the prevalence rate in pregnant women increased from 4.2 % to 22 %. However, the Ministry of Health and Social Services indicates that there are reasons to believe that HIV is starting to stabilise even though the prevalence remains high. The 2002 national sero-prevalence survey shows an increase in prevalence in 12 out of 18 sites and a decrease in the remaining six sites resulting in an overall stabilisation of the infection rate (MHSS, 2004).

UNAIDS indicates countries with HIV prevalence rates of more than 20% are estimated to lose as much as 2% of their annual GDP (Beresford, 2001). Beresford also reports on studies indicating that South Africa, the country with the world's highest number of HIV/AIDS cases at 5.3 million and an HIV prevalence rate of 21.5%, is estimated to lose between 0.3% and 17% of its GDP annually (WHO, 2006). GDP loss of between 24% and 38% by 2021 is estimated by the UN Development Programme for Botswana, the country with an estimated population of 1.8 million and the world's highest HIV prevalence rate of 37.3% (Beresford, 2001). Beresford also reports that Namibia, with a population size similar to Botswana, at 1.9 million, and an HIV prevalence rate of 23%, similar to South Africa, is estimated to lose 12.8% of its workforce by 2005 and 35.1% by 2020 (Beresford, 2001; WHO, 2006).



The Ministry of Health and Social Services (2004: Foreword). reports as follows: "The negative impact of the HIV/AIDS epidemic on all sectors of the Namibian economy is already being felt, and is expected to increase considerably over the next decade." Namibia is one country in Africa that has remained stable among the economically and politically challenged Southern African Development Community (SADC) countries in the region. Namibia has "one of the highest levels of per capita income in Africa...The country has a high domestic savings rate but the main challenges facing the country are social in nature" (South Africa Monitor, 2004:9). Furthermore, Namibia has a highly unequal distribution of income and wealth, which means that poverty is widespread and worsening. Namibia suffers from a severe

shortage of skilled workers, while unemployment is high and HIV/AIDS often afflict the poor. The South Africa Monitor (2004:9) reports further, that in spite of Namibia's macro-economic achievements, the government falls short of addressing these very important economic and social discrepancies.

The Family Health International Report (2000) states that a country monitoring its HIV epidemic aims to slow down the spread of the virus through effective prevention programmes. Research also suggests that southern African governments should lead the fight to combat this epidemic. However, there has been limited success with the existing strategies. In addition, a comprehensive response is absent. Mainly lacking is the implementation of effective prevention programmes (Mngomezulu, 2005; Sebastian, 2003). Family Health International (2000:109) also points out that, "the control of the HIV epidemic differs from that of other infectious diseases because of the complex and personal nature of the risk behaviours that drive its spread. An understanding of these behaviours is the key to an appropriate response, and tracking them over time is one of the most crucial elements of an effective monitoring and evaluation system for HIV prevention and care programmes." Effective prevention programmes enable people to adopt safer behaviours and protect themselves from the risk behaviour of their partners. But unless something is known about existing risk behavior, it is not possible to support relevant safe alternatives (Bennet et al. 2003 & Nel, 2003).

Besides the psychological impact, HIV/AIDS has hit African families especially hard through the loss of income of those who lost their jobs, productivity and societal contribution due to infection, illness and eventually death (ILO, 2001). The economic impact felt by the families also translates into the macroeconomic impact on companies and industry. HIV/AIDS not only deprives the family of a loved-one and bread-winner, but also creates losses of skilled and experienced workers, draining the professional and experience capacity in important GDP sectors such as mining and education. With the constant stressors of personal health losses, workers also experience degradation of morale and confidence in a prosperous future. These psychological constraints further serve to undermine productiveness and economic growth (Beresford, 2001).



Within the labour force of Southern Africa, the mining industry is noted as carrying one of the highest HIV infection rates, due to migration and family separation, which contributes to increased commercial sex and male-to-male sexuality (Beresford, 2001). The increased negative impact of HIV/AIDS on the mining workforce contributes to this industry's making asserted efforts and responses to HIV/AIDS in the workplace. Beresford further notes studies showing that in South Africa unskilled and semi-skilled workers are at greatest risk for HIV, with infection rates estimated to rise to nearly 33% in this group in 2005, and estimated to reach 13% among highly skilled workers. Company and personal investments in training and skills development will be lost, while replacement will not only be costly, but difficult, as companies compete for skilled workers with an ever-narrowing pool of candidates not

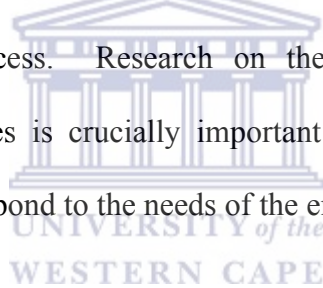
infected or affected by HIV/AIDS. Beresford also reports findings that indicate productivity losses of nearly 54% of companies' total economic cost due to lost skills. Besides loss of skills and the financial cost of recruiting and re-training new staff, companies must also bear the cost of increased medical claims and insurance payouts, while dealing with absenteeism due to personal illness, caring for loved-ones, or attending funerals (Beresford, 2001:2).

Addressing the HIV/AIDS needs of the employees, a company must focus both on preventative and treatment approaches. One of the companies taking a lead in addressing workers' health and wellness needs in Southern Africa is De Beers, the largest diamond mining company in the region. De Beers has initiated HIV treatment programmes to cover the cost and access to anti-retroviral therapy for employees and their significant others in their countries of operation including Botswana, South Africa and Namibia. The company expressed commitment to a pro-active approach to minimize the impact of this killer disease and other infectious, acute and chronic diseases on their workforce by putting in place effective workplace wellness programmes. The company established a wellness strategy implemented across all operations in accordance with best practice principles as set forth by Bloom et al., 2000 (see Chapter 3). Appropriate prevention programmes are instrumental in keeping the present HIV/AIDS prevalence rate stable, and eventually positively affecting a decrease in the infection rate.

HIV/AIDS workplace wellness programmes can only be successful if the employees' needs regarding knowledge, attitudes and practices have been thoroughly researched (FHI, 2000). Therefore, this research study was undertaken to assess the HIV/AIDS knowledge, attitudes and practices (KAP) of employees participating in a workplace wellness programme.

1.2 PROBLEM STATEMENT

Addressing HIV/AIDS in the workplace requires an understanding of the impact of HIV/AIDS on the national, economic and industrial resources, especially human resources. Baseline information allows a benchmark against which to measure workplace programmes' success. Research on the Knowledge, Attitudes and Practices (KAP) of employees is crucially important in ensuring that HIV/AIDS strategies in the workplace respond to the needs of the employees and the company.



1.3 RESEARCH AIMS AND OBJECTIVES

The aim of this study was to assess and describe the HIV/AIDS knowledge, attitudes and practices of employees at a marine mining company in Namibia.

The objectives were:

- ◆ To measure the overall knowledge levels as well as attitudes and sexual practices of DBMN employees on HIV and STD's.
- ◆ To determine whether there was a difference in the knowledge levels, attitudes and sexual practices of employees in different age groups, job grades, marital status, gender and education level.
- ◆ To measure risky sexual behaviours of participants.

1.4 RESEARCH METHODOLOGY

The research methodology is discussed in full in Chapter 4. The following is presented for the initial orientation of the reader.

The population of the study was all employees of a marine mining company in Namibia. All 550 employees were invited to participate, and 226 (41%) responded. The sample included different departments, age groups, job grades, sexes and educational levels.

The data-gathering instrument was a structured, self-administrated questionnaire designed by the researcher exploring biographical characteristics, knowledge, attitudes and sexual practices. The instrument was based on and adapted according to the guide of the AIDS Control in Companies in Africa (ACCA) Toolbox. (Deutsche Gesellschaft für Technische Zusammenarbeit [GTZ], 2004). The data analysis instrument was SPSS using post hoc tests and ANOVA to provide more specific conclusions. Most of the data acquired were quantitative results with a few qualitative data. Independent variables used were age, job grade, educational level, sex and employment duration. Dependent variables were knowledge, attitude and sexual practices/behaviours.

1.5 ETHICAL CONSIDERATIONS

The researcher informed and sensitised the employees on the purpose and aim of the study prior to administering the survey. The procedures followed ensured anonymity

of the surveys and data collected as no names were requested, while each candidate was provided with an envelope to enclose the completed questionnaire to be placed in a secured box. The company gave verbal consent to the researcher to conduct the survey in the workplace during working hours. Participation was completely voluntary, and participants were given the option and permission to skip any question and/or withdraw from the study at any point. Participants were informed about the survey through e-mail, information posters and peer educators.

1.6 LIMITATIONS OF THE STUDY

The marine mining company in Namibia has a mostly specialised workforce in a unique work environment. Thus the conclusions of this study cannot be generalized to other populations. The questionnaire was quite lengthy and participants could have become bored and/or tired, which could have affected some of the responses. There were quite a number of questions where several participants did not provide answers, which can be attributed to participants not being comfortable to respond, or they did not understand these questions. Only a questionnaire was used to collect data. Thus unclear points could not be followed up. For this type of study, a combined quantitative-qualitative methodology could have been used. See recommendations in Chapter 6.

1.7 STRUCTURE OF THESIS

The lay-out of the thesis is presented as follows: chapter one gives an introduction to the study. Chapter two discusses the literature investigating the meaning of work,

well-being and HIV/AIDS, the economic implications of HIV/AIDS on the workplace and the human capital losses for the organization. Chapter three presents the knowledge, attitudes and sexual practices and the need for baseline information and theory-based interventions. Chapter four describes the research design and methodology used. Chapter five presents the findings of the survey providing descriptive and comparative results. Chapter six summarized the findings of the survey and the literature review and concludes with recommendations.

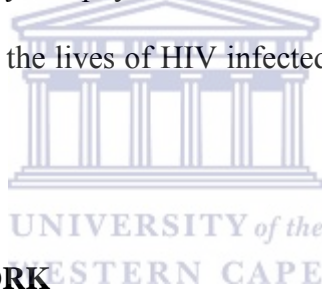
For the purpose of this research, the researcher opted to write in the present tense when discussing other people's findings and ideas. The present tense is also used for unpublished and published work.



CHAPTER 2: WORK, WELL-BEING AND HIV/AIDS

2.1 INTRODUCTION

The well-being of employees, more specifically in relation to HIV/AIDS, is a major concern for employers as well as for employees. Several factors such as work place programmes can promote psychosocial well-being. For workplace programmes to respond to the needs of the employees and the employer, the understanding of certain behaviours and attitudes can aid in introducing and maintaining effective wellness programmes. This chapter will review previous research on work and well-being, exploring the relationship between work and health with specific emphasis on the effects of HIV/AIDS on employees' physical and mental health and well-being. The significance of employment in the lives of HIV infected people within the workplace will be explored.



2.2 THE MEANING OF WORK

Work does not only mean an income and benefits, but it gives purpose to peoples' lives. Akabas states that "Work is a corner stone of life, which helps individuals and families to live both as private and social beings." (1982:41) A person spends about eight hours per day working, making it evident that one spend more time at work than at home or with family. Visser (2003) agrees that work is not just for economic and survival purposes. "Work is at the very core of contemporary life for most people, providing financial security, personal identity, and an opportunity to make a meaningful contribution to community life.....Many large companies realize that their employees' productivity is connected to their health, wellness and well-being"

(NAMI, 2000:5). It can thus be concluded that work is one of the core components of one's wellness and psychosocial wellbeing.

2.3 WELLNESS AND WELL-BEING

Hettler (2004) of the National Wellness Institute recognises that wellness includes physical wellness, intellectual wellness, emotional wellness, social wellness, environmental wellness, spiritual wellness and occupational wellness. The physical aspect recognizes the need for exercise and the personal responsibility to identify when medical care is necessary. Intellectual wellness involves ones inspired, stimulating mental performances. The emotional aspect recognizes the attentiveness and acknowledgement of ones feelings. Social wellness is about one's role in the broader society and the contributions one makes towards the society. Spiritual wellness involves looking for meaning and reason for human survival. Lastly, the occupational aspect recognizes the role of individual contentment and enrichment. These components are interdependent to create a holistic state of wellness. Hettler (2004) displays the dimension of wellness in a graphic representation as seen in Fig. 2.

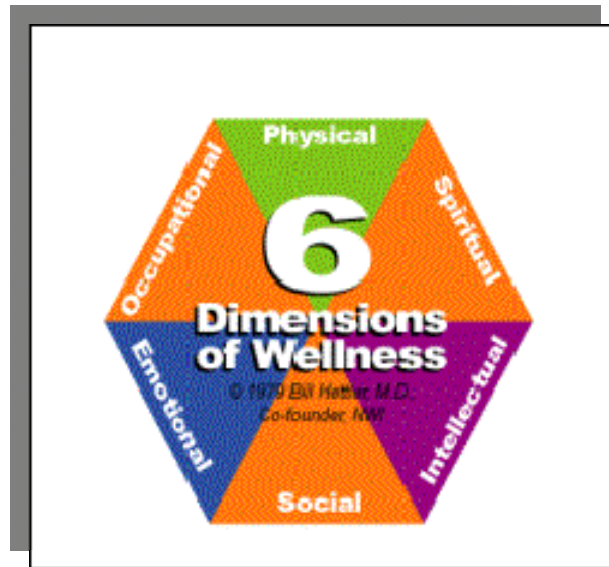


Figure 2: Dimensions of Wellness
Adapted from Hettler, (2004)

Danna & Griffin (1999:359) also define wellness as “compromising the various life / non-work satisfactions enjoyed by individuals (i.e. satisfaction and/or dissatisfaction with social life, family life, recreation, spiritually, and so forth), work/job-related satisfactions (i.e. satisfaction and/or with pay, promotion opportunities, the job itself, co-workers, and so forth) and general health. Health, in turn, is seen as being a sub-component of well-being and compromises the combination of such mental/psychological indicators as effect, frustration, and anxiety and such physical/physiological indicators as blood pressure, heart condition, and general physical health.”

In this research, the concept of well-being is interrelated with wellness and refers to the subjective expectation that one’s basic health needs are met adequately. The

Psychosocial Working Group (2000) describes well-being as mainly consisting of three domains: human capacity, social ecology, and culture and values. This means that a person is part of a bigger circle consisting of several influences. One's well-being depends on how one perceives and reacts to these influences. One's ability to cope depends on the value we put on health, work, family and society, thus considering the social connection and support. HIV/AIDS is a direct threat to these domains.

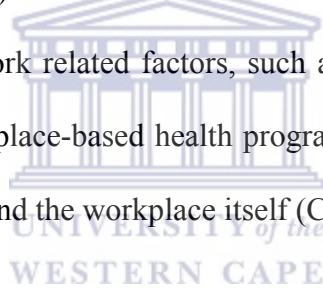
In areas in the world where several health issues are affecting the lives of workers, companies increasingly acknowledge that future achievement can only be realized with a healthy, qualified, motivated workforce (Chu et al, Breucker, Harris, Stitzel, Gan, Gu, & Dwyer, 2002)). A comprehensive workplace health promotion programme is intended to have the flexibility and dynamic capacity to meet the employee skills and health needs, while addressing the expectations and objectives of the organization (Chu et al. 2002).

Workers' physical, mental, economic and social well-being are affected and influenced by their workplace setting. NAMI (2000:5) underlines employment as providing five categories of psychological experience that promote mental wellbeing:

- time structure (an absence of time can be a major psychological burden)
- social contact
- collective effort and purpose (employment offers a social context outside the family),

- social identity and
- regular activity (organizing one's daily life)

The workplace setting therefore offers the ultimate situation and framework to support the promotion of the health of large groups, and in the establishment of environments conducive to health within and outside the workplace (Chu et al, Breucker, Harris, Stitzel, Gan, Gu, & Dwyer, 2002). The essence of workplace health promotion programmes is to reduce health risks for employees. Workplace health promotion programmes require effective awareness campaigns with high visibility and thorough employee involvement to ensure greater success and longevity (Cogwell & Kaczmarek, 2004). Besides the work environment, workers' behaviours are also influenced by non-work related factors, such as personal, interpersonal and community influences. Workplace-based health programmes have potential benefits to the workers, their families and the workplace itself (Chu et al. 2002).



2.4 THE RELATIONSHIP BETWEEN WORK, WELL-BEING AND HIV/AIDS

There is a strong relationship between work, well-being and HIV/AIDS, an argument that several literature references support (Lynch, 2004; Glenn, 2003; Timmons & Beresford, 2001 & Rushing, 1995). HIV/AIDS starts with the individual and households before it spreads out to the workplace, communities and societies, impacting and affecting people who constitute all these sectors. Throughout this literature review, this researcher identifies two themes on the relationship between

work and wellbeing. These themes consist of the WORK – WELLBEING approach and WELLBEING – WORK approach, which will be explored in more detail.

2.4.1 WORK – WELLBEING APPROACH

Work plays an important role in promoting physical and mental wellbeing. People living with HIV/AIDS (PLWA) experience several challenges regarding employment, and numerous researchers (Glenn, 2003; Rushing, 1995; Timmons & Lynch, 2004) conclude that work is a very important part of people's lives; that work leads to income, which gives stability in life and leads to a more secure future. This statement enhances the understanding of fears and insecurities people infected with HIV/AIDS experience, as illness due to HIV/AIDS has become a threat to their jobs.

Timmons and Lynch (2004) conducted a survey exploring the impact, meaning and challenges from the perspective of HIV infected people addressing their concerns regarding employment. Individuals with HIV/AIDS describe employment as a central source of well-being and dignity. In all four focus groups of the survey, participants describe their ongoing desire to work, not only to provide economic stability, but also “to increase self-respect and self-fulfillment....It gives people a sense of belonging and contributes to feelings of independence, self-sufficiency and emotional and physical health” (Timmons & Lynch 2004:3). The challenges related to unemployment include boredom and a sense of uselessness that can lead to depression. The authors highlight that a shift must take place in the management of HIV/AIDS from focusing on an immediate medical crisis to managing a chronic long-term health issue as people strive to recover and maintain their health in order to

remain employed. Timmons and Lynch (2004) use an argument made by Rushing (1995) that financial security is important in maintaining a sense of worth and social status enabling people to cope better with their HIV/AIDS status. A person living with HIV/AIDS constantly faces several stressors such as disclosing their status, as there is a thin line between supportive and discriminating reactions. Because people may choose not to disclose, access to medical services and accommodative alternatives (such as working hours, time off for medical appointments, and alternative lighter duties) may be impossible to access for fear of discrimination. Timmons and Lynch mention the main concerns of employees in their study were “social security and fear of discrimination related to disclosing their HIV/AIDS status” (Timmons & Lynch, 2004:4).



2.4.2 WELLBEING – WORK APPROACH

Several researchers (Glenn, 2003; Conyers, 2003; Ferrier & Lavis, 2003) argue that people needed HEALTH to WORK as they focus on returning to work after a period of illness. The health of people living with AIDS had improved to such a degree due to the use of anti-retroviral therapy that many considered returning to work.

Ferrier and Lavis (2003:426) divide returning to work into three categories that include:

2.4.2.1 Activities participants are already engaged in: Most participants are engaged in managing their health. For some it is almost a full-time schedule with not

much other activity. When their health becomes managed, activities such as exercise and meeting other people at social activities are mentioned.

2.4.2.2 Risks associated with work: The fear of losing one's job and benefits, lower income and the effect returning to work might have on their health are mentioned as risks.

2.4.2.3 Barriers to returning to work: Health and disability insurance programmes appear to be a barrier to returning to work.

The study of Glenn (2003) indicates that the thought of losing life benefits can build anxiety in the decision-making process and lead to ineffective and stress-induced work-related decision-making. People move through stages as their circumstances and health change. "Research shows a correlation between long-term health and employment among people with HIV/AIDS, as they report a better quality of life and functional status" (Glenn, 2003:30). Assistance is needed to address work-related concerns and concerns about returning to work. People living with AIDS must by all means stay motivated to work as it allows them to live fully (Harrison, Smit & Myer, 2003). However, people often have to adapt their working conditions because of their diagnosis or even consider a different or new career. Glenn (2003:34) reports that 52% of his sample indicates that they need a flexible work environment in order to remain or become employed.

There are barriers affecting the return to work primarily after long-term disability which include flexible hours, physical restrictions such as standing for long hours,

heavy lifting, close access to the restroom, low-stress job and work environment, larger print and computer screen due to vision problems.

