

**ASSESSING BEHAVIOURAL INTENTION OF SMALL AND MEDIUM  
ENTERPRISES IN IMPLEMENTING A HIV/AIDS POLICY AND PROGRAMME**

**By**

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**Declaration**

**I, the undersigned hereby declare  
that the work contained in this thesis  
is my own original work and  
has not previously in its entirety or  
in part been submitted at any university for a degree**

## **ABSTRACT**

The relentless progression of HIV/AIDS epidemic has made it imperative that measures are put in place to minimise its impact on Small and Medium Enterprises (SME). HIV is set to have a significant effect on every facet of the population, and SME is not immune. Business is likely to feel the impact of HIV/AIDS epidemic through reduced productivity, increased absenteeism, increased staff turnover, increased recruitment and training costs, increased cost of employee benefits and poor staff morale. One of the interventions is to implement a HIV/AIDS policy and programme, yet a literature search showed that psychological studies of SME in implementing a HIV/AIDS policy and programme are limited. The present study utilised the model of the theory of planned behaviour (Ajzen, 1985, 1988, 1991), which is an extension of the theory of reasoned action (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980). Intention to implement a HIV/AIDS policy and programme was predicted by the theory of planned behaviour constructs such as attitude, subjective norm and perceived behavioural control. The theory of planned behaviour was found to be useful in assessing behavioural intention of SME in implementing a HIV/AIDS policy and programme. These findings indicate that implementing an intervention like a HIV/AIDS policy and programme by SMES is a behavioural intention motivated by attitudes, subjective norms and perceived behavioural control.



## OPSOMMING

Die meedoënlose progressie van die HIV/VIGS pandemie het dit gebiedend noodsaaklik gemaak om maatreëls daar te stel om die impak daarvan op klein en medium sakeondernemings te minimaliseer. HIV/VIGS sal 'n beduidende uitwerking hê op alle vlakke van die bevolking. Klein en medium sakeondernemings is geen uitsondering nie.

Die uitwerking van die HIV/VIGS pandemie sal tot gevolg hê 'n afname in produktiwiteit; 'n toename in personeelafwesigheid, personeelomset, personeelwerwing en – opleidingskoste, personeelvoordele; en swak personeel moreel. Een manier om die probleem aan te spreek is om 'n HIV/VIGS beleid en program te implimenteer. Ongelukkig toon literêre navorsing dat psigologiese studies van klein en medium sakeondernemings om 'n HIV/VIGS beleid en program te implimenteer, beperk is.

Dié navorsing steun op die teorie van planmatige gedrag (Ajzen, 1985; 1988; 1991), wat 'n verlenging is van die teorie van beredeneerde optrede (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980). Die oogmerk met die implimentering van 'n HIV/VIGS beleid en program is bepaal deur die teorie van planmagtige gedrag soos waargeneem in geesteshouding, subjektiewe norme en waargenome beheerde gedrag. Daar is gevind dat die teorie van planmagtige gedrag nuttig is om die oogmerke en optrede van werknemers in klein en medium sakeondernemings te bepaal met die implimentering van 'n HIV/VIGS beleid en program. Hierdie bevindings toon dat die implimentering en tussenkoms van 'n HIV/VIGS beleid en program by klein en medium sakeondernemings'n gedragsoogmerk is wat gemotiveer word deur geesteshoudings, subjektiewe norme en waargenome beheerde gedrag.



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## TABLE OF CONTENTS

Declaration	ii
Opsomming	iii
Abstract	iv
Acknowledgements	v
Table of contents	vi-vii
List of Figures	viii
List of Tables	ix
 <b>1. INTRODUCTION</b>	 <b>1</b>
1.1 Economic impact of HIV/AIDS in the workplace	2
1.2 Supply of labour	4
1.3 Impact on companies	5
1.4 Training and development	7
1.5 Research objectives	8
1.6 Research problem	9
1.7 Research process	9
1.8 Chapter divisions	10
 <b>2. LITERATURE REVIEW</b>	 <b>11</b>
2.1 Defining SMEs	13
2.2 Motivational models	14
2.2.1 Health belief model	15
2.2.2 Protection motivation theory	16
2.2.3 Social cognitive model	16
2.3.4 Theories of reasoned action/planned behaviour	17
2.3 Theory of planned behaviour	18
2.3.1 Background	18
2.3.2 Variable functioning	19
2.3.3 Behaviour	20
2.3.4 Intention	21
2.3.5 Attitude	22
2.3.6 Social norm/subjective norm	22
2.3.7 Perceived behavioural control	23
2.3.8 Beliefs	23
2.4 Implementation of HIV/AIDS policy/programme	25
2.4.1 HIV/AIDS and legislation	26

2.4.2	Consequences of AIDS in the workplace	28
2.5	Psychological aspects of HIV/AIDS	41
2.5.1	Course of illness	41
2.5.2	HIV associated dementia	43
2.5.3	Stress and coping	44
2.5.3.1	Stressors faced by people with HIV	44
2.5.3.2	Adaptive coping	47
2.6	Summary: workplace implications	50
3.	<b>METHODOLOGY</b>	56
3.1	Research objectives	56
3.2	Research problem and substantive research hypothesis	56
3.3	Research methodology	57
3.3.1	Research design	57
3.3.2	Statistical hypothesis	57
3.3.3	Sampling design	59
3.3.4	Measures/operationalisation	59
3.3.5	Variables/Instruments	61
3.3.6	Procedure	64
3.3.7	Statistical analysis/packages	64
4.	<b>RESULTS</b>	66
4.1	Descriptive information	66
4.2	Implementation of a HIV/AIDS policy/programme	67
4.3	Reliability analyses	69
4.4	Discriminant and convergent validity	73
4.5	Regression analysis	78
4.6	Testing of hypothesis	81
5.	<b>DISCUSSION</b>	85
5.1	Overall findings	85
5.2	Self report vs. objective behaviour	87
5.3	Attitude and intention	87
5.4	Subjective norm and intention	88
5.5	Perceived behavioural control and intention	89
6.	<b>CONCLUSION</b>	92
7.	<b>REFERENCES</b>	98-106
8.	<b>APPENDIX A</b>	107-110



**LIST OF FIGURES**

Figure 1: Theory of Planned Behaviour (TPB)	12
Figure 2: Scree Plot	76
Figure 3: TPB Model Data	80

**LIST OF TABLES**

Table 1: Impact of HIV/AIDS on SA labour force	5
Table 2: Direct costs of HIV/AIDS at company level	6
Table 3: Effect of HIV/AIDS on returns to training and work experience	7
Table 4: Market characteristics of most vulnerable groups by earnings category	29
Table 5: Descriptive information	66
Table 6: Means	66
Table 7: Gender	67
Table 8: Implementation of HIV/AIDS policy and plan in the last six months	67
Table 9: Implementation of HIV/AIDS and number of employees	68
Table 10: Currently implementing HIV/AIDS and gender	68
Table 11: Reliability attitude beliefs	69
Table 12: Reliability subjective norm	70
Table 13: Reliability control beliefs	71
Table 14: Reliability self efficacy	72
Table 15: Reliability self efficacy and PCB	73
Table 16: Descriptive statistics	74
Table 17: Correlation matrix	74
Table 18: Communalities	75
Table 19: Total variance explained	75
Table 20: Component matrix	76
Table 21: Correlation Matrix	77
Table 22: Variables entered	78

Table 23: Model summary	78
Table 24: ANOVA	79
Table 25: Regression coefficients	79



## **CHAPTER 1**

### **1. INTRODUCTION**

HIV/AIDS is emerging as a major societal problem that will affect most organisations. This chapter focuses on a brief overview of the infection rates, economic impact on the workplace, direct and indirect costs to companies and issues pertaining to training and development.