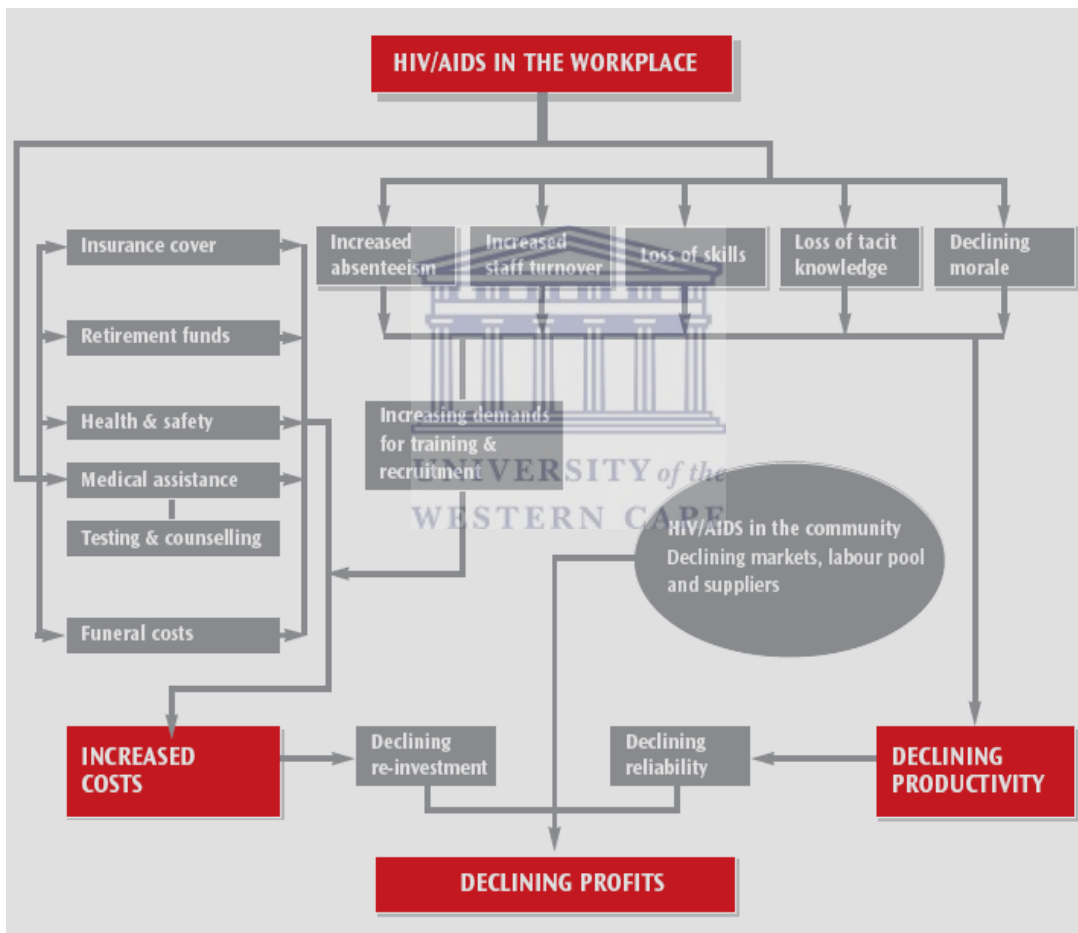
The research of Brooks, Martin, Ortiz & Veniegas (2002) finds that 75% of HIV positive participants in their study want to return to work after their health improved. A survey by Conyers (2003) reports that participants have more expectations and set new goals after they start work, whereas at the beginning when they are unemployed, they are passive with a low interest in work. Work thus adds more meaning and purpose to their lives. Pranschke and Wright (1995:44) say that “An employer experiences many benefits in accommodating an employee with HIV infection or AIDS, including stronger worker morale, loyalty and productivity.” Returning to work is complicated by the fact that most people living with AIDS do not know their constitutional and legal rights and are not informed about policies and procedures in the workplace that may protect them from discrimination. It is thus evident in the literature that there is an important link between work, health and well-being.

2.5 ECONOMIC IMPLICATIONS OF HIV/AIDS ON THE WORKPLACE

The economic implications of HIV/AIDS on businesses have been reported by several studies. (Daly, 2000; Bloom, Bloom, Steven & Weston, 2006) In Sub-Saharan Africa, with the highest HIV prevalence rates, 65% of the companies surveyed report some impact whereas 21% report a serious impact. However, 87% forecast impacts in the future and 54% foresee severe effects (Bloom, et al, 2006:11). The impact on companies is explained in detail in Fig.3 where a decline in productivity is caused by several factors such as increased absenteeism, loss of skills, low morale and increased

staff turnover, which lead to increased costs (i.e. higher medical aid expenses, health and safety, retirement funds, HIV testing and counseling and funeral costs). Fig. 3 illustrates the impact of HIV/AIDS on a company from a costs and production scenario. As underscored throughout the related literature, the impact is severe, irrespective of the size of a company.

Fig. 3: Impact of HIV/AIDS on a Company



(Source: Daly, 2000:15)

Dickenson (2004) argues that there are two reasons for the slow response of business to the impact of HIV/AIDS. Firstly, the lack of national response lead by

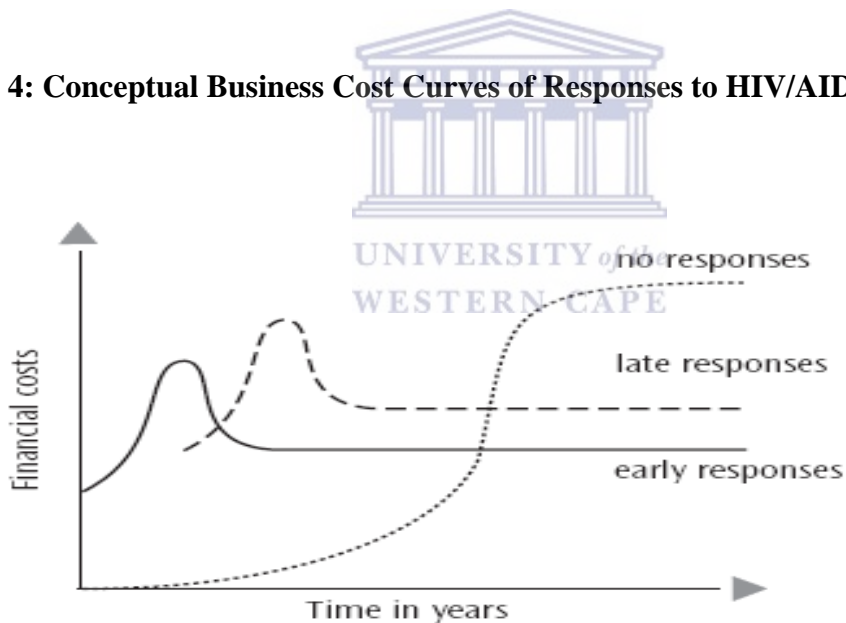
governments; and secondly, managers' failure to understand the vulnerability of their companies. Akabas (1982) in the early 1980's concluded that companies realized the importance of investing in their workforces long before the world realized the impact HIV/AIDS would have on businesses. She states that large corporations are discovering that the cost of employee losses or lay-offs due to HIV/AIDS illnesses impacts the rates of unemployment insurance and severance pay. It also contributes to the loss of productivity resulting from employee turnover and increases the cost of training new employees. All these factors in turn negatively affect their bottom-line.

Haynes, Dunnagan, and Smith (1999) report that their cross-sectional study of the cost-effectiveness of the Employee Wellness Programme indicates that the intensity of participation directly influences the costs of health care. They indicate that their study results show that "Those Employee Wellness Programme participants who intensively utilize the program incur lower health care costs than those who use the program less intensively". (1999:83) They also report that participants of Employee Wellness Programme had higher health costs than non-participants (Haynes, Dunnagan, & Smith). However the study looks at short-term results, and the cross-section data collected does not capture the long-term, continuous impact of an Employee Wellness Programme on participants' health costs or changes in the participation behaviour of employees. They also report that the study limitations, such as observation and self-reporting, compromise the validity of the results. These study results offer an additional component of programme evaluation, to take into

consideration the long-term impact of participation on health care costs and its potential influence on programme participation.

The social, political and economic structure of the company finds itself may also influence how the company interprets the value of an Employee Wellness Programme in light of the human resource capacity and disease profile of the country. In countries with low populations, limited employee skills, and high prevalence infectious, chronic and endemic diseases, companies must consider all these factors when measuring the success of their Employee Wellness Programme (ILO, 2001).

Fig. 4: Conceptual Business Cost Curves of Responses to HIV/AIDS

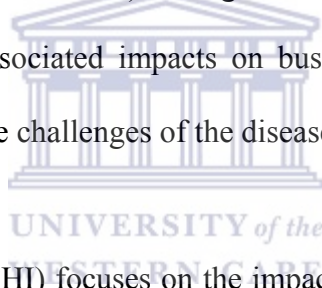


(Source: Daly (2000) based on Aventin, L & Huard, P (1998))

There is sufficient evidence (see Fig. 4) that the costs of the epidemic can be serious if businesses do not act in time. Below is a United Nations Educational, Scientific

and Cultural Organisation (UNESCO) graph explaining the different financial costs in comparison with the time lapse before businesses respond.

The private sector has only over the past few years started to play a role in the battle against HIV/AIDS once the disease appeared to be a threat to businesses. Companies increasingly suffer employee losses due to HIV/AIDS. One company in Kenya reports 43 AIDS related deaths in 1998 (Daly, 2000). “No business is immune from AIDS. Many South African companies have HIV/AIDS policies, but these are often inadequate because business leaders fail to react strategically to the epidemic” (Bureau for Economic Research 2003:9). The global spread of HIV/AIDS, and the increasing evidence of the associated impacts on businesses, underline the urgent need for business to react to the challenges of the disease.



Family Health International (FHI) focuses on the impact of HIV/AIDS on the public sector workforce and warns that “HIV/AIDS requires sustained investments. Short-term solutions are inadequate for effective prevention and for addressing the long-term effects of HIV/AIDS. Creating a budget line item for HIV/AIDS efforts is a critical step for any public or private sector organization” (FHI, 2004:20). HIV/AIDS impacts employees and their families which in return affects the workplace. The employee’s ability to work, morale (stress and overwork) and the need to cope with the costs of treatment and care, are immediate concerns that have an effect on productivity. According to FHI (2004:28), “Workers take sick leave to deal with those illnesses or to care for family members that are sick. Also, the ability to carry

out job functions may be hindered by HIV/AIDS and related illnesses. Studies in both public and private sectors show that absenteeism is a major cost to organizations. In turn, staff absences affect the work of others. Attendance at funerals – of family members or work colleagues – is often socially obligatory. These absences have become a significant factor in disrupting work routines.” Companies will benefit from paying closer attention to factors that indicate the impact of HIV/AIDS on the well-being of their employees, such as monitoring absenteeism, increases in medical aid costs, increases in costs associated with recruitment and increases in new staff trainings.

There are some reports that the private sector is already involved in introducing measures against HIV/AIDS, however, additional sources (Mngomezulu 2005; Sebastian 2003) indicate that businesses still have a long way to go before there will be any significant breakthrough. The Bureau for Economic Research’s Report on “The Economic Impact of HIV/AIDS on Business in Southern Africa” states that 9% of companies surveyed indicate that HIV/AIDS already has had an adverse impact on their businesses. More than 40% envisage a significant negative impact on their businesses. 75% of large companies in comparison with approximately 30% small companies rate increased absenteeism as the highest company cost; higher employee benefits costs are rated second highest; and loss of experience and skills is the third highest impact on company costs (Bureau for Economic Research [BER], 2003:ii).

Small companies still believe that employing unskilled people makes replacement easier. They argue that “devising and implementing an HIV/AIDS programme takes

time and money, both of which are short in supply for small firms” (Economist, 2005:60). Supply of professional skills will become a serious challenge to the world of work due to HIV/AIDS related staff losses. The International Labour Organization (ILO, 2001) suggests that “national policy address human capital issues, which means to sustain the supply and quality of public goods and services” (Economic Review, 2005:34). The Namibia National Policy on HIV/AIDS has been a late response, as it was only launched in 2004 and currently does not address human capital loss in the workforce. The policy focus on the impact of HIV/AIDS on the family and the community at large (Ministry of Health and Social Services, 2004).

It is important for managers to understand the impact on the company and aim to put short term and long-term responses in place. The size of a company determines the responses. Larger companies are able to embark on more costly responses, whereas small and medium sized companies can only respond as far as minimal resources allow them to respond. The following figure indicates that businesses response to HIV/AIDS is a multi-level area of influence and impact.

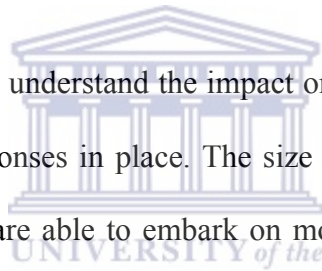
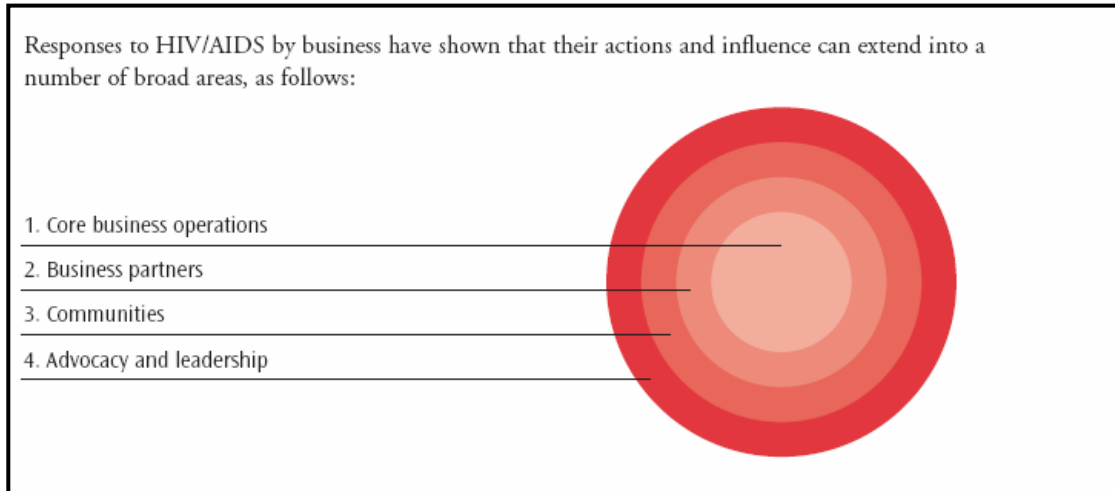


Fig. 5: Company level multi-level response to HIV/AIDS



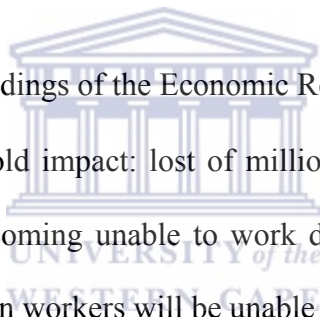
(Source: Daly, 2000:20)

Fig. 5 describes that *core business operations* included the implementation of policies and procedures as a signal that they recognize HIV/AIDS as a threat to the employees and the company as indicated in Fig. 5, thus protecting the workforce and their families and protecting the business interests. Small and medium-sized enterprises typically protect their business interests from the impact of HIV/AIDS by forming *direct business partners*, educating their customers. Employees are part of *communities* and thus company responses are extended to communities mainly to influence the psychosocial health of the employees and their families who are exposed to the disease. Several companies have taken a *leadership* role in the responses to HIV/AIDS and have formed partnerships to *advocate* for greater business responses by joining business coalitions on HIV/AIDS (Daly, 2000).

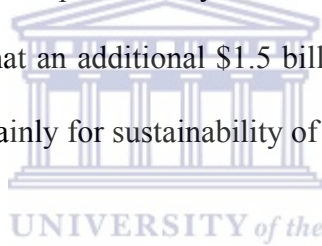
HIV/AIDS is among the “major identified risks such as asset security, exchange rate volatility, crime, and political and infrastructural risks. All of these risk factors exist across the globe, however nowhere else do they seem to combine with such severe

implications to deter investment and raise cost of doing business as in Southern Africa and South Africa in particular” (BER, 2003:1). This report quotes the Actuarial Society of South Africa (ASSA) 2000 model which projects that approximately 25% of adults between the ages of 20 and 64 are HIV positive and that it can reach 28% by 2006 without proper interventions (BER, 2003). The Economic Review (ER) states that “In the absence of increased access to treatment, the number of workers lost to the labour market due to HIV/AIDS will increase to 48 million by 2010 and 74 million by 2015, making HIV/AIDS one of the biggest causes of mortality in the world of work” (ER, 2005:33).

The ILO (2001) reports key findings of the Economic Review as follows:

- 
- HIV/AIDS has a twofold impact: lost of millions of workers through death, whilst millions are becoming unable to work due to illness. ILO estimates that globally two million workers will be unable to work in 2005.
 - Healthy workers will be forced to carry heavier workloads because of colleagues dying of AIDS, along with the increased burden on families as breadwinners die. “Approximately 2 million more persons of working age will be unable to work because of care duties, i.e. the indirect impact of care can double the direct impact of the illness where the burden of care is in the household and on the family” (Economic Review, 2005:33) directly impacting economic growth and development.

The study of Andemariam (2004) approaches costs from two scenarios: direct and indirect costs. Direct costs refer to expenses for health services provided by public and private sectors. Indirect costs refer to calculating the loss of future income estimating the morbidity, disability and pre-mature mortality as a result of HIV/AIDS. The impact on enterprises is AIDS-related illness and death which lead to less productivity and more labour costs. Enterprises in countries with high HIV infection rates such as Namibia will suffer due to increases in absenteeism (sick and compassionate leave), labour turnover, recruitment, training and staff benefits. Glenn (2003) quotes the National AIDS Fund 2001 that reports that the USA experiences losses of \$1.8 billion annually in productivity due to absenteeism of HIV positive employees. He also reports that an additional \$1.5 billion were spent on public and private disability insurances mainly for sustainability of HIV positive people.

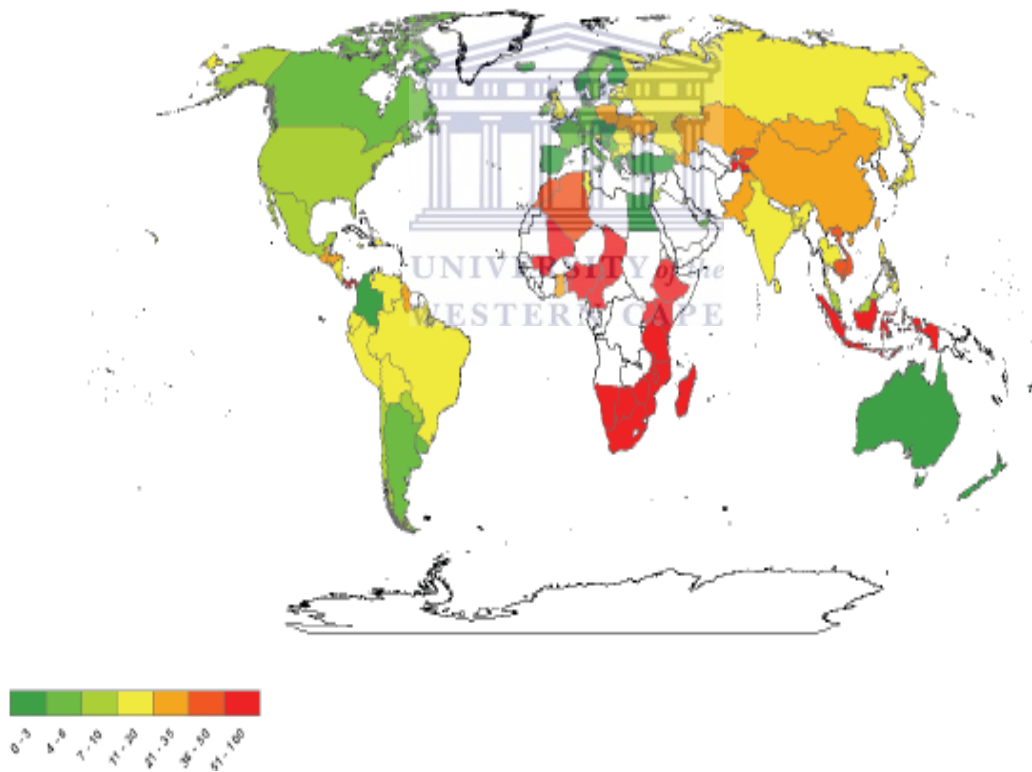


Bloom, Mahal and River Paths Associates (2002) argue that industry will respond once the HIV/AIDS epidemic affects their labor force and their profit margin, however, they question whether the HIV/AIDS epidemic will generate such a response. Other researchers examine businesses' stands on the impact of HIV/AIDS on the workforce and the companies. In 1997, UNAIDS surveyed 203 companies in 14 countries to determine the companies' motivation to respond to HIV/AIDS in the workplace. UNAIDS reports that the main motives given for corporate action on AIDS are as follows: welfare of employees (46%), safety and prevention (34%), legal implications (24%), health care cost (16%), concern for the worldwide epidemic (12%), followed by community problems, absenteeism due to illness and public

image. The survey indicates that companies are increasingly aware of the future impact of HIV/AIDS on businesses.

The following figure indicates how businesses around the world are impacted by HIV/AIDS which corresponds with the high global prevalence rates. Businesses in Southern Africa are hardest hit by HIV/AIDS because of the high prevalence rates in these countries.

Fig. 6 Global Concern over Future Impact on Business of HIV/AIDS (% concerned)



(Source: Bloom D. E, Bloom L. R, Steven D. & Weston M., 2006: 11)

2.6 HUMAN CAPITAL LOSSES FOR THE ORGANIZATION

Several studies (Cohen 2002, Bloom et al. 2002, Glenn, 2003 Andemarian, 2004 & Lisk, 2002) have given insight into the effects of HIV/AIDS on human capital losses, recognizing that HIV positive employees constitute experienced and skilled workers who contribute directly to production. Losing skilled and experienced professionals in any field leads to additional training costs, but the greatest and most expensive factor is to replace the skills and experience lost. Cohen (2002:3) describes this problem as, “Both men and women are prevented from providing their full to development. The time has forever passed where developers believed that labor is in unlimited supply and that “it can be replaced without cost.” The literature provides sufficient proof that these human capital losses have the capacity to directly cripple the economic sectors and grossly impact the growth of the nation’s Gross Domestic Product (GDP). Cohen (2003) also mentioned that the capacity of companies to maintain the flow of those with needed skills and training, especially professional and trained staff, was greatly undermined by the adverse impact of HIV/AIDS on the health and well-being of the workforce.

In summary, these findings indicate four cost considerations companies need to take into account when addressing HIV/AIDS in the workplace:

- Cost due to increased insurance premiums paid by employers
- Cost due to increased benefits paid by employers
- Cost due to lost and reduced productivity

- Costs due to new training and hiring due to HIV/AIDS induced downsizing of the labour market.

Addressing the human capital impacts of HIV/AIDS on the labour market and employment implications, Lisk (2002) emphasizes that the “Impact on Population and Labour Force” report by the ILO, projects that countries with higher prevalence rates such as Zimbabwe, had a labour force that was estimated to be 20% smaller than without HIV/AIDS. In the eight countries with the highest prevalence rates, (including Namibia) it is estimated that by 2020 there would be a 19% decrease in the male population and an 18% deduction in the female population because of AIDS. According to Andemariam (2004), Sub-Saharan Africa has extensively invested in human capital over the past few decades, and needs to continue to support these investments in the face of the HIV/AIDS epidemic as these skills and experience remain seriously threatened.

2.7 SUMMARY

Research suggests that there is a link between work and health as work contributes to employees’ emotional, social, psychological and physiological wellbeing and health which enable people to work. The long-term and permanent losses of skilled and experienced professionals lead to capacity back-log as companies have to reinvest in recruitment and training of replacement staff, and bear the associated costs. In addressing the social and economic toll of HIV/AIDS, businesses play an important role in the fight against HIV/AIDS, as they can through their workforce reach

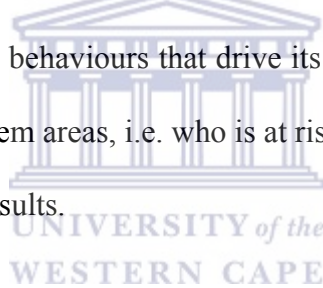
communities and stakeholders to curb the impact of the disease. Large companies have realized that workplace programmes improve employees' health which is interconnected with enhanced performance and improved productivity. Both the employee and the employer benefit from the implementation of employee wellness programmes in the workplace.



CHAPTER 3: KNOWLEDGE, ATTITUDES AND SEXUAL PRACTICES – THE NEED FOR BASELINE INFORMATION AND THEORY BASED INTERVENTIONS.

3.1 INTRODUCTION

This chapter explores some of the core views and theoretical perspectives in the debate about changing behaviours that put people at risk for HIV/AIDS and concludes with models and approaches for prevention. There is no doubt that HIV/AIDS has been a devastating disease, with severe global implications, especially in Southern Africa. Family Health International (2003:109) states “Control of the HIV epidemic differs from that of other infectious diseases because of the complex and personal nature of the risk behaviours that drive its spread.” Thus, KAP surveys are crucial in identifying problem areas, i.e. who is at risk of HIV, to ensure responses with successful outcomes or results.



Knowledge, a sound understanding of sexual behaviours, and tracking behaviour over time is part of the most crucial elements of an effective monitoring and evaluation system for HIV prevention and care programs. Surveys on the knowledge, attitudes and sexual practices (KAP surveys) were used in public health research before the era of HIV/AIDS. The eruption of the HIV/AIDS pandemic called for the need to get baseline information “to measure the outcome of interventions” (Family Health International [FHI], 2003:31). FHI (2002) regards Behavioural Surveillance Surveys as essential tools in monitoring responses to HIV/AIDS. Behavioural assessments can be used as an early warning system as not all people have an equal risk to HIV. “Risk

behaviours are sometimes concentrated in subpopulations. Unless something is known about existing behaviour, it is not possible to support relevant safe alternatives. Behavioural data can indicate who is most at risk of contracting or passing of HIV infection and why” (Family Health International, 2002:2). Understanding why people behave in a certain way, putting themselves at risk, will be helpful in identifying barriers to change and could identify areas that need reinforcement in HIV/AIDS intervention programmes (Petzer, 2003). Ajzen (1988:127) states that behaviour can be measured on different levels looking at general and specific acts. General behaviour refers to repeated behaviours at different times and contexts whereas specific behaviour refers to a single act performed at a specific time and context.



3.2 THE DEBATE ON KNOWLEDGE, ATTITUDE AND BEHAVIOUR CHANGE

The research on behaviour change shows that change occurs in incremental steps over time, and that knowledge is not a sufficient indicator of change. That can be because the challenges of HIV/AIDS have been too broad. Harrison, Smit and Myer (2000) claim that behaviour change seems to be the only hope to reduce HIV infection. They further conclude that “The continuing increase in infection rates suggests that these efforts have been too limited or perhaps not effective on a broad scale to achieve a significant public health impact” (Harrison, et al. 2000:286). The authors further agree that “Numerous studies indicated an impact on knowledge and attitudes, but less have demonstrated an influence on actual behaviour-change”. In fact,

evidence increasingly suggests that knowledge alone cannot make behaviour change possible. Hoosain (1995), Perkel (1991) and UNAIDS (1999) suggest that knowledge of AIDS and methods of protection remain inadequate as a modifier of health-risk behaviours. Knowledge needs to be linked with individual risk assessment. *“How does my sexual behaviour put me at risk of possible HIV infection?”* “Focus should be shifted to recognition of risk, commitment to change, acquisition of sexual communication and negotiation skills, empowerment within relationships, and development of group norms to encourage information sharing on risk reduction” (Harrison, et al. 2000:288). These behavioural interventions need to challenge people on their personal roles in the fight against HIV/AIDS and encourage personal risk assessment as far as lifestyles and high risk behaviours are concerned. Prevention should still be among the primary focuses. Greater success may be seen when groups considered to be at high risk are targeted, i.e. sex workers. Hence, high risk groups must be identified within the workplace programme in order to address their behavior change needs, and to adapt and design behavioral interventions that include behavioural risk management (Parsadh, 2004).

Ntozi and Kirunga (1997) suggest that the only hope to beat the epidemic is to focus on the prevention of infection. They conducted a survey “HIV/AIDS, change in sexual behaviour and community attitudes in Uganda” and discussed the Health Belief Model (HBM) from Pollak (1992), emphasizing the significance of a person’s attitude in the “prevention of a disease, seriousness of the disease, benefits of health action, and barriers to health action; and this attitude is modified by demographic and

psycho-sociological factors.” This model underscores knowledge of a disease as crucial to behaviour change even though it is only one factor amongst others. Ntozi and Kirunga also discuss the AIDS Risk Reduction Model (ARRM) emphasizing the knowledge of the spread of the disease, belief in the seriousness of the disease, and anticipated risk of infection. They also include peer support for safer behaviour, self efficacy or belief in one’s ability to avoid disease, and skills in communicating and enacting safer.” (1997:158). Pikhholz (1992) suggested that the best known prevention to HIV/AIDS is health education. Both models mentioned, the HMB and the ARRM, will be elaborated on later in the chapter.

Previous research (Raybin 1998; Perkel 1991; Abrahams 2001) found that there is no significance between knowledge and attitudes as there is no link between a high level of education and attitudes. Attitude is defined by Parsadh (2004:22) as a person’s evaluation of a particular behaviour, and is seen as a behaviour trigger. Perkel (1991) suggests that the ‘avoidance-denial’ mechanism may prompt some to reject behavioural changes. Campaigns should focus on the alleviation of guilt, the moderation of fear, and addressing those mechanisms that retard behavioural changes even where knowledge is sufficient.

Within a workplace setting, Parsadh (2004:55) suggests that Behavioural Risk Management (BRM) be introduced at companies to “manage and prevent risky behaviours that are associated with the spread of HIV/AIDS” in the form of educational and awareness campaigns. The BRM is designed to focus on the

management and prevention of HIV/AIDS sexual risky behaviours within a workplace context. A UNAIDS (2000) report indicates that for many managers it was not a priority to measure success of survey responses. Now that more information is available on HIV/AIDS, people are willing to answer personal questions on their sexual practices that can be used in planning response programmes. This data then can be used to monitor and evaluate existing programmes in the workplace.

Perkel (1991) approaches behavior changes from another angle when he suggests that there are other psychosocial variables that influence the transmission of HIV/AIDS. His study shows a high correlation between *low self-concept*, low HIV/AIDS knowledge and negative condom attitudes. Participants in the study were concerned that their partners would view them negatively if they suggested condom use. Thus peace within a relationship was valued more than their protection from HIV transmission. Abrahams (2001) also indicates the same conclusion, that negotiating sex options would negatively impact relationships. *External locus of control* correlates significantly with low knowledge and a negative condom attitude and is therefore linked with low self-concept. Flexible factors that influence knowledge or attitude, also indirectly influence actual practices (Perkel, 1991:143). These defenses also correlate with *high denial* which thus increases the acceptance of health-risk behaviours and makes change more difficult, linking back once again to low self-concept. Perkel (1991:i) concludes that “Other variables may intrude which may mediate between knowledge acquisition, attitude formation, and consequent sexual

behaviours” (1991:i). Fear for instance can lead to two different behaviours. Fear can be a motivator of positive action but it can also be a de-motivator that can lead to denial and can trigger negative action especially relating to HIV/AIDS because of its serious implications.

3.3 A SUMMARY OF SOME OF THE MOST SIGNIFICANT THEORETICAL PERSPECTIVES AND APPROACHES/MODELS FOR INTERVENTIONS

The previous discussion indicates the need for considering basic theoretical perspectives when interventions are planned, in different settings.

UNAIDS (1999) has investigated different theories and models based on behavioural interventions to identify the ones with successful outcomes. Prevention interventions, including the prevention of HIV/AIDS, are based on theory. A few samples of relevant behavioural theories will be discussed that move from an individually-centred to the macro-level of structural and environmentally focused models.

3.3.1 INDIVIDUAL-BASED THEORIES

3.3.1.1 Health Belief Model (HBM)

This model holds that health behaviour derives from an individual’s socio-demographic characteristics, knowledge and attitudes and identifies six beliefs for a person to have in order to change behaviour: (Kalichman, 1998)

- (a) Perceived vulnerability to an illness

- (b) The seriousness of the illness
- (c) How can the new behaviour protect you?
- (d) Exposure to the effects of the illness
- (e) What benefits will the preventive action have?
- (f) What are the barriers to change? (UNAIDS, 1999:6)

For change to take place, the benefits must be more than the costs.

3.3.1.2 Social Cognitive / Learning Theory (SCT)

This theory describes new behaviours that are learned from others or from own behaviours (Bandura, 1977). Important principles of this theory are self-efficiency and outcome expectancies. Self-efficiency is the “belief in the ability to implement the necessary behaviour (I know I can insist on condom use with my partner).” Outcome expectancies are beliefs about outcomes such as the belief that using a condom correctly will prevent HIV infection (UNAIDS, 1999:7).

3.3.1.3 AIDS Risk Reduction Model (ARRM)

The ARRM (Catania et al. 1990) builds on the health belief model and the social cognitive theory describing the stages a person goes through during behaviour change concerning HIV risk. This model focuses on three main points: “behaviour labelling, commitment to change and taking action” (UNAIDS, 1999:8).

3.3.2 SOCIAL THEORIES AND MODELS

The social theories and models that emphasize the relationship between the individual and social groups are the Diffusion of Innovation Theory, the Social Influence Model and the Social Network Theory. These theories and model focus on the interactive relationship of behaviour in its social and cultural dimensions.

3.3.3 STRUCTURAL AND ENVIRONMENTAL MODEL

The model that seems to be most appropriate for this study and that might work best for this specific target population is the Social Ecological Model for Health Promotion. This model acknowledges the relationship between the individual and the environment and considers multi-level influences on unsafe behaviours (Choi, 1998).

This theory links the outcome of interest and behaviour that are set off by:

3.3.3.1 Intrapersonal factors – characteristics of the individual such as knowledge, attitude, behaviour, self-concept, and skills

3.3.3.2 Interpersonal processes and primary group's formal and informal social network and social support systems, including the family, work group and friendships

3.3.3.3 Institutional factors – social institutions with organizational characteristics and formal and informal rules and regulations for operation

3.3.3.4 Community factors – relationships among organizations and informal networks within defined boundaries

3.3.3.5 Public policy – local state and national laws and policies (UNAIDS, 1999:11).

A review of these models reveals that a comprehensive approach to behaviour change requires that employee health behaviours be addressed at multiple levels of influence. Taking into consideration the evidence provided through the literature review, the need is to address health behaviour issues both in and outside of the work environment. Company support is also a key factor in determining programme success; therefore, an ideal model of behaviour change must include all the levels of behaviour influence. Based on the review of the behaviour change models, the social ecological model addresses a multi-level, comprehensive approach to workplace behaviour-change intervention.

3.4 THE SIGNIFICANCE OF WORK PLACE PROGRAMMES

Workplace programmes have been described in the literature using several different terms. The following terms appear to be used interchangeably: employee health programmes, employee wellness programmes and workplace programmes. All these terms refer to a comprehensive employee health initiative, implemented on the jobsite as part of the company's human resources, and staff retention plan (ILO, 2001).

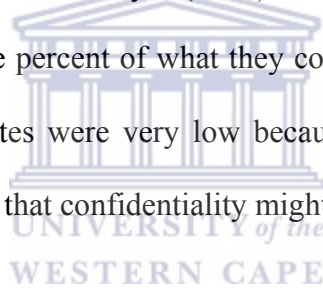
Successful workplace programmes have been based to some extent on behaviour change models. Although none of the programmes explored through the literature review revealed the specific model applied, it is clear that over time, employee wellness programmes have consistently moved away from focusing solely on employee safety. The model selected by each company is influenced by the factors

that motivate companies to take on employee programmes, and the extent and magnitude of the programmes envisaged.

An historical perspective of employee wellness programs provides both a time line of strategic changes and an evolutionary overview of the health issues of importance to both workers and companies. According to Chu et al. (2002) workplace health promotion programmes were initiated in the 1970s to address single illnesses or risk factors that related more closely to work-conditions and focused on lifestyle changes and individual worker behaviour. Over the past thirty years, the focus has shifted to include the environmental, social and organizational factors influencing employee health. Current wellness programmes present a more inclusive approach, offering a wider range of interventions that target identified risk factors associated with employee health. Such interventions include general health screening, stress management activities and courses, nutritional and health information discussion groups, psychological counselling, substance abuse awareness and smoking cessation programmes. Cogwell and Kaczmarek, (2004) indicate that workplace health appraisals generally include screenings that allow the employees to participate in personal health assessments which allow incorporation of both personal behaviours and the inclusion of family health histories (Cogwell & Kaczmarek, 2004). Cogwell and Kaczmarek also reports that this process allows greater worker participation and increases knowledge as a first step in behaviour changes, while enabling employees to be more proactive in addressing and reporting health issues with their personal

physicians. These programmes also tend to include broader socio-economic, environmental and organisational influences on workers' health (Chu et al. 2002).

Similarly, Wolfe, Parker and Napier (1994) report that during the 1970's the focus of work place programmes was primarily on the prevention of injury and disease but has since shifted to a broader health perspective of "health promotion model" (1994:26). The focus was on employee behaviour instead of workplace conditions. Services also were mainly available for white-collar employees. As discussed in Chapter 2, HIV/AIDS has horrifying effects on a business; thus the implementation of workplace programmes are crucial. Bery's (2004) study concludes that the private sector worldwide did only five percent of what they could, and that well-intentioned workplace programs utility rates were very low because employees were afraid of discrimination and were afraid that confidentiality might be compromised.

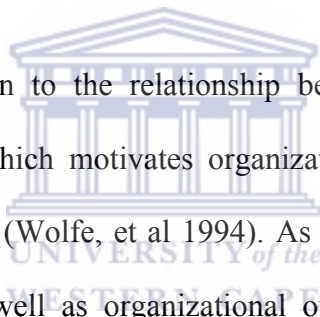


Haynes, Dunnagan and Smith (1999) indicate that one of the key motivating factors for companies in providing an employee wellness programme is the cost associated with providing health care benefits to its workforce, and exploring ways to reduce this cost. In the past, the employee carried the high costs of health care services, which have proven to have a negative effect on the employees' level of satisfaction, recruitment and retention. There has since been a need to introduce health care management programmes to improve the overall health of the employee. This lead to a positive impact on the employee and the employer considering the costs implications discussed in Chapter 3. The U.S. Centers for Disease Control and

Prevention (CDC) reports that 75% of healthcare costs are spent on preventable illnesses. Workplace programmes, through health promotion education, peer education, testing and counselling, prevention and care programmes are approaches that aim at individual level behaviour change (UNAIDS, 1999) and can contribute to lower health costs and lead to healthier and more productive employees. A study conducted with 40 factories in Zimbabwe regarding counselling and testing with or without peer education, showed a 34% HIV incidence with peer education (Katzenstein, 1998). Therefore, workplace programmes contribute to increased profits for the employer and hence the return programme expenditure back to the company, making the programme self-sustaining. Large companies have experienced significant savings on health costs since the introduction of workplace programmes. One manager describes workplace programmes as more than just good business, because his company's costs decreased from 20 million US\$ to 11.5 million US\$ in three years. (Coulter, 2006; Angelo, 2004).

Based on the literature, there are two basic viewpoints of employee wellness programmes; (1) The focus is on changing the workplace by creating a *healthy workplace* in order to improve or increase production, or (2) The focus is on the worker by building a *healthy workforce* in order to improve the workplace and increase production (Lowe, 2004). The healthy workplace model focuses on changing the workplace environment, specifically to positively influence workplace safety, injury and work stress (Lowe, 2004). The healthy worker model focuses on individual and group behaviour change within the organization with subsequent

influences on behaviour change outside the organization. The focus areas centre around creating and maintaining the health of the worker through personal and health history risk reduction strategies, information exchange and behaviour change. The focus is on reducing workers' risk to endemic, infectious and chronic diseases that may negatively influence the retention of skills and worker experience. It is clear through the literature that organizations must assess early in the change process, where the primary focus of their Employee Wellness Programme will fall. For the purpose of this study, the focus is on building a healthier workforce, thereby improving the workplace and increasing production.