According to the World Health Organisation (WHO), 24,5 million adults and children were living with HIV/AIDS in sub-Saharan Africa at the end of 1999. The UNAIDS report in 2003 estimated that 29,4 million people are now infected and, of these, more than five million were already infected by the end of 2002. UNAIDS further estimated that 4,7 million people in the age group 15-49 are living with HIV/AIDS. The estimated number of adults and children who died of AIDS in 2001 is 360 000. The estimated number of children who had lost their mother or father or both parents to AIDS and who were under the age of 15 at the end of 2001, is 660 000 (UNAIDS/WHO, 2002, 2003). Antenatal HIV prevalence in South Africa increased rapidly from 0,7% in 1990 to 10,5% in 1995 and then to 22,5% in 1998. Although, it seems that HIV prevalence rate is stabilising at quite a high rate ranging from 11,2% to 27,9%, the rate is still exhibiting an upward trend in various provinces, such as KwaZulu-Natal, Mapumulanga and Gauteng (Epidemiological Fact Sheet, 2002).

The HIV/AIDS epidemic in South Africa continues to grow at a rapid rate. UNAIDS estimated that in 2000, 19,9% of adults were infected, which was an increase from 12,9% two years previously. It was further estimated that about 40% of deaths in the age group 15-49 were due to HIV/AIDS and that about 20% of all deaths in 2000 were due to AIDS. Projections show that without treatment and interventions to prevent HIV/AIDS, the number of AIDS deaths is expected to grow within the next ten years to more than double the number of deaths due to all other causes. This could result in five to seven million cumulative AIDS deaths in South Africa by 2010.

The social and economic consequences are far reaching and will affect every facet of the lives of all South Africans (SABCO on HIV/AIDS, 2002). If more than five million South Africans are currently infected and likely to die over the next ten years, this then could have an adverse effect on organisations. The adverse impact would be evident in a



number of ways, for example, loss of skilled employees due to HIV/AIDS, increased costs on employee benefits, higher company costs due to increased absenteeism and overall reduction on organisational performance.

### **1.1. Economic Impact of HIV/AIDS in the Workplace**

Although, the modes of transmission within the South African workplace are reasonably well understood, HIV/AIDS and the workplace issues need to be understood from an economic perspective.

According to Christianson (2001), HIV/AIDS has been recognised by large companies in South Africa as a major challenge. A large number of companies have formal HIV/AIDS policies and have launched joint initiatives. Cost-benefit analyses have also been developed, both internally (company workforce) and externally in the market. However, while the costs to business are recognised, these are in many cases misunderstood and the small and medium enterprises (SMEs) have been neglected.

A macroeconomic sensitivity analysis by Stellenbosch University's Bureau for Economic Research (BER) concluded that when the impact of HIV/AIDS is factored in, South Africa's projected gross domestic product (GDP) will be 1,5% lower by 2010 and 5,7% lower by 2015 than it would have been without the disease. Furthermore, BER postulates that while the economic impact of HIV/AIDS can be expected to be negative, South Africa does not face "a doomsday scenario". The BER's main findings are that GDP growth rate could fall by 0,5% a year between 2002 and 2010, that the total real final household consumption expenditure will be reduced by 0,3 per cent a year and that the producer price inflation will be 2,3% higher for the same period. Given the above scenario, the potential impact to the productive category of society can be severe. If SMEs provide products and services to society and to large companies, HIV/AIDS can have an impact on the economic sector of South Africa (Christianson, 2001).

Daimler Chrysler launched a plan for its workplace in April 2001. Their initiatives provide care, monitoring and treatment with antiretroviral drugs, which was supported by the National Union of Metal workers of South Africa. A medical benefit of R30 000 was provided to each employee or dependent. Daimler Chrysler has a workforce of 4500 and a dependent population of 23 000.



Public announcements in recent years with regard to HIV/AIDS policies were also made by ABSA, Afrox, Anglo American, BP, BHP Billiton, Deloitte & Touche, Eskom, Ford, Gold Fields, Harmony, Johnnic, Metropolitan Life, Montecassino, Pfizer, Sanlam, Old Mutual and SA Breweries (SAB), to name a few. The activities of these and other companies were premised on the belief that the impact of HIV/AIDS on company workforces can be managed. It has been suggested that strategic management could alleviate the direct costs of the disease. Medscheme offers a health care package called "Aid for AIDS". The approach is based on the assertion that it is cheaper for companies to manage the health costs of those living with HIV than it is to allow them to develop full blown AIDS.