More attention is being given to the relationship between employee health and organizational performance which motivates organizations to engage in employee health/workplace programmes (Wolfe, et al 1994). As Work Place Programmes can benefit employee health, as well as organizational outcomes, it is advisable that workplace programmes are implemented sooner rather than later. Research has found that workplace programmes “positively influence morale, absenteeism, turnover, recruitment and productivity” (Wolfe, et al. 1994:27). There seems to be agreement that corporate performance and employee health is a concern. The literature reviews conducted by (Wolfe, et al. 1994:27) on Employee Health Programmes found consistence in the conclusion that “Individuals who participated in Employee Health Programmes tended to be better performers, were absent less, and had lower health care costs, than non-participants before program implementation” (1994:28).

Employee Health Programmes thus contribute positively to work habits. Wolfe et al. (1994:33) conclude that companies with Employee Health Programmes will:

- Have higher levels of commitment from employees than companies without Employee Health Programmes
- Improve employee satisfaction as programmes encourage attendance
- Improve employee attendance – employees who are concerned about non-work problems, i.e. family, home, etc. are less motivated to go to work
- Have higher employee motivation
- Have Employees who value Employee Health Programmes show less absenteeism.

Lacking in the current literature are clear guidelines on the qualification and experience needed of key staff implementing Employee Wellness Programmes. Given the scope, magnitude and complicated nature of a holistic multi-level workplace programme, well-trained and qualified staff is needed to implement, monitor and evaluate employee wellness programmes. Akabas (1982:34) suggests that social work contributes to well-being in the workplace by looking at social policy and “raises new questions, promotes new values, and factors new variables into its cost/benefit analysis.” Akabas states that the role of the social worker within workplace programmes includes the promotion of social policies that encompass the individual and the family within the organizational structure, without undermining the economic goals of the company. The aim is to increase social and economic productivity of the company in the long-run (Akabas, 1982). Akabas highlights the

role of the social worker as important in individual, employee, group and business relationships. Akabas also illustrates the connection between work, family and health. It underscores the fact that companies should introduce employee wellness programmes that focus on physically, emotionally and professionally healthy employees. A healthy employee without doubt contributes to a highly productive workforce, and a constructive work environment. (Wolfe, et al. 1994 & Danna, et al. 1999).

Due to the impact of HIV/AIDS on the health and well-being of the employee, and its subsequent effects on business, companies should act in a socially responsible manner to address the HIV/AIDS health needs of the employee. Because of fear of discrimination in the workplace, employees may choose not to participate in company programmes. The skills that a social worker brings to the programme will enhance understanding of employee fears and can lead an organization to implement programmes that would address these fears. Policies and procedures ensure that employees feel safe to participate in workplace programmes.

Wolfe et al. (1994:34) suggest a number of ways that employee health programmes can be implemented successfully:

- Links between functions to avoid perceived loss of responsibility domains and duplication of services across related health areas, i.e. medical and/or safety programmes

- Strategies to increase participation in employee health program: Lack of time is the common reason for employees not attending, thus incorporating programmes into working hours, offering on-site programmes, also subsidizing employee health program
- Union and blue-collar workers support
- Participation to be voluntary
- Ensuring non-stigmatized environments
- Ensuring confidentiality

Global Business Coalition (GBC) on HIV/AIDS (2003) recognized the successes of several global companies with effective workplace programmes. Levi Strauss & Co represented the U.S. business at the Meeting of the Experts on HIV/AIDS Workplace Standards because of their leading role in supporting HIV/AIDS education, prevention and care efforts. Eskom, the South African power supplier, has monitoring and evaluation strategies in place to ensure that their company policies and responses reflect the changing dynamics of the epidemic. Eskom projected the cost per individual infected to four to six times his/her annual salary. The international motor manufacturer, Daimler Chrysler, received in 2002 the GBC Award for Business Excellence in the Workplace. Other companies mentioned are Unilever, Standard Chartered Bank, TATA Iron and Steel Co., Heineken, and Chevron Texaco. International companies operating in southern Africa who received mentioned were AngloGold and De Beers Group of companies. De Beers Group has companies in

three of the countries with the highest HIV/AIDS infection rates in the SADC region which are Debswana in Botswana, DeBeers South Africa, Namdeb Diamond Corporation in Namibia, and De Beers Marine Namibia.

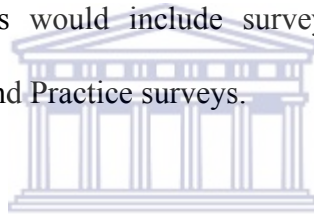
3.5 KEY ELEMENTS OF A WORKPLACE PROGRAMME

The literature offers several examples of workplace programme components. Although there is no consistent workplace programme, or a clear link to behaviour change theories in the workplace programmes discussed in the literature, all workplace programme descriptions encompass a multi-level approach that includes at minimum individual and organizational level interventions and targets. The following section will review literature on the components of workplace programmes. As mentioned earlier, workplace programmes from companies that are used at present as examples are not linked to theories. However they are tested and evaluated even though not necessarily theory-based.

Global Business Coalition (2003) presents the most inclusive and comprehensive workplace programme and recognizes that workplace programmes should consist of the following six components:

- Prevention and Awareness Programmes focus on prevention i.e. condom use, education and awareness campaigns, distribution of condoms, voluntary counseling and testing, etc.

- Non-discriminatory Policies and Practices protect the employer and the employee and ensure a non-discriminatory work environment.
- Communication plan for education and awareness information to reach employees and to ensure the language and tools are understood by the employees.
- Care, Support and Treatment include provision of Anti-retroviral Therapy (ART), continuous counseling and education on living with HIV/AIDS.
- Voluntary Counseling and Testing (VCT) services are available for employees to find out their HIV/AIDS status.
- Risk Assessment tools would include surveys such as HIV prevalence, Knowledge, Attitude and Practice surveys.



Parsadh (2004:55) reports that the HIV/AIDS policies and programme of Small and Medium Enterprises consist of interventions that focused on behaviours, intentions and motivators of behaviour change such as personal and group “attitudes, subjective norms and perceived behavioural control”.

Individual and organizational Behaviour Risk Assessment (BRA) is a valuable tool in determining the direction and content of health behaviour interventions at the workplace. Responses to workplace programmes can be designed to target individuals, groups and organizations, and therefore can address the specific needs of each target, including comprehensive organisation-wide programmes. (Nel:2003)

The World Health Organization's "Healthy Work Approach" calls for a comprehensive approach based on four fundamental complementary principles: "health promotion, occupational health and safety, human resource management and sustainable development" (Chu et al. 2002:15).

An example of a workplace health-promotion model that utilizes multiple strategies includes:

- The development of policies and regulations
- The creation of safe and supportive environments for learning and sharing
- The strengthening of preventative health services
- The promotion and facilitation of work participation
- The education and empowerment of employees to promote healthy behaviours. (Chu et al. 2002)

The success of such programmes depends on the following four components working in unison: employee participation, a problem solving approach to project management, programme integration into the company's regular management practices and corporate plan, and finally in-depth programme comprehensiveness to address multilevel behavioural determinants. Such a programme affords the opportunity to combine the company's economic goals with the health-related concerns of the employees (Chu et al. 2002; Cogwell & Kaczmarek, 2004).

Well-thought out and well planned employee wellness programmes also depend on continuous evaluation and feedback to ensure that the implementation strategies, impact and long-term effects of the programmes meet the needs of the employees and the company, assessed through risk assessments, questionnaires and medical screening results (Chu et al. 2002; Cogwell & Kaczmarek, 2004).

Bennet, Cook and Pelletier (2003) suggest a five step model for Behavioural Risk Management (BRM) which could be essential for selecting and developing a HIV/AIDS workplace programme. This BRM suggest the following approach:

- Conduct a behavioural risk audit
- Summarize the data to provide an overall view of the risk of HIV/AIDS in the organization
- Analyze both individual and organizational risks associated with effective management of HIV/AIDS in the workplace and the effectiveness of the current risk management practices
- Determine which interventions can impact risks, and which programmes are still needed
- Use all generated information to develop a prevention-based strategy and health promotion programme.

3.6 SUMMARY

The literature shows a clear correlation between knowledge and behaviour. However, the literature also indicates that knowledge does not necessarily result in safe sexual

behaviours. Specific behaviour change interventions, based on behaviour change theory, are needed to target high risk groups and the general workforce, especially in Southern Africa where the HIV prevalence is high. The workplace is an ideal setting to combat HIV/AIDS in southern Africa, as it offers the opportunity to address the prevention and care needs of workers, and the production and profitability needs of the company. Selecting the ideal workplace programme format depends on the unique needs of the company and its employees. Assessing these needs and developing an appropriate wellness intervention depends on the initial knowledge, attitudes and practices of employees, the depth of the workplace programme the company is willing to take on, and the impact of HIV/AIDS on the community.



CHAPTER 4:RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

The research design and methodology which include variables, research tool, data collection and study site used in the survey to explore knowledge, attitudes and practices related to HV/AIDS of employees at mining company in Namibia is explained in this section.

4.2 RESEARCH DESIGN

A quantitative study was conducted to explore knowledge, attitudes and practices of employees at a marine mining company in Namibia. Best and Kahn (1989:160) state “Quantification has been identified as a numerical method of describing observations of materials or characteristics. When a defined portion of the material or characteristic is used as a standard for measuring any sample, a valid and precise method of data description is provided.” The reason for choosing a quantitative design is to analyse the data with numerical comparisons.

Saunders et al. (2003:96) describes a cross-sectional design as “the study of a particular phenomenon (or phenomena) at a particular time”. Cross-sectional research involves the measurement of all dependent variables for all cases within a specific time span. One advantage of a cross-sectional research design is that it is more economical in time and cost than other designs. This cross-sectional design

compared dependent variables which were knowledge, attitudes and sexual practices in an employee population participating in a workplace HIV/AIDS and health education program, across different independent variables measured at the same point in time. There was no comparison group.

4.3 POPULATION AND SAMPLE

4.3.1 POPULATION

The study population consisted of men and women employed at a marine mining company. The age groups targeted were 18 to 65, with varying job grades, education levels, gender and marital/relationship status. No restriction was placed on ethnicity or racial background, nor was any data collected on these variables. The size of the targeted population was 550 employees.



4.3.2 SAMPLE SIZE

The entire workforce of five hundred and fifty (550) employees of the company was targeted to participate in the survey. Participants were approached by the researcher and requested to participate in the survey. Two hundred and twenty-six (226) responses were received.

4.4 DATA COLLECTION

The data-gathering instrument used is a structured questionnaire. The data was collected over a two month period. The questionnaires were group administered to between eight and ten participants per group. Participants were asked to complete the

questionnaire during one sitting and to place the completed questionnaire in a closed, locked box. A pilot study was done prior to the study to assess the appropriateness of the questions.

Self-administered surveys/questionnaires were distributed to all employees who voluntarily participated.

4.4.1 RELIABILITY AND VALIDITY

The instrument used is a questionnaire to measure the knowledge, attitudes and practices of a specific workforce. Content validity determines whether the instrument used really measures the concepts we expect it to measure. (De Vos, et al. 2002) The questionnaire used for this survey explored specific questions to measure the dependent variables in order to get certain quantitative data. De Vos describes content validity as a judgemental process whereby colleagues establish the validity of the content. As face validity refers to what the instrument appears to measure, (De Vos, et al. 2002) the questionnaire measured what was assumed however to enable further analysis of data, it might have been advisable to use a combined quantitative-qualitative methodology combining the questionnaire with an interview. Because such personal and sensitive information is required from the respondents, it is possible that some respondents omitted to answer questions that they might have found to be private. Reliability describes “degree of consistency or agreement between two independently derived set of scores; and as the extent to which independent administrations of the same instrument yield the same (or similar results)

under comparable conditions.” (De Vos, 2003:168) A variety of tests were conducted that include descriptive statistics where means and standard deviations were provided and the comparative statistics where the ANOVA and post hoc tests were done.

4.4.2 THE QUESTIONNAIRE

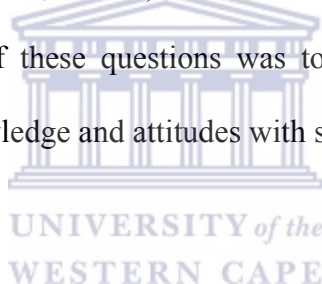
Closed-form questions and a few descriptive, explanatory type questions were asked (See Annexure 1). The questionnaire explored background characteristics (independent variables) which include age, sex, job grade, employment duration with company and marital status. The dependent variables included knowledge, attitudes and sexual practices relating to HIV/AIDS. Questions regarding the effectiveness of the workplace health education programme were also included. The self-administrated questionnaire designed by the researcher was based on and adapted from the ACCA Toolbox (GTZ, 2004). The study questionnaire consists of one hundred and twenty-four (124) questions.

The questions on knowledge aimed to collect information on general basic HIV/AIDS knowledge (Questions 10, 12, 13, 14, 15, and 16), transmission and prevention (Q11, 17, 18, 19, 20, 101, and 103), knowledge on STD's (Q21, 23, and 50) and knowledge on ART (Q41, 42, 43 and 44). See Annexure 1.

The questions on attitudes focused on the attitudes towards co-worker and acquaintances with HIV/AIDS (stigma), the aspects of blame toward HIV infection, attitudes towards life-expectance of persons living with HIV/AIDS, risk of family to

be exposed to HIV infection, believes on disclosing HIV status, care and support for people living with HIV/AIDS, and attitudes toward the effects of the pandemic on the individual, the family, the community and the company (See appendix 1: Questions 49, 58, 59, 62, 65, 66, 67, 68, 69, 70, and 71).

The questions on sexual practice explored the sexual behaviours of participants, the age when they first had sex, how often they had sex, HIV testing, number of sexual partners, faithfulness of sexual partners, possible other sexual risky behaviours (See appendix 1: Q86, 87, 91, 95, 96, 99, 102, and 104). The attitudes towards condom-use (Appendix 1: Q53, 54, 55, 90, and 94) were also explored as a predictor of risky sexual behaviour. The aim of these questions was to assess a baseline of sexual practices and to compare knowledge and attitudes with self-reported sexual practices.



4.4.3 VARIABLES

Independent variables used were age, sex, education level, job grade, employment duration and marital status. The dependent variables used were Knowledge, Attitude and Sexual Practices (KAP) of HIV/AIDS.

4.5 DATA ANALYSIS

Forty-four (44) of the 124 questions were divided into seven indexes for reporting data analysis. The remaining eighty questions added depth to the study, however, did not lend itself to further analysis beyond descriptive and qualitative analysis. A broad-based independent variable choice options, especially in the categories of

marital status and education level hampered greater statistical analysis. These categories choices were set up based on the workplace program parameters within which the study was conducted.

An independent contractor assisted with the data analysis using SPSS. Utilizing the ratio data developed through the indexes, an analysis of variance (ANOVA) was conducted to determine significant difference between the means of the groups in comparison. Because multiple comparisons were done, a post hoc test (Fisher LSD) was used to determine significant differences between group means.

This study serves as a baseline assessment of HIV/AIDS KAP, and therefore a hypothesis was not offered. All significant findings are reported as part of baseline results. Reporting of all significant results will provide in-depth analysis of the independent and dependent variables at play in HIV/AIDS KAP at a workplace study site.

4.5.1 Setting up of Indexes

By incorporating a number of individual data (independent variables) items into a single reliable index, analysis of only a few variables replace large volumes of work on single variables. In datasets with limited variability or discreet data responses, such as raw data of this KAP study, indexes work well to provide greater variability. As most of the data in the existing dataset emphasize variance of kind rather than degree, additive indexes were constructed to convert discrete data into ratio data. For

example, rather than looking at the individual results of each question measuring knowledge, knowledge scores were added together across all knowledge questions to form a knowledge index. This index was analyzed either on its own, or as dependent variables in data mining. New ratios/ranges were developed based on the number of questions selected for compilation and a score (value) assigned to each question.

Table 1: INDEXES

| INDEX | RANGE | QUESTIONS ITEMS | PURPOSE |
|---|--|---|--|
| KNOWLEDGE General Knowledge Index | 0-6 | Q10,12,13,14,15,16 | Measures number of correct responses |
| Knowledge of Transmission & Prevention Index | 0-7 | Q11,17,18,19,101,103,20 | Measures the number of correct responses on questions dealing with transmission & prevention of HIV/AIDS |
| Knowledge of STI Index | 0-3 | Q21, 23, 50 | Measures the number of correct responses to questions of STI's |
| Knowledge on ART Index | 0-4 | Q41, 42, 43, 44 | Measures the number of correct responses on questions dealing with ART |
| ATTITUDES Stigmatization Index | -11 discriminatory +11 non-discriminatory | Q49, 58, 59, 62, 65, 66, 67, 68, 69, 70, 71 | Measures the extent to which respondents have negative or positive attitudes toward PLWA |
| SEXUAL PRACTICE Risk Behaviour / Action Index | 0-7 Number of risk actions taken | Q86, 87, 91, 95, 96, 99, 102, 104 | Measures the number of actual risk actions that were taken by respondents |
| Attitudes toward condom use Index | -5 anti-condom +5 pro condom | Q53, 54, 55, 90, 94 | Measures the extent to which respondents has pro- or anti-condom attitudes |

The above-mentioned seven indexes were developed to group questions based on content and relevance to Knowledge, Attitudes and Practices (KAP) related to HIV/AIDS in the workplace as summarized in Table 1. The knowledge index includes sub-indexes that explore knowledge on different subjects: General knowledge index, knowledge of transmission & prevention index, knowledge of STI Index and knowledge on ART index. The attitudes are covered under the

stigmatization index. Sexual practices were covered under the risk behaviour index which included attitudes towards condom use as a direct sexual practice indicator.

4.6 STUDY SITE

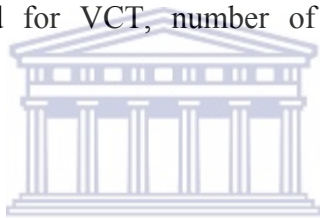
The study site is a marine mining company in Namibia. The company has both offices and five mining vessels at sea. The study site was selected because of its unique role as employer in several countries in the southern African region, its role in international business and the fact that it has recently expanded its workplace health programme. The company recognized HIV/AIDS as a threat to the company and its employees and therefore initiated a comprehensive wellness programme in 2003. This employee wellness programme was integrated into the company's existing Safety, Health and Environment programme. The study site has a history of enhanced worker safety due to skill requirement and intensive nature of the work environment. Employee health has played an increasing role in the human resources management of the organization selected as the study site. The company's shift, from primarily focusing on worker safety and a safe work environment to focusing more specifically on workers' personal and work related health, was influenced by the social and political change in the southern African region, the consequential economic and social responsibility of the company, the global business and economic implications and the company's reputation and role as a multi-national employer.

The current workplace health programme includes general health screening, HIV/AIDS education, voluntary HIV/AIDS counseling and testing (VCT), and the

provision of anti-retroviral treatment (ART) to all HIV positive employees and their spouses and/or significant others (De Beers, 2004).

The site workplace health programme has additional components, which include:

- Stakeholder Engagement: Government and the community
- Feasibility and Fairness which include cost projection – long and short term plans
- Monitoring and Evaluation: Monitoring utility of services, i.e. condom use, number of employees attending peer education sessions, number of people who have participated for VCT, number of people on ART, treatment compliance, etc.



4.7 LIMITATIONS OF THE STUDY

One of the limitations of the study was small samples, i.e. the age group 56-65 and the small number of females in the multi-variant analysis responses.

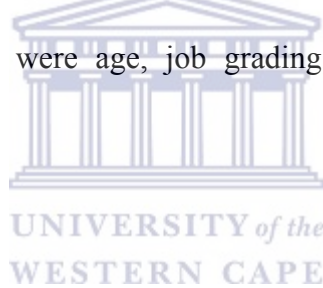
The educational level was not statistically feasible for further statistical analysis beyond descriptives as some of the options per category had too few respondents.

The marine mining company in Namibia has a mostly specialised workforce in a unique work environment. Thus the conclusions of this study cannot be generalized to other populations. The questionnaire was quite lengthy and participants could have become bored and/or tired, which could have affected some of the responses. There were quite a number of questions where several participants did not provide answers,

which can be attributed to participants not being comfortable to respond, or they did not understand these questions. Only a questionnaire was used to collect data. Thus unclear points could not be followed up. For this type of study, a combined quantitative-qualitative methodology could have been used. See recommendations in Chapter 6.

4.8 SUMMARY

A quantitative study exploring the knowledge, attitudes and sexual practices of a marine mining company in Namibia was conducted. The study design used is a cross-sectional design to determine whether there are differences between the independent variables, which were age, job grading, educational level, sex and marital status.



CHAPTER 5: FINDINGS OF THE SURVEY

5.1 INTRODUCTION

This chapter discusses the demographic data that include age, job grade and employment duration with company. The main findings of the survey will be reported in the form of descriptive and multiple comparative statistics; identifying significant differences between groups on knowledge, attitudes and behaviour / practices of respondents.

5.2 DEMOGRAPHIC DATA

The following demographic data (four independent variables) were used for comparative analysis: age, job grade and employment duration. (Statistical significance level $\alpha = 0.05$)

5.2.1 Age of Participants

Table 2: Age groups

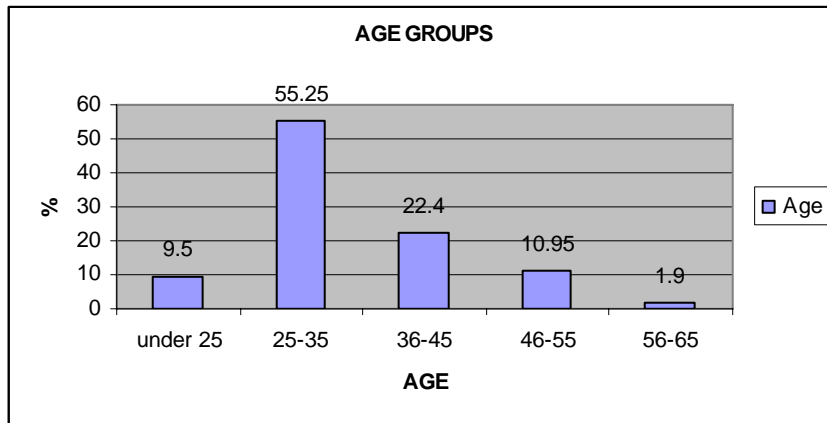
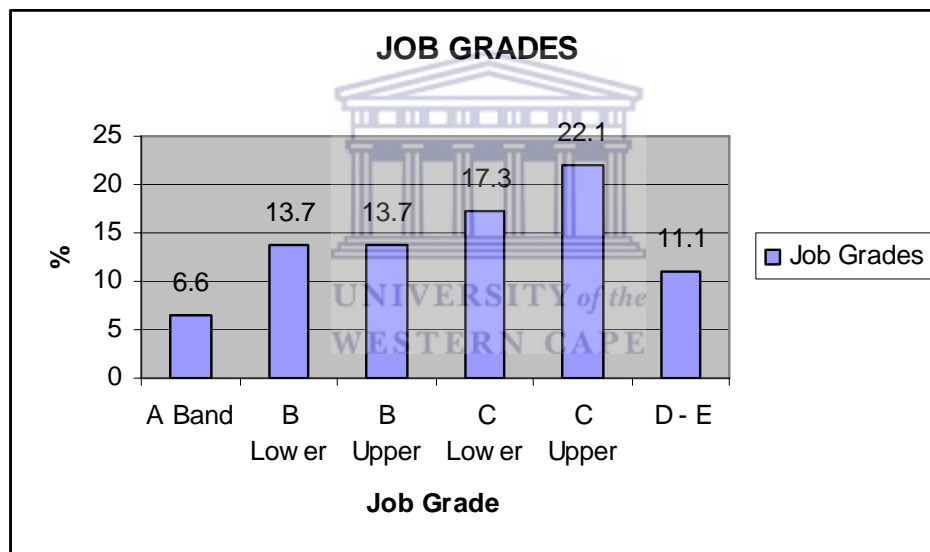


Table 1 reflects the age groupings and the number of participants per group. A total of 210 participants indicated their age grouping. The largest age group participating in this study is the 25-35 age group making 55% of the sample. This is an important observation as this age group has been identified by both the Namibian national seroprevalence survey as well as the company prevalence survey as the most vulnerable and highest infected age group.

5.2.2 Job Grades of Participants

Table 3: Job Grades



The above table reflects the percentage of participants per job grade that participated in the survey. A total of 191 participants indicated their job grades. The A – band has the lowest qualifications and skills whereas the E-band which is the highest skilled and qualified employees, and makes up the top management of the company. The majority of the sample was C-upper (22.1%) which are mostly skilled workers and

first line supervisors.

5.2.3 Employment Duration

Table 4: Employment Duration with Company

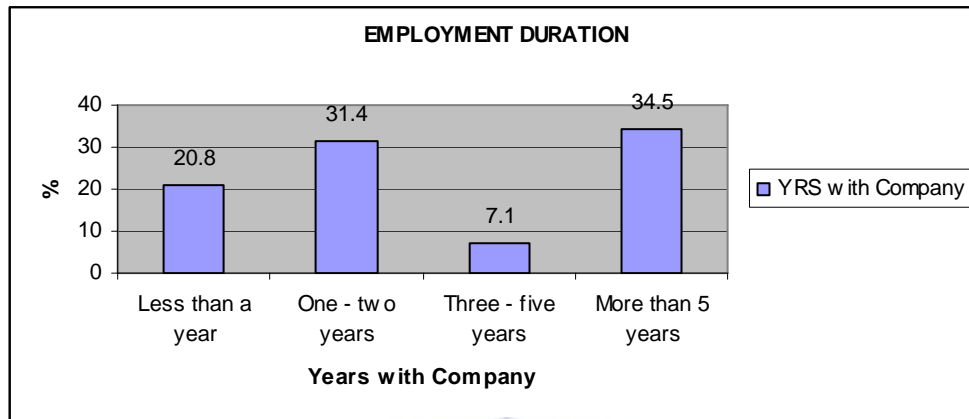


Table 3 reflects the employment duration and the number of participants. A total of 212 participants indicated their employment duration with the Company. The majority of the sample (34.5%) work for the company for more than five years.

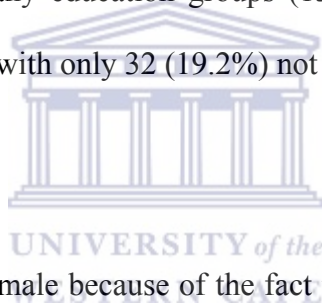
5.2.4 Education Level

The educational level was not statistically feasible for further statistical analysis beyond descriptives as some of the options per category had too few respondents.

Table 5: Education Level

| | |
|---|------|
| No education, has an N value of 3 | 1.3% |
| Primary School, has an N value of 6 | 2.7% |
| Incomplete High School, has an N value of 32 | 14.2 |
| Completed High School, has an N value of 50 | 22.1 |
| Incomplete tertiary education, has an N value of 26 | 11.5 |
| Completed Certificate, has a N value of 31 | 13.7 |
| Completed diploma has an N value of 43 | 19.0 |
| Completed undergraduate degree has an N value of 4 | 1.8 |
| Completed post-graduate degree has an N value of 12 | 5.3 |
| Marine Engineer Class 4 has an N value of 3 | 1.3 |
| NTC 3 has an N value of 1 | .4 |
| MSC has an N value of 2 | .9 |
| Post graduate diploma has an N value of 1 | .4 |

Post hoc tests were not performed on education levels as at least one group had fewer than two cases due to too many education groups (13) reported. The sample has fairly high levels of education with only 32 (19.2%) not completing High School.



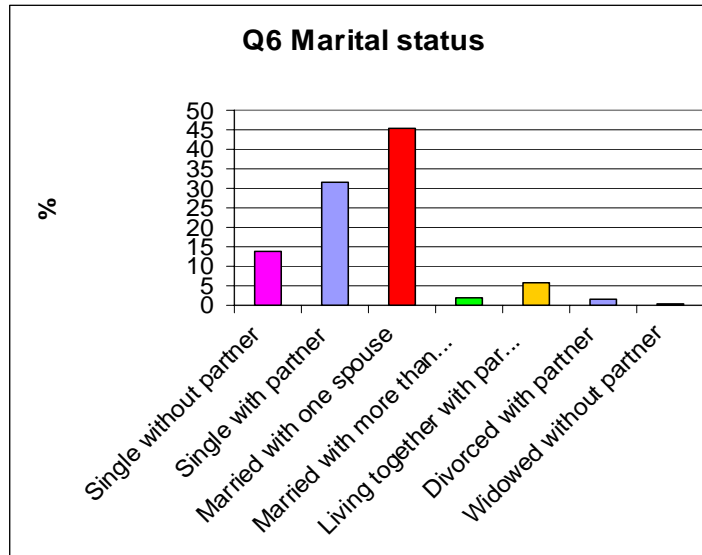
5.2.5 Sex

The majority of the sample is male because of the fact that the females only recently started to work for the company because of the ‘male oriented’ career structure of the company which is marine mining which involve mostly engineering and other technical fields. A total of 217 participants indicated their sex.

- o Male had a N of 203
- o Female had a N of 14

5.2.6 Marital Status

Table 6: Marital Status



Almost half of the participants were married, and another 30% had a partner, showing the majority of the sample to be in some form of stable relationship. However, the report included too many categories which resulted in some groups that were too small for statistical analysis, thus post hoc test were not performed. This can be described to a questionnaire flaw.

5.3 DESCRIPTIVE STATISTICS

5.3.1 KNOWLEDGE

This section describes the HIV/AIDS knowledge of the employees at a marine mining company who participated in the KAP study. Knowledge has been divided into sub-indexes which are General Knowledge Index, Knowledge of Transmission and Prevention Index, Knowledge of STI index and Knowledge

on ART.

5.3.1.1 General Knowledge Index: This index measures the number of correct responses on general HIV/AIDS knowledge questions. Questions 10, 12, 13, 14, 15 and 16 were used to compile this index: (see annexure 1). The range was set up from 0 to 6.

The average knowledge level of participants is 82.3%. The following data provides a breakdown of the responses based on the different questions asked.

- 81.9% have said that most people who have HIV/AIDS do not show signs immediately.
- 87.2% believe that there is not a cure for HIV/AIDS.
- 93.4% believe that traditional healers cannot cure HIV/AIDS.
- 92.9% believe that having sex with a virgin does not cure HIV/AIDS.
- 43.4% believe that you cannot be re-infected with HIV/AIDS if you are already HIV+. The correct response to this particular question have ranged from 33% (56-65 age group) to well above 80% correct responses for all the other age groups. It is concerning that the general knowledge on re-infection among all responses is so low.

a) *General Knowledge and Age*

Table 7: General Knowledge and Age:

| | | N | Mean | Std. Deviation | Std. Error |
|---------------------------------------|----------|-----|---------------|----------------|------------|
| General Knowledge Index (out of 6) | Under 25 | 20 | 4.9500 | .94451 | .21120 |
| | 25-35 | 116 | 4.8707 | 1.26168 | .11714 |
| | 36-45 | 47 | 4.7660 | 1.25478 | .18303 |
| | 46-55 | 23 | 5.0000 | 1.12815 | .23524 |
| | 56-65 | 4 | 3.5000 | 1.91485 | .95743 |
| | Total | 210 | 4.8429 | 1.23702 | .08536 |

The age group of 56-65 had only four participants with group mean of 3.5 out of a general knowledge index of six meaning that their general knowledge was the lowest among all age groups. The small sample may have been implicated negatively in terms of comparisons meaning that the results might have been different if the sample was bigger. The age group 46-56 has the highest general knowledge on HIV/AIDS with a group mean of 5.0 out of six.

5.3.1.2 Knowledge of Transmission and Prevention Index

This index measures the number of correct responses on questions dealing with transmission and prevention on HIV/AIDS. Questions 11, 17, 18, 19, 20, 101 and 103 (see annexure 1) were used to compile this index: The range was set up from 0 to 14.

The majority of participants, between 75.7% and 82.3%, correctly indicated that one cannot acquire HIV from (1) a mosquito bite, (2) eating food prepared by an HIV+ person, (3) sharing toilet facilities with an HIV + person, or (4) sharing kitchen utensils with an HIV+ person. A small minority, between 1.3 and 5.3%, incorrectly indicated that one can acquire HIV from the above mentioned interactions, and between 13.7% and 19% of participants were unsure about the transmission risks associated with these interactions.

The following averages were calculated for the knowledge on transmission and prevention index:

- 88.1% believe that you can get infected with HIV AIDS after a single sexual intercourse.
- 88.5% believe that a pregnant woman who is infected with HIV AIDS can pass the virus on to the baby during pregnancy or childbirth.
- 65.9% said that HIV AIDS can be transmitted from an HIV+ mother to a baby through breastfeeding.
- 94.2% believe that you can protect yourself from HIV/AIDS by abstaining from sexual intercourse.
- 95.5% believe that you can protect yourself from HIV/AIDS by having one faithful uninfected partner.
- 93.2% believe that you can protect yourself from HIV/AIDS by avoiding HIV infected blood.

(a) *Knowledge of Transmission and Prevention and Age*

Table 8: Knowledge of Transmission and Prevention and Age

| | | N | Mean | Std Deviation | Std. Error |
|---|----------|-----|----------------|---------------|------------|
| Knowledge of Transmission and Prevention Index (out of 14) | Under 25 | 20 | 11.6000 | 1.78885 | .40000 |
| | 25-35 | 116 | 11.0086 | 2.80526 | .26046 |
| | 36-45 | 47 | 11.7021 | 2.73396 | .39879 |
| | 46-55 | 23 | 12.0000 | 1.75810 | .36659 |
| | 56-65 | 4 | 7.5000 | 5.56776 | 2.78388 |
| | Total | 210 | 11.2619 | 2.73082 | .18844 |

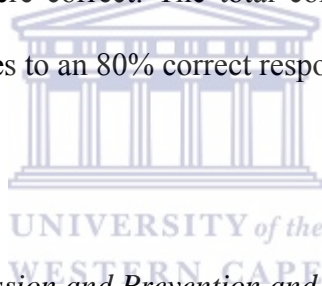
The knowledge of transmission and prevention is within this group is 11.26 out of 14 calculating that the average knowledge is 80.42%. Once again, the age group 46-55 shows a slightly higher information level of this subject.

(b) *Knowledge of Transmission and Prevention and Job Grades*

Table 9: Knowledge of Transmission and Prevention and Job Grades

| | | N | Mean | Std. Deviation | Std. Error |
|--|---------|-----|----------------|----------------|------------|
| Knowledge of Transmission and Prevention Index (out of 14) | A Band | 15 | 10.6667 | 2.38048 | .61464 |
| | B Lower | 31 | 9.4839 | 4.01556 | .72122 |
| | B Upper | 31 | 11.1290 | 1.78404 | .32042 |
| | C Lower | 39 | 11.3846 | 2.30121 | .36849 |
| | C Upper | 50 | 12.2000 | 1.73793 | .24578 |
| | D - E | 25 | 11.5200 | 3.82012 | .76402 |
| | Total | 191 | 11.2094 | 2.81689 | .20382 |

Knowledge on transmission and prevention within this group indicates that B Lower has the lowest level of knowledge that calculates to 67.71% whereas 87.14% of the C Upper job grade responses were correct. The total correct response within the age groups is 11.21% that calculates to an 80% correct response.



(c) *Knowledge of Transmission and Prevention and Employment Duration*

Table 10: Knowledge of Transmission and Prevention and Employment Duration

| | | N | Mean | Std. Deviation | Std. Error |
|--|--------------------|-----|----------------|----------------|------------|
| Knowledge of Transmission and Prevention Index (out of 14) | Less than a year | 47 | 10.6809 | 2.65483 | .38725 |
| | One - two years | 71 | 11.6761 | 2.71385 | .32207 |
| | Three - five years | 16 | 10.2500 | 2.72029 | .68007 |
| | More than 5 years | 78 | 11.2051 | 3.09738 | .35071 |
| | Total | 212 | 11.1745 | 2.86550 | .19680 |

The mean of 11.17 out of 14 was recorded calculating to an average of an 80% knowledge level on the subject within this group.

5.3.1.3 Knowledge of STD Index

This index measures the number of correct responses on questions about sexually transmitted diseases / infections (STDs). Questions 21, 23, and 50 (see annexure 1) were used to compile this index. The range was set up from 0 to 3.

(a) *Knowledge of STD and Age*

Table 11: Knowledge of STD and Age

| | | N | Mean | Std. Deviation | Std. Error |
|------------------------------|----------|-----|---------------|----------------|------------|
| Knowledge of STDs (out of 3) | Under 25 | 20 | 2.8500 | .36635 | .08192 |
| | 25-35 | 116 | 2.6207 | .68086 | .06322 |
| | 36-45 | 47 | 2.5957 | .77065 | .11241 |
| | 46-55 | 23 | 2.6087 | .58303 | .12157 |
| | 56-65 | 4 | 1.7500 | 1.25831 | .62915 |
| | Total | 210 | 2.6190 | .69007 | .04762 |

The mean of knowledge of STD and age is 2.6 out of 3 calculating an average of 86.7% knowledge level. All the age groups have an above 80% knowledge level except for the 56-65 age group that has an 58% knowledge level. However, as mentioned previously, this age group could have been implicated negatively by the low number of participants.

(b) *Knowledge of STD and Job Grades*

Table 12: Knowledge of STD and Job Grades

| | | N | Mean | Std. Deviation | Std. Error |
|------------------------------|---------|-----|---------------|----------------|------------|
| Knowledge of STDs (out of 3) | A Band | 15 | 2.5333 | .63994 | .16523 |
| | B Lower | 31 | 2.2903 | .93785 | .16844 |
| | B Upper | 31 | 2.6129 | .71542 | .12849 |
| | C Lower | 39 | 2.8718 | .33869 | .05423 |
| | C Upper | 50 | 2.6800 | .51270 | .07251 |
| | D - E | 25 | 2.5200 | .87178 | .17436 |
| | Total | 191 | 2.6126 | .68568 | .04961 |

The mean of knowledge of STD and job grades is 2.52 out of 3 calculating to an 84% knowledge level. The B Lower job grade has reported the lowest level of knowledge (76%) even though it is still a relatively high average.

(c) *Knowledge of STD and Employment Duration*

Table 13: Knowledge of STD and Employment Duration

| | | N | Mean | Std. Deviation | Std. Error |
|------------------------------|--------------------|-----|---------------|----------------|------------|
| Knowledge of STDs (out of 3) | Less than a year | 47 | 2.5745 | .77304 | .11276 |
| | One - two years | 71 | 2.6620 | .58416 | .06933 |
| | Three - five years | 16 | 2.4375 | .81394 | .20349 |
| | More than 5 years | 78 | 2.6282 | .66663 | .07548 |
| | Total | 212 | 2.6132 | .67551 | .04639 |

The majority of the sample works for the company more than five years and shows a mean of 2.62 out of 3 calculating to an 87.3% knowledge level. The one to two years sample shows a mean of 2.66 calculating to 89% knowledge level. All the groups indicate a 2.61 mean out of 3 calculating to 87% knowledge level.

5.3.1.4 Knowledge of ART Index

This index measures the number of correct responses on questions dealing with Anti - retroviral Therapy (ART). Questions 41, 42, 43 and 44 were used to compile this index. (See annexure 1) The range was set up from 0 to 4.

- 84.1% of the sample believes that ART does not cure HIV AIDS.

(a) Knowledge of ART and Age

A mean score of 2.1 out of 3 was recorded by the age groups which calculate to a 70% knowledge level. The age group under 25 shows a mean of 1.6. The age group 56-65 shows a mean of 1.25 (41.6%).

(b) Knowledge of ART and Job Grades

Table 14: Knowledge of ART and Job Grades

| | | N | Mean | Std. Deviation | Std. Error |
|-----------------------------|---------|-----|---------------|----------------|------------|
| Knowledge of ART (out of 4) | A Band | 15 | 2.2667 | 1.03280 | .26667 |
| | B Lower | 31 | 1.2903 | 1.32145 | .23734 |
| | B Upper | 31 | 2.0645 | 1.38890 | .24945 |
| | C Lower | 39 | 2.1795 | 1.35475 | .21693 |
| | C Upper | 50 | 2.4200 | 1.37158 | .19397 |
| | D - E | 25 | 2.3200 | 1.49220 | .29844 |
| | Total | 191 | 2.1047 | 1.39153 | .10069 |

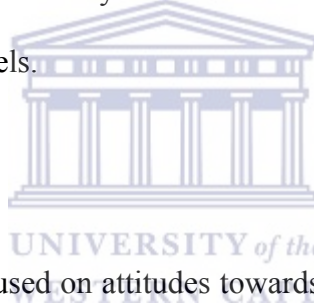
The average of the knowledge of ART and job grades of the total sample is 2.10 out of 4 calculating to a 52.5% knowledge level within the group. The B Lower job grade shows a mean of 1.29 calculating to 32.25% knowledge level. All the other job grades indicated a mean higher than 2.0.