According to Christianson (2001), large companies probably have the resources to manage the impact of HIV/AIDS on their workforces. However, SMEs do not have such resources and this may pose a difficulty in dealing with HIV/AIDS in the workplace. A study conducted by the University of Port Elizabeth (UPE), identified the disease as one of the three factors that cause nearly 80 per cent of new small businesses to fail. Crime and inadequate management expertise are the other two. Their argument was that a very ill employee has a much greater overall effect in a small company than in a large one, as the company could not afford consultants or medical schemes. While larger companies may be in a position to absorb the immediate costs of managing HIV/AIDS in their workforces, SMEs are reliant on outside agencies, such as the public health system. BER reports that AIDS will thus have a disparate impact on different sectors of the economy. BER further contends that the overall impact on the GDP will be adverse, as a shift in household expenditure patterns takes place away from consumer goods and other areas towards health care and. In 1998, the JD Group funded a study, using the "Doyle model", on the likely impact of the disease on its consumer base of about one million account holders. The outcome revealed a slow down in the growth of the company's consumer base and increased credit risk and changing consumer patterns were identified as potential problems. Small business remains the most ignorant and marginal sector in the battle against HIV/AIDS, yet this sector will probably feel the impact most heavily.

HIV/AIDS is therefore having a significant impact on South Africa's economy and is expected to reduce the country's gross domestic product over the decade. Inggs (2002) indicated that South Africa is the most economically vulnerable country in the world to



HIV/AIDS. While large companies are taking active steps in response to this threat on their supply of labour, small businesses remain slow to react.

## **1.2 Supply of Labour**

The HIV/AIDS epidemic affects the supply of labour through the overall decline in size of the labour force, shifts in age structure as a result of changes in mortality and birth rates, changes in the skills composition of the labour force, and an increase in the labour turnover rates.

As the epidemic evolves, mortality rates increase. This means that the life expectancy of an age cohort entering the labour market at a particular time declines which, in turn, lowers the average age of the work force. Eventually, the decline in birth rates results in a decline in the rate of growth of new cohorts entering the labour market.

As a consequence, the size of the old cohort relative to size of the youngest cohort increases as the average age of the work force increases to some extent. Before this happens, however, the decline in the average age of workers results in a decline in work experience. This obviously means that the supply of certain skills will also decline.

The statistics in Table 1 indicate the possible effect on South Africa's labour force up to 2015. As a result of HIV/AIDS the labour force could be 3,9 million smaller in 2015 than in a no-AIDS scenario, but still marginally larger than in 2000. The epidemic could, therefore, for all the wrong reasons, alleviate South Africa's unemployment crisis to some extent. However, this "benefit" will be outweighed by the overwhelmingly negative effect of a high prevalence of HIV/AIDS particularly among skilled and highly skilled members of the work force. It is estimated that by 2015 a quarter of the skilled work force and just over 18% of the highly skilled force could be HIV positive.

**Table 1: Impact of HIV/AIDS on South Africa's labour force**

Year	Labour force		HIV prevalence (%)			AIDS prevalence (%)		
	No-Aids (m)	Incl. AIDS (m)	Highly skilled	Skilled	Semi & unskilled	Highly skilled	Skilled	Semi & unskilled
2000	14,5	14,4	7,2	12,1	14,3	0,3	0,5	0,6
2005	15,8	15,1	13,3	20,2	22,8	1,4	1,9	2,2
2010	17,2	15,1	16,7	23,8	26,3	2,7	3,5	3,9
2015	18,7	14,8	18,3	25,4	27,6	3,5	4,2	4,7

(Institute for Futures Research, 2002, p. 2)

### 1.3. Impact on Companies

HIV/AIDS influences companies in various ways. The two factors discussed below pertain to the direct costs to companies and the changes in the cost of returns to training.

#### 1.3.1 Direct Costs

Companies' costs are affected directly in different ways. Some of the more significant ones are:

- Absenteeism.
- Sick leave and disability pensions.
- Medical care.
- Pensions to surviving dependents.
- Funeral costs and overall loss of productivity.

Case studies in various African countries show that these costs vary significantly across countries and sectors. Some of these case studies are summarised in Table 2.



**Table 2: The direct costs of HIV/AIDS at company level**

Country Case	Category
Botswana	Companies are anticipating that AIDS related costs could increase to between five and eight per cent of the wage bill by 2004.
Ivory Coast: three companies	For an HIV prevalence of 10% among the companies' workforce, HIV related costs would amount to between 6,8 and 10% of the work force costs.
South Africa: manufacturing sector	The costs of risk benefits could rise from seven per cent of the wage bill in 1997 to 14,6% in 2007, largely due to HIV/AIDS.
South Africa: sugar mill	The HIV/AIDS costs per worker are R9500. The cost of replacement workers, lost productivity, and absenteeism account for about one quarter each.
Zimbabwe	Life insurance premiums have quadrupled due to HIV/AIDS. As early as 1995, AIDS related death claims for individual and group life assurance amounted to 48% and 38% of claims.
Zimbabwe: national railways	AIDS related costs will rise from Z\$39 million in 1996 to Z\$108 million in 2005, for a total work force of 11 000. Of this, health expenditure accounts for 56%, absenteeism for 24%, and cost of training for 17%.

(Adapted from IFR, 2002, p. 20-22)

It has been suggested that a company with one per cent of AIDS cases among its employees can expect its direct costs to increase by one to two per cent of its wage bill. Moreover, if the company bears the costs of risk benefits (disability and death), additional costs of between 0,5 and five per cent of the wage bill may be incurred, depending on the extent of the coverage. Since HIV/AIDS related mortality rates are projected to rise to between 2.1% and 4.9%, the costs of HIV/AIDS to companies could rise to more than 10% of their personnel costs (Institute of Futures Research (IFR), 2002).



## 1.4 Training and Development

Rising mortality rates also reduce the incentive to companies to invest in the training of their employees. The effect of HIV/AIDS on the returns to training and working experience is shown in Table 3. It is assumed that the probability of employees quitting is 10% per year.

**Table 3: The effect of HIV/AIDS on the returns to training and working experience**

Mortality rates (%)	Change in return to training	Change in cost of maintaining fixed number of skilled employees (%)	Average duration of tenure (years)
0.25	0.0	0.0	9.3
1.0	-4.7	6.6	8.6
3.0	-15.3	24.2	7.2
5.0	-23.8	41.8	6.2

(Haacker, 2002, p. 23)

The following serves as an interpretation of the Table 3 (Haacker, 2002).

- From the second column it can be seen that if mortality rates among employees rise from 0,25 to 5%, returns to training fall by 23,8%.
- The third column provides an indication of the increase in a company's training budget if the company aims to maintain a constant number of employees with specified skills. For instance, if mortality rates rise from 0,25 to 5%, the annual training budget will have to rise by 41.8%.
- In the fourth column it can be seen that if 10% of employees quit the company each year and mortality rates are 0,25%, a young employee can be expected to stay in the company for an average of 9,3 years. If mortality rates rise to 5%, the expected period with the company falls to 6,2% years; i.e. Job-specific experience falls by 33%.

- Moreover, the proportion of employees who remain for more than 10 years falls from 34% (for a mortality rate of 0,25%) to 20% (for a mortality rate of 5%).

The ability of organisations to deal effectively with HIV/AIDS in the work place is thus not only relevant but also important and interventions could make a significant difference to the course of the epidemic. Increasingly, Small Medium Enterprises (SME) are seen to play an important role in the South African economy. However, Hendry, Arthur and Jones (1995) suggest that much theory and research continues to emphasise large organisations. It is further stated that two assumptions operate to the detriment of SME research. One is that SMEs are less important than large organisations, and second is that SMEs should learn from these organisations. Although the assumptions may hold true within the South African SME sector, the current reality is that research on the assessing behavioural intention of SMEs in dealing with HIV/AIDS in the workplace is lacking. What then should SMEs do to deal effectively with HIV/AIDS in the workplace and moreover why do SMEs differ in their behaviours in dealing with HIV/AIDS in the workplace? These questions need to be explored.