(c) *Knowledge of ART and Employment Duration*

Table 15: Knowledge of ART and Employment Duration

| | | N | Mean | Std. Deviation | Std. Error |
|-----------------------------|--------------------|-----|---------------|----------------|------------|
| Knowledge of ART (out of 4) | Less than a year | 47 | 1.5957 | 1.36190 | .19865 |
| | One - two years | 71 | 2.0845 | 1.42173 | .16873 |
| | Three - five years | 16 | 1.7500 | 1.39044 | .34761 |
| | More than 5 years | 78 | 2.3974 | 1.37075 | .15521 |
| | Total | 212 | 2.0660 | 1.41266 | .09702 |

The mean of the total sample is 2.0 out of 4 calculating to 50% knowledge level within the group. The “less than one-year” group shows the lowest mean of 1.6, followed by the three to five year group that shows a mean of 1.75. The groups “one to two years” and the “more than five years” show means of 2.08 and 2.39 indicating more than 50% knowledge levels.



5.3.2 ATTITUDES

The questions on attitudes focused on attitudes towards co-worker and acquaintances with HIV/AIDS (stigma). These questions explored whether participants knew anyone who are infected with the virus, whether there are aspects for blame, attitudes towards life-expectancy of persons living with HIV/AIDS, risk of family to be exposed to HIV infection, attitudes toward company sponsored programmes, beliefs on disclosing HIV status, care and support for people living with HIV/AIDS, and attitudes toward the effects of the pandemic on the individual, the family, the community and the company (workplace). The stigmatization index reports on the stigmatization level of the respondents.

5.3.2.1 Stigmatization Index

This index measures the extent to which respondents have negative or positive attitudes towards those with HIV/AIDS.

Questions 49, 58, 59, 62, 65, 66, 67, 68, 69, 70, and 71 were used to compile this index. (See annexure 1). The range was set up from 0 to 11.

(a) *Stigmatization and Age, Job Grades and Employment Duration*

Table 16: Stigmatization and Age, Job Grades and Employment Duration

| | | N | Mean | Std Deviation | Std Error | |
|--------------------------------------|---------------------|------------------|---------------|---------------|-----------|---------|
| Stigmatization index (-11 to +11) | Under 25 | 20 | 3.1000 | 2.67346 | .59780 | |
| | Age | 25-35 | 116 | 3.3103 | 2.08270 | .19337 |
| | | 36-45 | 47 | 2.6596 | 2.43415 | .35506 |
| | | 46-55 | 23 | 2.7826 | 2.74618 | .57262 |
| | | 56-65 | 4 | 2.0000 | 2.16025 | 1.08012 |
| | | Total | 210 | 3.0619 | 2.30269 | .15890 |
| Job Grade | A Band | 15 | 3.1333 | 1.12546 | .29059 | |
| | B Lower | 31 | 3.4516 | 2.26331 | .40650 | |
| | B Upper | 31 | 3.6129 | 2.43143 | .43670 | |
| | C Lower | 39 | 2.3846 | 2.68147 | .42938 | |
| | C Upper | 50 | 3.0600 | 2.17978 | .30827 | |
| | D - E | 25 | 2.0800 | 2.62869 | .52574 | |
| | Total | 191 | 2.9529 | 2.37816 | .17208 | |
| | Employment Duration | Less than a year | 47 | 3.2979 | 2.26423 | .33027 |
| One - two years | | 71 | 2.9155 | 2.18924 | .25981 | |
| Three - five years | | 16 | 2.3750 | 2.68017 | .67004 | |
| More than 5 years | | 78 | 3.1410 | 2.40521 | .27234 | |
| Total | | 212 | 3.0425 | 2.32095 | .15940 | |

The above table shows the stigmatization index and the mean scores for each group. Stigmatization index scores can fall between -11 to +11. The closer to -11 the score is the more negative it is and the closer to +11 the more positive it is.

The total mean score for age groups is 3.06 indicating three positive items which means on average they have said yes to around three positive items in this index. The total mean score for job grades is 2.95 indicating just below three positive items. For the employment duration group the mean score is 3.04 also indicating around three positive items.

The general attitude of HIV/AIDS of the sample indicates attitudes that are more positive. The negative attitudes reported are minimal; only two respondents (1.9%) reported that people who are HIV positive disgust them.

- 8% of respondents indicated that people with the virus should be isolated.
- All the other responses are positive including that HIV positive people must be supported, that they are considered to be normal. (See table 22).
- 19% indicated that they feel sorry for an HIV positive person.
- 19.5% said they feel they are at risk working with someone who is HIV positive mainly when providing first aid or when injured, the risk of getting infected through blood.

5.3.3 SEXUAL PRACTICES

Questions on sexual practice explored the sexual behaviours of participants, how often they had sex, the age when they first had sex, HIV testing, number of sexual

partners, faithfulness of sexual partners, possible sexual risky behaviours (sex worker/prostitutes), condom use, alcohol use and sexual behaviour, homosexual sex, oral sex, anal sex, and STIs. The aim of these questions was to assess a baseline of sexual practices and to compare knowledge and attitudes with self-reported sexual practices. As attitudes toward condom-use are an important factor of sexual practice, it will be discussed as part of sexual practices.

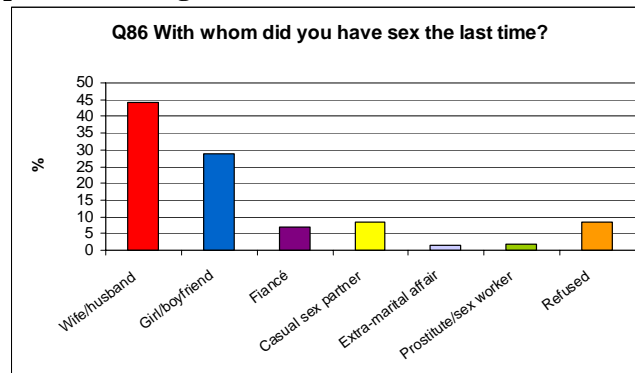
This index measures the number of actual risk actions that were taken by respondents.

Questions 86, 87, 91, 95, 96, 99, 102, and 104 were used to compile this index:

(See annexure 1). The range was set up from 0 to 8. As indicated before attitudes toward condom-use is closely link with sexual practices thus reported under this section instead of under attitudes.

- The youngest age of having had sex was 4, with another response of 5 and one of 9 and 10. Seven had sex for the first time after the age of 25 years.
- 59.8% had sex before the age of 18.
- 94.7% have had sex, which is to be expected in an adult working environment.
- 73.9% have gone for a HIV test.

Table 20: Sex partner during last sexual intercourse



31.4% used a condom the last time they had sex.

5.3.3.1 Attitudes toward Condoms Use Index

This index measures the extent to which respondents have pro- or anti-condom attitudes. Questions 53, 54, 55, 90, and 94 were used to compile this index. (See annexure 1) The range was set up from -5 to +5. (Anti-condom use a value of -5, and pro-condom use a value of +5.)

(a) Attitudes towards Condoms Use and Age

Table 17: Attitudes towards Condom-use and Age

| | | N | Mean | Std Deviation | Std Error |
|--|----------|-----|---------------|---------------|-----------|
| Attitudes toward condoms (-5 to +5) | Under 25 | 20 | 1.7500 | 2.19749 | .49137 |
| | 25-35 | 116 | 2.5345 | 2.10767 | .19569 |
| | 36-45 | 47 | 2.5957 | 2.11269 | .30817 |
| | 46-55 | 23 | 1.6522 | 2.24841 | .46883 |
| | 56-65 | 4 | -.2500 | 1.89297 | .94648 |
| | Total | 210 | 2.3238 | 2.16760 | .14958 |

Table 16 describes in summary the attitudes toward condom use and age categories. The age group 56-65 had a mean of -2.5 condom-use attitude range, indicating a strong anti-condom use attitude. All the other age groups indicate a positive attitude towards condom use. The age group under 25 has a mean of 1.75 (range -5 to +5) which should be higher considering that they are mostly single.

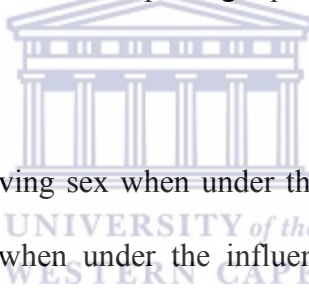
Considering the relationship status of the age group 56-65, three participants are married with one spouse and the fourth participant is widowed without a partner indicating that they are in stable relationships. Thus the negative attitudes toward condom-use need to be reported keeping in mind their stable relationship status.

(b) Attitudes toward Condoms Use and Job Grades

The C Upper-Band has a mean score of 2.88 to 5 condom-use attitude range, indicating a pro-condom use attitude, followed by C Lower with a mean score of 2.6154. B Band indicates mean scores of 1.7419 (B Lower) and 1.6774 (B Upper). Even though it is the lowest mean scores, it still indicates a positive attitude.

(c) Attitudes toward Condoms Use and Employment Duration

All groups indicated at least one positive item. Mean scores ranging from 1.6383 indicated by the 1-2 years group to 2.850 indicated by the 3-5 years group. The total mean score within the groups is 2.2783 reporting a positive attitude towards condom use.



Exploring the likelihood of having sex when under the influence of alcohol, 44.7% are more likely to have sex when under the influence of alcohol. A follow-up question, whether they are likely to use a condom, could have given more insight on the risk.

5.3.4.1 Risk Behaviour Index

This index measures the number of actual risk actions that were taken by respondents. Questions 86, 87, 91, 95, 96, 99, 102, and 104 were used to compile this index:

(See annexure 1). The range was set up from 0 to 7.

(a) *Risk Behaviour and Age, Job Grades and Employment Duration*

The total mean score for age groups on number of risk actions is 1.7810, for job grades is 1.7487 and for employment duration is 1.7406 (out of a score of seven risk actions). The C Upper has the highest mean 2.1282 followed by the A Band who has a mean 2.0.

5.4 COMPARATIVE STATISTICS

Comparative statistics reporting the significant differences within the groups (age, job grade and employment duration) of the sample is discussed in the following section.

Data analysis has shown that real differences lie not between different groups but within the groups of the sample.



5.4.1 KNOWLEDGE

5.4.1.1 General Knowledge

(a) *General Knowledge and Age groups*

Table 18: General Knowledge and Age: Post Hoc Tests Multiple Comparisons

| Dependent Variable | (I) Q2 Age of respondent | (J) Q2 Age of respondent | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|------------------------------------|--------------------------|--------------------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | | Lower Bound | Upper Bound |
| General Knowledge Index (out of 6) | 56-65 | 25-35 | -1.37069(*) | .62681 | .030 | -2.6065 | -.1349 |
| | | 36-45 | -1.26596(*) | .64197 | .050 | -2.5317 | -.0003 |
| | | 46-55 | -1.50000(*) | .66772 | .026 | -2.8165 | -.1835 |
| | | Under 25 | -1.45000(*) | .67510 | .033 | -2.7810 | -.1190 |

- o The between group means of age group 56-65 are significantly different from all other age groups.
- o Age groups Under 25 and 56-65 had a significant between group mean difference with a p value of 0.033.
- o Age groups 25-35 and 56-65 had a significant between group mean difference with a p value of 0.030
- o Age groups 36-45 and 56-65 had a significant between group mean differences with a p value of 0.050
- o Age groups 46-55 and 56-65 had a significant between group mean difference with a p value of 0.026.

(c) *General Knowledge and Job Grades*

- o Job grades, B Lower-Band and C Lower -Band, had a significant between group mean difference with a p value of 0.041
- o Job grades, B Lower-Band and C Upper -Band, had a significant between group mean difference with a p value of 0.012
- o Job grades, B Upper-Band and C Upper -Band, had a significant between group mean difference with a p value of 0.017

There is no significant difference between the group mean of the A Band (with the least number of respondents at 15) and any of the other job grades. The A band generally consists of the less educated and entry-level employees with D/E Band consisting of the top management which is the most educated and experienced level

employees. There is no significant difference between the group mean of the D-E and any of the other job grades.

(d) General Knowledge and Employment Duration

Table 19: General Knowledge and Employment Duration

| Dependent Variable | (I) Q5 How long have you been working for DBMN? | (J) Q5 How long have you been working for company? | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|------------------------------------|---|--|-----------------------|------------|------|-------------------------|-------------|
| | | | | | | Lower Bound | Upper Bound |
| General Knowledge Index (out of 6) | One - two years | Less than a year | .47408(*) | .22986 | .040 | .0209 | .9272 |
| | | Three - five years | .71743(*) | .33828 | .035 | .0505 | 1.3843 |
| | | More than 5 years | .42416(*) | .20050 | .036 | .0289 | .8194 |

- o The between group means of the “1 -2 years” are significantly different from the means of all other groups.
 - Mean differences between the “less than a year” and “1-2 years” groups were significant with a p value of 0.040
 - Mean differences between the “1-2 years” and “3-5 year” groups were significance with a p value of 0.035.
 - Mean differences between the “1-2 years” and “more than 5 years” group were significant with a p value of 0.036

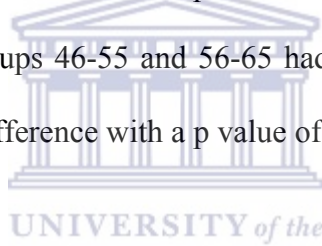
(e) General Knowledge and Sex

- o No significant differences between group means was found between males and females.

5.4.1.2 Knowledge of Transmission and Prevention Index

(a) *Knowledge of Transmission and Prevention and Age*

- o The Between group means of age group 56-65 are significantly different from all other age groups.
 - Age group under 25 and 56-65 had a significant between group mean difference with a p value of 0.006.
 - Age groups 25-35 and 56-65 had a significant between group mean difference with a p value of 0.011.
 - Age groups 36-45 and 56-65 had a significant between group mean difference with a p value of 0.003.
 - Age groups 46-55 and 56-65 had a significant between group mean difference with a p value of 0.002.



(b) *Knowledge of Transmission and Prevention and Job Grades*

- o The between group means of the B Lower Band are significantly different from all other job grades, except A-Band.
 - Job grades, B Lower-Band and B Upper-Band, had a significant between group mean difference with a p value of 0.018.
 - Job grades, B Lower-Band and C Lower-Band, had a significant between group mean difference with a p value of 0.004.
 - Job grades, B Lower-Band and C Upper-Band, had a

significant between group mean difference with a p value of 0.000.

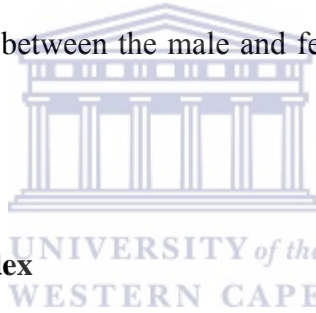
- Job grades, B Lower -Band and D-E-Band, had a significant between group mean difference with a p value of 0.006.

(c) *Knowledge of Transmission and Prevention and Employment Duration*

No significant between group mean differences were found within Employment Duration Index.

(d) *Knowledge of Transmission and Prevention and Sex*

Significant differences between the male and female group means was found with a p value of 0.028.



5.4.1.3 Knowledge of STI Index

(a) *Knowledge of STI and Age*

The between group means of Age Group 56-65 are significantly different from all other age groups.

Age Groups under 25 and 56-65 had a significant between group mean differences with a p value of 0.004.

Age Groups 25-35 and 56-65 had a significant between group mean differences with a p value of 0.013.

Age Groups 36-45 and 56-65 had a significant between group mean differences with a p value of 0.018.

Age Groups 46-55 and 56-65 had a significant between group mean differences with a p value of 0.021

(b) Knowledge of STD and Job Grades

- o* Job grades, B Lower-Band and C Lower-Band, had a significant between group mean differences with a p value of 0.000.
- o* Job grades, B Lower-Band and C Upper-Band, had a significant between group mean difference with a p value of 0.012.
- o* Job grades, C Lower -Band and D-E-Band, had a significant between group mean difference with a p value of 0.042.
- o* There is no significant difference between the group means of the A Band and all other bands.
- o* There is also no significant difference between the group mean of the B Upper-Band and all other bands.

(c) Knowledge of STI and Employment Duration

- o* No significant differences between group means were found.

(d) Knowledge of STI and Sex

- o* No significant differences between group means were found between males and females.

(a) *Knowledge of ART and Age*

- o Age groups Under 25 and 36-45 had a significant between group mean difference with a p value of 0.017 for ART knowledge.

(b) *Knowledge of ART and Job Grades*

- o The between group means of the B Lower Band are significantly different from all other job grades for ART knowledge.

Job grades, A-Band and B Lower-Band, had a significant between group mean difference with a p value of 0.023.

Job grades, B Upper-Band and B Lower-Band, had a significant between group mean difference with a p value of 0.026.

Job grades, C Lower-Band and B Lower-Band, had a significant between group mean difference with a p value of 0.007.

Job grades, C Upper-Band and B Lower-Band, had a significant between group mean difference with a p value of 0.000.

Job grades, D-E-Band and B Lower-Band, had a significant between group mean difference with a p value of 0.005.

(c) *Knowledge of ART and Employment Duration*

- o The mean of the “less than a year” group is significantly different from the mean of the “more than 5 year” group were found with a p value of 0.002 for ART knowledge.

(d) Knowledge of ART and Sex

- o* No significant differences between group means for ART knowledge were found between males and females.

5.4.2 ATTITUDES

5.4.2.1 Stigmatization Index

(a) Stigmatization and Age

- o* No significant differences between Age Group mean were found on the Stigma Index.

(b) Stigmatization and Job Grades

- o* Job grades, B Lower-Band and D-E-Band, had a significant group mean difference with a p value of 0.031.
- o* Job grades, B Upper-Band and C Lower-Band, had a significant group mean difference with a p value of 0.031.
- o* Job grades, B Upper-Band and D/E-Band, had a significant group mean difference with a p value of 0.016.

(c) Stigmatization and Employment Duration

- o* No significant differences between group means were found.

(d) Stigmatization and Sex

- o* No significant differences between group means were found.

5.4.3 SEXUAL PRACTICES

5.4.3.1 Risk Behaviour Index

(a) *Attitudes towards Condoms Use and Age*

**Table 21: Attitudes towards Condom-use and Age: Post Hoc tests
Multiple Comparisons: Attitudes toward condom-use and Age**

| Dependent Variable | (I) Q2 Age of respondent | (J) Q2 Age of respondent | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|-------------------------------------|--------------------------|--------------------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | | Lower Bound | Upper Bound |
| Attitudes toward condoms (-5 to +5) | 56-65 | Under 25 | -2.00000 | 1.16654 | .088 | -4.3000 | .3000 |
| | | 25-35 | -2.78448(*) | 1.08311 | .011 | -4.9199 | -.6490 |
| | | 36-45 | -2.84574(*) | 1.10929 | .011 | -5.0328 | -.6587 |
| | | 46-55 | -1.90217 | 1.15380 | .101 | -4.1770 | .3727 |

- o Age groups 25-35 and 56-65 had a significant difference between group means with a p value of 0.011 regarding Attitudes towards Condom Use.
- o Age groups 36-45 and 56-65 had a significant between group mean difference with a p value of 0.011 regarding Attitudes towards Condom Use.

(b) *Attitudes toward Condoms Use and Job Grades*

- o Job grades, B Lower-Band and C Upper-Band, had a significant between group mean differences with a p value of 0.021 regarding Attitudes Towards Condom Use.
- o Job grades, B Upper-Band and C Upper-Band, had a significant between group mean differences with a p value of 0.015 regarding Attitudes Towards Condom Use.

(c) Attitudes toward Condoms Use and Employment Duration

- o* Significant differences between the “Less than a year” and “1-2 year” group means were found with a p value of 0.029 regarding Attitudes Towards Condom Use.
- o* Significant differences between the “Less than a year” and “ 3-5 year” group means were found with a p value of 0.047 regarding Attitudes Towards Condom Use.

(d) Attitudes toward Condoms Use and Sex

- o* No significant differences between group means were found within males and females regarding Attitudes towards Condom Use.

(a) Risk Behaviour and Age

- o* No significant differences between Ages Group means were found within the Risk Behaviour Index.

(b) Risk Behaviour and Job Grades

- o* Job grades, B Lower-Band and C Lower-Band, had a significant between group mean differences with a p value of 0.007.
- o* Job grades, C Lower -Band and C Upper-Band, had a significant between group mean differences with a p value of 0.025.

(c) *Risk Behaviour and Employment Duration*

- o Significant between the “Less than a year” and “3-5 year” group mean differences were found with a p value of 0.039.
- o Significant differences between the “Less than a year” and “ More than 5 year” group means were found with a p value of 0.023.

(d) *Risk Behaviour and Sex*

- o No significant differences between group means were found for males and females on the Risk Behaviour Index.

5.5 QUALITATIVE DATA

Qualitative data was collected only on the attitude questions in the form of open-ended questions.



Table 22: Attitudes of respondents who knows someone who is HIV+

| Category label | Count | % of Responses | % of Cases |
|--|-------|----------------|------------|
| Leads healthy lifestyle | 5 | 4.6 | 5.6 |
| Must change their lifestyle | 2 | 1.9 | 2.2 |
| Stopped sexual intercourse | 5 | 4.6 | 5.6 |
| Will help and support them | 12 | 11.1 | 13.3 |
| Make him happy/comfortable | 1 | 0.9 | 1.1 |
| Normal | 17 | 15.7 | 18.9 |
| She makes it worse for herself | 1 | 0.9 | 1.1 |
| Rejected by family/friends | 3 | 2.8 | 3.3 |
| Treat person with respect | 2 | 1.9 | 2.2 |
| Leads bad and corrupt lifestyle | 1 | 0.9 | 1.1 |
| Try to support and treat them the same | 4 | 3.7 | 4.4 |
| They are still happy and positive | 6 | 5.6 | 6.7 |
| Feel sorry for that person | 19 | 17.6 | 21.1 |
| Must keep a healthy lifestyle with ART | 1 | 0.9 | 1.1 |

| | | | |
|---|-----|-------|-------|
| Disgusted | 2 | 1.9 | 2.2 |
| Must use condom when having intercourse | 1 | 0.9 | 1.1 |
| Visits doctor often | 2 | 1.9 | 2.2 |
| Person is suffering physically and mentally | 2 | 1.9 | 2.2 |
| Needs encouragement and support | 3 | 2.8 | 3.3 |
| Will die soon | 4 | 3.7 | 4.4 |
| Did not contract HIV thru sex | 1 | 0.9 | 1.1 |
| Need psychological help | 1 | 0.9 | 1.1 |
| Reacts good on the medication | 1 | 0.9 | 1.1 |
| Nothing/no response | 12 | 11.1 | 13.3 |
| Total responses | 108 | 100.0 | 120.0 |

Table 22 illustrates the qualitative responses of participants (43.1%) who know a person who is HIV positive. Responses include mostly positive attitudes. However, it is important to note that 17.6% feel sorry for the person and 1.9% (two participants) indicated that they are disgusted.

Comparing the attitudes of people who know people infected with HIV/AIDS, and respondents who do not anyone infected with HIV/AIDS, there are a number of similar responses. Attitudes that are common between the two groups are normal, will help and support them and feel sorry for the person.

5.6 ADDITIONAL FINDINGS

In addition to the indexes, the existing data was examined further for the identification of meaningful indicators.

Table 23: Significant Predictors of Risk Behaviour

| THE MODEL | Unstandardized Coefficients | | Standardized Coefficients Beta | t | Sig. |
|--|-----------------------------|------------|-----------------------------------|----------|------|
| | B | Std. Error | | | |
| (Constant) | 3.660511 | 0.7042 | | 5.198113 | 0.00 |
| Knowledge of Transmission and Prevention Index (out of 14) | -0.08615 | 0.041731 | -0.18641 | -2.06447 | 0.04 |

| | | | | | |
|--|----------|----------|----------|----------|------|
| Knowledge of STDs (out of 3) | 0.016143 | 0.164383 | 0.008387 | 0.098204 | 0.92 |
| Knowledge of ARTs (out of 4) | 0.116627 | 0.072741 | 0.127636 | 1.603322 | 0.11 |
| Attitudes toward condoms (-5 to +5) | -0.01976 | 0.044761 | -0.03428 | -0.44148 | 0.66 |
| Stigmatization index (-11 to +11) | -0.10222 | 0.03966 | -0.19614 | -2.57728 | 0.01 |
| Q2 Age of respondent | -0.10214 | 0.112581 | -0.07374 | -0.9073 | 0.37 |
| Q4 Grading at DBMN | 0.014166 | 0.066781 | 0.017073 | 0.212132 | 0.83 |
| Q5 How long have you been working for company? | 0.173171 | 0.084324 | 0.16109 | 2.053625 | 0.04 |
| Q33 Have you ever needed treatment for a STI? | -0.6117 | 0.248617 | -0.1844 | -2.46042 | 0.01 |

The ordinary least squares regression statistical test tested for significance as predicting variables to help identify those variables that are significant predictors of high risk behaviour. The above table shows four items that have been identified as significant predictors of risk behaviour:

Two items REDUCE RISK BEHAVIOUR:

- Knowledge of transmission and prevention reduces risk behaviour.
- Not having strong feelings of stigmatization also reduces risk behaviour.

Two items INCREASE RISK BEHAVIOUR:

- Time working for company increases risk behaviour: It shows that socialization between those who work together (and in this case they spend long periods of time together on vessels at sea, which increases this dramatically) strongly influence each other's sexual behaviour and attitudes.
- Having gone for a STI test is a strong indicator of risk behaviour.

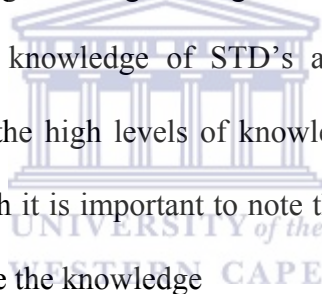
5.7 SUMMARY

The knowledge level is above 80% indicating a well-informed sample in general on all the knowledge indexes. The general attitude of HIV/AIDS of the sample indicates attitudes that are more positive. The general sexual behaviours / practices indicate an average of 1.7 out of seven risk behaviours in all age groups, job grades and

employment duration. In general there is a risky sexual behaviours but can be considered to be low.

The age group 56-65 is significantly different on general knowledge, knowledge of transmission and prevention, knowledge of STI index and attitudes toward condom use, from all other age groups. Looking at the raw data, the conclusion can be made that this age group is significant different because they are married, in safe relations, thus their negative attitude towards condom use and the entire HIV knowledge, they are not involved in high-risk behaviours but the other side of the coin could also be true.

Most job grades have a high average on general knowledge, knowledge of transmission and prevention, knowledge of STD's and knowledge of ART. A conclusion can be made that the high levels of knowledge contributes to low risky sexual behaviours, even though it is important to note that there are risky behaviours taking place whilst people have the knowledge

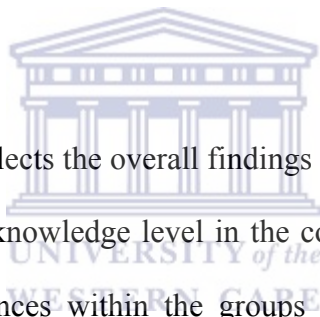


CHAPTER 6: DISCUSSION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The objectives of the study were:

- To measure the overall knowledge levels as well as attitudes and sexual practices of DBMN employees on HIV and STD's.
- To determine whether there is a difference in the knowledge levels, attitudes and sexual practices of employees in different job categories.
- To measure the perception of the risk relating to the sexual behavior of DBMN employees.



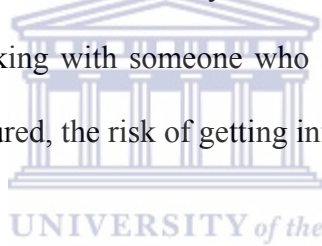
The summary of the results reflects the overall findings in relation to the objectives of the study that there is a high knowledge level in the company contributes low risky behaviours. There are differences within the groups that are discussed under the summary of results.

6.2 SUMMARY OF RESULTS

Overall, a high **knowledge level** is reported, above 80% in all knowledge indexes, indicating a well-informed sample on all the knowledge indexes, except for the knowledge on ART index where an 50% knowledge is reported. This however could be acceptable, as the majority of the respondents are not exposed to ART, thus have not needed the information yet. This assumption is made based on the company provision of ART programme where only eight people are registered on the

programme out of an HIV infection number of 23 people. The average on knowledge on transmission and prevention (11.26 out of 14) is also high knowledge on STD's (2.62 out of 3).

The **general attitude** of HIV/AIDS of the sample reflects attitudes that are more positive. The negative attitudes reported are minimal; only two respondents (1.9%) reported that people who are HIV positive disgust them. 8% of respondents indicated that people with the virus should be isolated. All the other responses are positive including that HIV positive people must be supported, that they are considered to be normal. (See table 22). 19% indicated that they feel sorry for the person. 19.5% said they feel they are at risk working with someone who is HIV positive mainly when providing first aid or when injured, the risk of getting infected through blood



The **general sexual behaviour** / practices indicate an average of 1.7 out of seven risk behaviours in all age groups, job grades and employment duration. In general there is a risky sexual behaviours but can be considered to be low. The high averages knowledge on transmission and STD's are considered as predictors to reduce high-risk behaviours. 76.1% have gone for an HIV test that can also be seen as an increase high-risk behaviour. However, as the company offered intensive VCT campaigns, this can also be seen as a predictor of reduce risk, people know their HIV status and could use this to stay negative considering the information and counselling that is part of the VCT process. A conclusion can be made that the high levels of knowledge contributes to low risky sexual behaviours, suggesting low risk predictors. Most job

grades have a high average on general knowledge, knowledge of transmission and prevention, knowledge of STD's and knowledge of ART. However, it is important to note that there are risky behaviours taking place whilst people have high levels of knowledge and should be alarming as the following behaviours are increased risk predictors.

- 5.3% indicated that one cannot get HIV/AIDS from having many sexual partners.
- 15.9% have received treatment for STD's
- 7.5% believes that there is a cure for HIV/AIDS
- 8.4% reported that one cannot get HIV after a single sexual intercourse.

On multiple comparisons, significant differences were reported between age group means on knowledge of transmission and prevention, knowledge of STD's and number of risk actions.

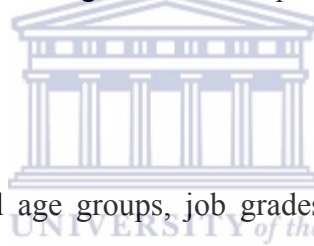
The age group 56-65 is significantly different on general knowledge, knowledge of transmission and prevention, knowledge of STI index from all other age groups even though the group was very small and thus could have been implicated negatively. They reported the lowest knowledge level of all age groups. There was no significant difference between the means of the rest of the age groups.

Multiple comparisons on **general attitudes** (the stigma index), indicate no significant differences between age group, employment duration were found. However, there were significant different recorded between some job grades. Once again, the age

group 56-65 had a mean of 2.00 (range -11 to 11+) whereas the highest group mean was found in the age group 25-35 with a mean of 3.31. Even though these are positive attitudes, the score means are quite low. D/E and C Lower job grades show the lowest means in the job grades category.

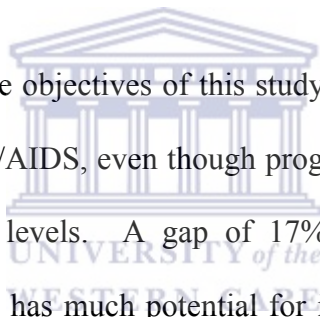
Significant differences were reported on job grades and stigmatization, knowledge of STD's, knowledge of transmission and prevention and general knowledge.

No significant differences were recorded for employment duration with the company in all the knowledge indexes. People who are employed by the company for longer periods do not have higher knowledge levels than people who work for less than a year.



Risky sexual actions: For all age groups, job grades and employment duration a mean of approximately 1.7 out of 7 is reported indicating high-risk behaviours even though it is relatively low. No significant differences between age group means were found within the Risk Behaviour Index. However, comparing employment duration, the “less than a year” with “3-5 year” and the “more than 5 year” group means significant differences were found. Respondents working for the company for longer periods (longer employment duration) indicate an increased risk behaviour. It may seem that socialization between the employees strongly influence each other’s sexual behaviour (Chu et al. 2002). It can also be a lifestyle issue as employees are at sea for long periods and thus are prepared to take calculated risks.

Attitudes towards condom-use in general were positive except for the age group 56-65 which reported a negative attitude towards condom-use. Looking at the raw data, the conclusion can be made that this age group is significant different because they are married, in safe relationships, thus their negative attitude towards condom use and the entire HIV knowledge indexes, they are not involved in high-risk behaviours but the other side of the coin could also be true. It is important to keep in mind the positions and roles this group occupy within the company. If they occupy senior and leadership positions to be cautious that they do not influence younger employees, who might be subordinates, with these negative attitudes toward condom use.

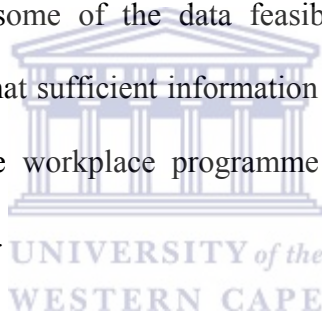


In conclusion, in relation to the objectives of this study, it seems that there is a high level of knowledge about HIV/AIDS, even though programmes should be intensified to bring increase knowledge levels. A gap of 17% in knowledge needs to be addressed. The attitudes level has much potential for improvement, as it is still too low. The respondents appear to be relatively low at risk but there are high-risk predictors that should be considered. The target groups for interventions are the age groups 56-65 (negative attitude towards condom use and the lowest knowledge levels) and under 25 (low positive attitude towards condom use). All age groups should be targeted for risk actions, as there is a degree of risk even though it is relatively low. Employees employed by the company for three years and longer, appear to be more at risk. They need to be targeted as they are the workforce with the skills and experience and the company has already invested in training and development; as the unique marine mining market requires specific qualifications and

skills to make operations at sea legal.

6.3 CONCLUSION ON THE RESEARCH METHODOLOGY, LIMITATIONS AND SIGNIFICANCE OF THE STUDY

The research methodology used for this study for this survey was reliable in a sense that the questionnaire used for this survey explored specific questions to measure the dependent variables in order to get certain quantitative data however as mentioned previously, if interviews were also conducted, further analysis on certain indexes could have been done. The limitations of the survey have been discussed on chapter 4 however in conclusion, it is advisable to regroup the age groups, educational levels and marital status to make some of the data feasible to use statistically. The significance of the survey is that sufficient information has been reported that makes way for improvements in the workplace programme but especially to target the groups at risk more assertively.



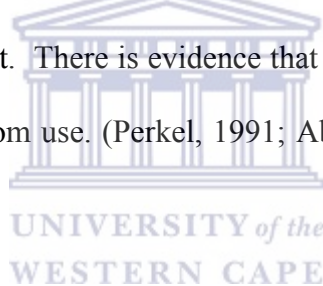
6.4 SUMMARY OF FINDINGS AND CONCLUSIONS OF LITERATURE

Behavioural Surveillance Surveys is regarded as essential tools in monitoring responses to HIV/AIDS and can be used to identify groups at risk of HIV. “Risk behaviours are sometimes concentrated in subpopulations (FHI, 2002). This survey has proven that some groups are at greater risk than others, for instance the age group 56-65.

Some researches show (Ntozi and Kirunga, 1997; Pikholtz, 1992) that the best-known prevention to HIV/AIDS is health education. Knowledge of a disease, as one factor among others, is crucial to behaviour change. The knowledge of the spread of the

disease, belief in the seriousness of the disease, and anticipated risk of infection can contribute to safer sexual practices. This study concludes that most age groups and job grades have a high average on general knowledge, knowledge of transmission and prevention, knowledge of STD's and knowledge of ART. The conclusion can be made that the high levels of knowledge contributes to low risky sexual behaviours, suggesting low risk predictors.

However, it is important to note that there are risky behaviours taking place whilst people have high levels of knowledge as argued by Hoosain (1995), Perkel (1991) and UNAIDS (1999) that knowledge of AIDS and methods of protection remain inadequate as a modifier of health-risk behaviours. Knowledge needs to be linked with individual risk assessment. There is evidence that there is a correlation between low knowledge and low condom use. (Perkel, 1991; Abrahams, 2001) which is seen in the age group 56 – 65.



Ajzen (1988) describes general behaviour that is repeated behaviours at different times and contexts and specific behaviour refers to a single act performed at a specific time and context. The following data includes both general and specific behaviours:

- 5.3% indicated that one could not get HIV/AIDS from having many sexual partners
- 19% indicated that they do not have fun when using a condom
- 44.7% are likely to engage in sexual activities whilst under the influence of alcohol

- 22.1% had sex with a commercial sex worker and 3.2% did not wear condoms.
- 15.9% received treatment for STD.

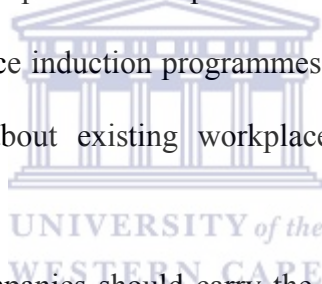
Previous research (Raybin 1998; Perkel 1991; Abrahams 2001) found that there is no significance between knowledge and attitudes as there is no link between a high level of education and attitudes. This study shows an average of 3 out of 11 positive attitudes which is quite low considering the high knowledge levels. If there was a strong correlation between attitudes and knowledge, the average should have been much higher.

6.5 RECOMMENDATIONS

- As it is difficult to change set behaviours, Davids (1995) recommends that education programmes be implemented at an early stage to encourage healthy behavioural patterns. As knowledge can be a predictor of reduced risk behaviour, it is worthwhile to sustain any program that increases knowledge. Thus, the company should continue with education programmes but at the same time address risky behaviours more aggressively.
- The results of this survey should be communicated to the workforce emphasizing the groups at risk, making it a personal behaviour identification exercise linking it with safer sexual practices exercises and behaviour change options. Within a workplace setting, Parsadh (2004:55) suggests that Behavioural Risk Management (BRM) be introduced at companies to “manage and prevent risky

behaviours that are associated with the spread of HIV/AIDS” in the form of educational and awareness campaigns.

- Culture diversities should be considered in prevention programmes. (Raybin 1998; Sebastian 2003). Even though culture was not a variable, it does not mean that it is not an area that should not be addressed. The social ecological model acknowledges the relationship between the individual and the environment and considers multi-level influences on unsafe behaviours (Choi, 1998). This model is very relevant to this workforce as it links the outcome of interest and behaviour. It covers intrapersonal factors, interpersonal processes and institutional factors addressing a broad aspect of possible risk predictors.
- Companies should introduce induction programmes for new employees to ensure that they are educated about existing workplace wellness programmes and policies and procedures.
- It is also advised that companies should carry the costs of wellness work place programmes as they will also benefit largely from healthier employees. (Haynes, Dunnagan & Smith, 1999).
- It is recommended that further research by a follow-up KAP survey in about two to three years to see if there is a change in the trends. Another alternative would be for companies can conduct smaller KAP surveys more regularly to receive updated information on a more regular basis, e.g. a three question mini survey on condom use next to condom dispensers. Companies that have engaged in KAP surveys should make their results available sharing how they have tried or intend



to address some of the problems areas identified in the studies. It is important that companies start to learn from each other's mistakes and successes.

- As there is a gap in research on cost to companies relating to HIV/AIDS, it is important to conduct future research in these areas especially in Southern Africa where the disease is the highest.

6.7 FINAL CONCLUSION

There seem to be a general agreement in most the research done that HIV/AIDS has a sever impact on businesses. Businesses need to put in more effort in monitoring and evaluation programmes to ensure that they are on top of what is happening in their businesses in order to make decisions based on true data. There however appears to be a gap in cost analysis as there is few or no research done on the actual costs on businesses in Africa with little information on USA and Europe. There are companies who should have this information available but it appears that they prefer to keep it confidential, more so to protect the image of the company.

Companies need to ensure that they start to carry weight to ensure the sustainability of the global, social and economic development and treat it as a priority workplace issue. Responses need to focus and prevention and treatment strengthening national guidelines and programmes. Several literatures suggest work place policies to be in place before a crisis hits.

In conclusion, there are sufficient responses but there is no common goal, each company pulls in their own direction where there is a sense of competition of who want to be the best. There is a need for a joint effort and statement. It has been happening on the international level already but it needs to happen in Africa esp. the SADC region where the highest prevalence prevails.



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**BASELINE SURVEY ON KNOWLEDGE, ATTITUDES AND PRACTICES
(KAP) QUESTIONNAIRE 2004**

Dear DBMN Employee

As part of the Company's management strategy, the Company aims to explore the Knowledge, Attitudes and Practices (KAP) of its employees through a survey. The findings of this research are very important to the Company and its employees as it will provide information about existing HIV/AIDS programmes and guides decisions in terms of future initiatives and guides services offered to employees

This is the first time DBMN conducts a KAP survey and follow up surveys will be conducted every two years. We would like to request that you participate in the survey a by completing the attached questionnaire. You have been chosen at random to participate in the survey. Your answers will remain anonymous as a completed questionnaire cannot be linked to you as you do not need to put your name on the questionnaire. Also, you will post your questionnaire in a box yourself with all other questionnaires. In order to ensure that the outcome of the survey is meaningful and add value to our HIV/AIDS strategy and wellness programmes, please answer all questions honestly. The data will be analyzed by an external service provider to ensure total anonymity.

Upon completion of the survey, the results of the survey will be communicated to all employees.

Thank you for your willingness to participate in the survey.

Should you have any questions, please feel free to ask the person who distributed the questionnaires.

Please take note of the following:

- Kindly complete the questionnaire on your own.
- Complete questionnaire without taking a break.
- After all questions have been answered, please put in box provided.

The questionnaire should take about \pm 45 minutes.

DATE OF COMPLETING THE QUESTIONNAIRE: _____

PERSONAL DATA AND DEMOGRAPHIC CHARACTERISTICS
Please CIRCLE your response.

| | | | |
|--|--|------------|------------|
| 1. SEX: | 1. Male | 2. Female | |
| 2. AGE: Years at the time of completing the questionnaire. | 1. Under 25 | 2. 25 – 35 | 3. 36 – 45 |
| | 4. 46 – 55 | 5. 56 – 65 | |
| 3. EDUCATIONAL LEVEL: What level of education did you complete? <i>If Other, please explain:</i> | 1. No education 2. Primary School 3. Incomplete High School 4. Completed High School 5. Incompleted tertiary education 6. Completed Certificate 7. Completed diploma 8. Completed undergraduate degree 9. Completed post-graduate degree 10. Other | | |
| 4. GRADING AT DBMN | 1. A Band | 2. B Lower | 3. B Upper |
| | 4. C Lower | 5. C Upper | 6. D - E |
| 5. How long have you been working for DBMN? | 1. less than a year 2. one – two years 3. three-five years 4. More than 5 years | | |
| 6. PRESENT MARITAL STATUS <i>If single, go to question 6</i> | 1. Single without a partner 2. Single with a partner 3. Married with one spouse 4. Married with more than one spouse 5. Living together with partner 6. Divorced with partner 7. Divorced without partner 8. Widowed with partner 9. Widowed without partner | | |
| 6.1 If you are married, does your partner live with you? | 1. Yes | 2. No | |
| 6.2 If you are single, does your partner live with you? | 1. Yes | 2. No | |
| 7. How many children do you have? | | | |
| 8. What is your religion? | 1. Christian 2. Muslim 3. Hindu 4. Jewish 5. No religion 6. Other, specify | | |
| 9. What type of housing do you live in? | 1. Own House (brick) 2. Own Flat 3. Rented house 4. Rented Flat 5. Informal Shelter (shack) 6. Traditional house 7. Rented room | | |
| 10. How many people live with you in the house? | Number of People: | | |
| 11. Where do you live? Please indicate the region. | | | |

KNOWLEDGE

Please CIRCLE your response.

| | | |
|--|----------|-----------|
| 10. Most people who have the HIV/AIDS virus show signs immediately | | |
| 1. True | 2. False | 3. Unsure |

| | | | |
|---|---------|----------|-----------|
| 11. You can get AIDS from: | | | |
| A mosquito bite | 1. True | 2. False | 3. Unsure |
| Sharing kitchen utensils with a HIV+ person | 1. True | 2. False | 3. Unsure |
| Eating food prepared by a HIV+ person | 1. True | 2. False | 3. Unsure |
| Sharing toilet facilities | 1. True | 2. False | 3. Unsure |
| By having many sexual partners | 1. True | 2. False | 3. Unsure |
| By kissing someone | 1. True | 2. False | 3. Unsure |

| | | |
|----------------------------------|----------|-----------|
| 12. There is a cure for HIV/AIDS | | |
| 1. True | 2. False | 3. Unsure |

| | | |
|---|----------|-----------|
| 13. Traditional healers can cure HIV/AIDS | | |
| 1. True | 2. False | 3. Unsure |

| | | |
|--------------------------------------|----------|-----------|
| 14. Sex with a virgin cures HIV/AIDS | | |
| 1. True | 2. False | 3. Unsure |

| | | |
|--|----------|-----------|
| 15. You can be re-infected with HIV even if you are already HIV+ | | |
| 1. True | 2. False | 3. Unsure |

| | | |
|--|----------|-----------|
| 16. Anti-retroviral Therapy (ART) cures HIV/AIDS | | |
| 1. True | 2. False | 3. Unsure |

| | | |
|---|----------|-----------|
| 17. You can get infected with HIV after a single sexual intercourse | | |
| 1. True | 2. False | 3. Unsure |

| | | |
|---|----------|-----------|
| 18. A pregnant woman who is infected with HIV can pass the virus on to the baby during pregnancy or childbirth. | | |
| 1. True | 2. False | 3. Unsure |

| | | |
|--|----------|-----------|
| 19. HIV can be transmitted from an HIV+ mother to a baby through breastfeeding | | |
| 1. True | 2. False | 3. Unsure |

| | | |
|---|---------|----------|
| 20. You can protect yourself from HIV by: | | |
| 20.1 Abstaining from sexual intercourse | 1. True | 2. False |
| 20.2 Having one faithful uninfected partner | 1. True | 2. False |
| 20.3 Avoiding HIV infected blood | 1. True | 2. False |

Please CIRCLE your response.

| | | |
|--|----------|-----------|
| 21. It is possible for a person to get a STI (Sexual Transmitted Infection) from having sexual intercourse just once without a condom? | | |
| 1. True | 2. False | 3. Unsure |

| | |
|--|---------|
| 22. You know where to get treatment for a STI. | |
| 1. Yes | 2. True |

| | | |
|--|----------|-----------|
| 23. Using a condom can reduce the risk of getting HIV or a STI | | |
| 1. True | 2. False | 3. Unsure |

| | |
|---|-------|
| 24. Was there ever HIV awareness / peer education / sessions held in your unit/ vessel? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 25. If yes to Q 24, have you ever attended any HIV awareness sessions at the workplace? | |
| 1. Yes | 2. No |

If yes, please explain why you find it necessary to attend

If no, what was the reason for you not attending?

| | | | | |
|---|-------------|---------|-------------|----------------|
| 26. Circle which of the following are STI's | | | | |
| 1. Herpes | 2. HIV/AIDS | 3. Acne | 4. Syphilis | 5. Hepatitis B |

| | |
|--|-------|
| 27. Have you ever needed information on STI's for yourself or anyone else? | |
| 1. Yes | 2. No |

| | | | |
|--|----------------|---------------|--------------------------|
| 28. Please indicate where you got most of your information about STI's from. | | | |
| 1. Health Clinic | 2. Doctor | 3. At work | 4. Magazines/Newspapers |
| 5. From Friends | 6. From Family | 7. Radio / TV | 8. Posters and pamphlets |

| | |
|---|-------|
| 29. Did you experience any difficulties in understanding the information? | |
| 1. Yes | 2. No |

| | | | |
|---|---------------------|----------------|----------|
| 30. If yes to q 29, what difficulties did you experience? | | | |
| 1. Terminology used | 2. Language problem | 3. Too medical | 4. Other |

If other, please list:

| | |
|---|-------|
| 31. Did you experience any problems in obtaining information on STI's | |
| 1. Yes | 2. No |

If yes, what type of problems did you experience when obtaining information on STI's

| | | | | |
|---|---------|-------|-------|----------|
| 32. How often did you discuss STI's with the following people over the past six months? Please circle number. | | | | |
| 1. Staff at health clinic in your community | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 2. Spouse | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 3. Family Members | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 4. Sexual partner | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 5. Fellow workers | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 6. Peer Educators | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 7. Staff at STD/HIV/AIDS NGO | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 8. Other: <i>If other, please state with whom:</i> | 1. Once | 2. 2x | 3. 3x | 4. Never |

| | |
|---|-------|
| 33. Have you ever needed treatment for a STI? | |
| 1. Yes | 2. No |

| | | | | |
|--|-------------------|-------------|-----------------------|--------------------|
| 34. Where did you seek treatment for STI's? Please circle all applicable to you. | | | | |
| 1. Community Clinics | 2. At your Doctor | 3. Pharmacy | 4. Traditional Healer | 5. Self-medication |

6. Other, please specify:

Please specify why you have chosen the above option(s).

| | |
|---|-------|
| 35. Have you ever needed information on HIV/AIDS for yourself or anyone else? | |
| 1. Yes | 2. No |

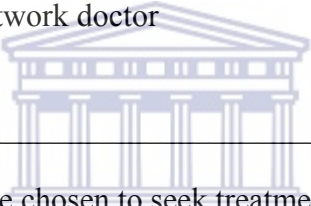
| | | | |
|--|----------------|---------------|--------------------------|
| 36. Please indicate where you got most of your information about HIV/AIDS from. Please circle all applicable to you. | | | |
| 1. Health Clinic | 2. Doctor | 3. At work | 4. Magazines/Newspapers |
| 5. From Friends | 6. From Family | 7. Radio / TV | 8. Posters and pamphlets |

| | |
|--|-------|
| 37. Did you experience any problems in obtaining information on HIV/AIDS | |
| 1. Yes | 2. No |

If yes, what type of problems did you experience when obtaining information on HIV/AIDS?

| 38. How often did you discuss HIV/AIDS with the following people over the past six months? Please circle options applicable to you. | | | | |
|--|---------|-------|-------|----------|
| 1. Staff at health clinic in your community | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 2. Spouse | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 3. Family Members | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 4. Sexual partner | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 5. Peer Educators | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 6. Fellow workers | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 7. Staff at STD/HIV/AIDS NGO | 1. Once | 2. 2x | 3. 3x | 4. Never |
| 8. Other: <i>If other, please state with whom:</i> | 1. Once | 2. 2x | 3. 3x | 4. Never |

| 39. Have you ever enquired about information on treatment for AIDS? | |
|---|-------|
| 1. Yes | 2. No |

| 40. Where would you seek information on treatment for AIDS? Please circle all applicable to you. | |
|--|--|
| 1. Community Services 2. At your private Doctor 3. At your Aid for AIDS network doctor 4. Traditional Healer 5. Pharmacy 6. Other, please name: _____ |  UNIVERSITY of the WESTERN CAPE |
| Please explain why you have chosen to seek treatment at above choice. | |
| _____ | |
| _____ | |
| _____ | |

| What is your knowledge of Anti-retroviral Therapy (ART)? | | |
|---|---------|----------|
| 41. Do you believe that ART delays HIV from processing in the body? | 1. True | 2. False |
| 42. Are you aware of the benefits of ART? | 1. True | 2. False |
| 43. Do you know how to access ART? | 1. True | 2. False |
| 44. Are you aware of any side effects of ART? | 1. True | 2. False |
| 45. Do you know anyone taking ART? | 1. True | 2. False |

ATTITUDES

| 46. Do you know someone who is HIV positive? | |
|--|-------|
| 1. Yes | 2. No |

47. If yes, what you think about that person?

48. If no, what do you think about a person that is HIV+.

| | |
|---|-------|
| 49. Do you think people with HIV have themselves to blame for being infected? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 50. Do you believe that you have a greater chance of being infected with HIV if you have STD? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 51. Do people with HIV live longer and can they continue working if they live healthy? | |
| 1. Yes | 2. No |

What do you feel about Condom Use?

| | |
|--|----------|
| 52. People who use condoms have sex often / too much sex | |
| 1. True | 2. False |

| | |
|--|----------|
| 53. Using condoms can protect you from HIV and STD's | |
| 1. True | 2. False |

| | |
|--|----------|
| 54. Do you believe that condoms tear easily? | |
| 1. True | 2. False |

| | | |
|---|----------|-----------|
| 55. When I use a condom, I don't have fun | | |
| 1. True | 2. False | 3. Unsure |

| | |
|--|-------|
| 56. Do you think your family can be affected by HIV? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 57. Do you think it is possible for a person to sleep with one partner only in a long-term relationship? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 58. Do you believe that the company will discriminate against anybody who is HIV+? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 59. Do you discriminate against a person who is HIV+? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 60. Do you know of anyone working with you who is HIV+? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 61. If yes to Question 60, do you feel comfortable working with the person? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 62. Do you think that you are at risk by working with some one who is HIV+? | |
| 1. Yes | 2. No |

| |
|---|
| 63. If yes, please explain the perceived risk |
| _____ |
| _____ |
| _____ |

| | |
|--|-------|
| 64. Do you believe that you can abstain from sex to prevent getting HIV? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 65. Do you believe that HIV only affects certain groups of people? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 66. Do you believe that HIV+ people should disclose their status? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 67. Do you believe that it is safe for people to disclose their HIV+ status? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 68. Do you believe that people with HIV/AIDS should be cared for? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 69. Would you take care for someone dying of an AIDS related disease? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 70. Do you believe that people with HIV should be treated like people with any other chronic disease? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 71. Do you believe that people with HIV/AIDS should be isolated? | |
| 1. Yes | 2. No |

| | | |
|--|---------|----------|
| AIDS contributes to: | | |
| 72. the high number of orphans | 1. True | 2. False |
| 73. the loss of skilled people | 1. True | 2. False |
| 74. the deaths of beloved ones | 1. True | 2. False |
| 75. negatively to a country's economy? | 1. True | 2. False |
| 76. the destruction of families | 1. True | 2. False |

| | |
|--|-------|
| 77. Do you know anyone who has died from AIDS / related illness? | |
| 1. Yes | 2. No |

| | | | | |
|--|-------------|----------------|---------------------|----------|
| 78. If yes, what was your relationship with that person? | | | | |
| 1. a family member | 2. a friend | 3. a neighbour | 4. community member | 5. Other |

SEXUAL PRACTICE

| | |
|----------------------------|-------|
| 79. Have you ever had sex? | |
| 1. Yes | 2. No |

| | |
|---|--|
| 80. If yes, how old were you when you had sex for the first time? | |
| Age / Years: | |

| | |
|-----------------|--|
| 81. If no, why? | |
| <hr/> <hr/> | |

| | |
|--|-------|
| 82. Have you ever gone for a HIV test? | |
| 1. Yes | 2. No |

| | | | | |
|---|------------------------|--------------------|-----------|-----------|
| 83. If no to q 82 why have you not gone for a test yet? | | | | |
| 1. Ascertain HIV status | 2. results cause worry | 3. do not have HIV | 4. Afraid | 5. Other, |
| If other, please specify | | | | |
| <hr/> | | | | |

| | |
|----------------------------------|-------|
| 84. Do you know your HIV status? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 85. Have you been counselled about the window period about having unprotected sex with a new partner during the past 3 months? | |
| 1. Yes | 2. No |

| | | | | | |
|---|---------------------|-----------|-----------------------|-------------------------|---------------------------|
| 86. With whom did you have sex the last time? | | | | | |
| 1. Wife | 2. Girl / Boyfriend | 3. Fiancé | 4. Casual sex partner | 5. Extra-marital affair | 6. Prostitute/ Sex worker |
| 7. Other relationship, specify: | | | | | |

| | | |
|---|-------|-----------|
| 87. Did you use a condom the last time you had sex? | | |
| 1. Yes | 2. No | 3. Unsure |

| | |
|---|-----------------------------------|
| 88. Have you ever engaged in more than one sexual relationship (being in more than one sexual relationship at the same time)? | |
| 1. with all your sexual partners | 2. only with some sexual partners |

| | | |
|--|---------------|----------|
| 89. If yes to q 88, are you likely to use a condom | | |
| 1. Always | 2. Some times | 3. Never |

| | | |
|---|--------------|-------------------------|
| 90. How easy is it to get condoms at work | | |
| 1. Very easy | 2. Difficult | 3. Not available at all |

| | | | |
|---|---------------|-------------------|-----------------|
| 91. How many sexual partners have you had during the last year? | | | |
| 1. One | 2. Two – four | 3. More than five | 4. More than 10 |

| | | |
|---|-------|-----------|
| 92. Do you think your partner is faithful to you? | | |
| 1. Yes | 2. No | 3. Unsure |

| | |
|--|-------|
| 93. Do you ever speak to your partner about HIV? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 94. Have you ever spoken about condom use with your partner? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 95. Have you ever had sex with a sex worker / prostitute? | |
| 1. Yes | 2. No |
| If yes, did you use a condom? | |
| 1. Yes | 2. No |

| | | |
|--|-------|-----------|
| 96. When you are under the influence of alcohol, are you likely to have sex? | | |
| 1. Yes | 2. No | 3. Unsure |

| | |
|--|-------|
| 97. Do you think it is okay for women to refuse sex? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 98. Do you think it is okay for men to refuse sex? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 99. Have you ever engaged in homosexual sex? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 100. Have you ever engaged in oral sex (using your mouth)? | |
| 1. Yes | 2. No |

| | | |
|--|-------|-----------|
| 101. Can HIV/AIDS be transmitted via oral sex? | | |
| 1. Yes | 2. No | 3. Unsure |

| | | |
|---|-------|-----------|
| 102. Have you ever engaged in anal sex? | | |
| 1. Yes | 2. No | 3. Unsure |

| | | |
|--|-------|-----------|
| 103. Can HIV/AIDS be transmitted via anal sex? | | |
| 1. Yes | 2. No | 3. Unsure |

| | |
|---|-------|
| 104. During the past year, did you have a sore, a smelling colored discharge and/or painful swelling in your private parts? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 105. Did you tell your partner that you had these problems? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 106. Do you talk about HIV with your children? | |
| 1. Yes | 2. No |

| | |
|------------------------------------|-------|
| 107. Have you ever used a femidom? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 108. Do you know how to use a femidom? | |
| 1. Yes | 2. No |
| Would you allow your partner to use a femidom? (only for Males) | |
| 1. Yes | 2. No |

| | | |
|--|-------|-----------|
| 109. Would you use a femidom? (for females only) | | |
| 1. Yes | 2. No | 3. Unsure |

| | |
|--|-------|
| 110. Do you think a femidom can protect you against sexual transmitted diseases? | |
| 1. Yes | 2. No |

WHAT DO YOU FEEL ABOUT THE COMPANY WORKPLACE PROGRAMMES?

THE EMPLOYEE ASSISTANCE PROGRAMME (EAP)

| | |
|---|-------|
| 111. Have you ever used the EAP services provided by the company? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 112. Did the EAP assist you to solve your problem? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 113. If yes, were you satisfied with the service / support offered | |
| 1. Yes | 2. No |
| If no, why not? | |
| | |

| | |
|--|-------|
| 114. Do you know how to access the EAP services? | |
| 1. Yes | 2. No |

| | |
|--|-------|
| 115. Do you have someone to talk to when you have a problem? | |
| 1. Yes | 2. No |

| | | | | |
|---|-----------|--------------|---------------|--------|
| 116. If yes, who do you usually talk to? Circle all applicable answers. | | | | |
| 1. Spouse | 2. Friend | 3. Colleague | 4. Counsellor | 5. EAP |

VOLUNTARY COUNSELLING AND TESTING (VCT)

| | |
|---|-------|
| 117. Do you think that your results will be kept confidential if you get tested by a company-funded programme such as EAP or New Start? | |
| 1. Yes | 2. No |

| | |
|---|-------|
| 118. You know how to access VCT services? | |
| 1. Yes | 2. No |

| | | |
|---|-------|---------------|
| 119. There are VCT services available for DBMN employees and life-partners. | | |
| 1. Yes | 2. No | 3. Don't know |

| | |
|---|-------|
| 120. If yes to q119 would you make use of these services? | |
| 1. Yes | 2. No |

| | |
|-----------------------------------|--|
| 121. If no to q120, why not? | |
| UNIVERSITY of the WESTERN CAPE | |
| | |

PROVISION OF ANTI-RETROVIRAL THERAPY (ART)

| | |
|-------------------------------------|-------|
| 122. Do you know how to access ART? | |
| 1. Yes | 2. No |

| | | |
|---|-------|-----------|
| 123. Do you know whether your medical aid covers ART? | | |
| 1. Yes | 2. No | 3. Unsure |

| | |
|---|-------|
| 124. Would you enrol on the Company ART Programme if you might need to? | |
| 1. Yes | 2. No |

If yes, please provide reasons?

If no, please provide reasons?

Thank you for your time and honesty