### **1.5 Research Objective**

The research intends to investigate various possibilities as to what affects SMEs in their implementation of an HIV/AIDS policy and programme. Various researchers have attempted to explain these possibilities. Stanton, Kim, Galbraith and Parrot (1996), in reviewing 28 studies of HIV risk reduction interventions, identify twelve issues they considered critical in the design of interventions. These include basing the intervention on a theory of behaviour change, pilot testing interventions and strengthening interpersonal skills. However, of these twelve issues addressed in the 28 studies reviewed, the median number was only six. For example only 18% of the studies reviewed based their research on a theory of behaviour, but Kirby (1995) notes that a key criteria to understanding any intervention is a basis of a sound theoretical behaviour model.

SMEs within the South African context therefore need to ensure that their interventions are research based in order to have an affect not only on company policy, but human resource (HR) related policy and strategies, so as to deal effectively with HIV/AIDS in the workplace. What should organisations - especially SMEs - do to understand their



behaviour in implementing an HIV/AIDS policy and programme in the workplace? The question also arises as to why owner-managers in SMEs differ in their intentions in implementing an HIV/AIDS policy and programme in the workplace. In an attempt to explain this phenomenon the theory of planned behaviour will be used.

The Theory of Planned Behaviour (TPB) will be applied to assess the effect of attitude, the subjective norm and/or social norm, and perceived behavioural control of Small and Medium Enterprises on the implementation of an HIV/AIDS policy and programme. The research does not focus on actual risk reduction behaviours of HIV/AIDS persons, but looks at the behavioural intention in implementing an HIV/AIDS policy and programme. Therefore the main objectives of this research are:

- To explain the behavioural intention of SMEs in implementing an HIV/AIDS policy and programme in the workplace.
- To assess the constructs of self-efficacy and perceived behavioural control that could be used to augment the TPB.

## 1.6 Research Problem

Is SMEs behavioural intention to implement an HIV/AIDS policy and programme in the workplace  $[\eta_2]$  linearly dependent on their attitude towards the action  $[\xi_1]$ , the subjective/social norm towards the action  $[\xi_2]$  and perceived behavioural control towards the action  $[\xi_3]$ .

## 1.7 Research Process

The research was conducted in phases and is presented accordingly:

### ▪ Phase 1: Literature review

A literature review was undertaken on the theory of planned behaviour and HIV/AIDS.

### ▪ Phase 2: Research methodology

The research problem and substantive research hypothesis will be presented. Thereafter, the design, statistical research hypothesis, sampling design, measures and operationalisation and statistical analysis are formulated.

- **Phase 3: Empirical Results**

The empirical results of the research will be illustrated and discussed.

- **Phase 4: Discussion of the results**

- **Phase 5: Limitations of the research will be highlighted**

- **Phase 6: Recommendations**

## **1.8 Chapter Divisions**

The chapters comprise:

- Chapter 1: Introduction
- Chapter 2: Literature review
- Chapter 3: Research methodology
- Chapter 4: Empirical results
- Chapter 5: Discussion of results
- Chapter 6: Conclusion (including limitations and recommendations for future research).



## **CHAPTER 2**

### **2. LITERATURE REVIEW**

The literature on HIV/AIDS is extensive, yet little research is paid to empirical explanations of how organisations, and especially SMEs, deal with HIV/AIDS in the workplace. A class of theories commonly referred to as expectancy-value models (Rosenberg, 1956; Fishbein, 1963) are of particular relevance because they provide a theoretical link between evaluative criteria and the concept of attitude. After extensive research, it was found that little attention has been devoted to explain intentions of SMEs in implementing a HIV/AIDS policy and programme in the workplace (Coates & Feldman, 1997; Keil & Schellenberg, 1998; Wager, Remien & Carballo, 1998). A plausible explanation for this is that the workplace is not associated with high-risk behaviours leading to the transmission of HIV (Goss & Adam-Smith, 1995).

However, the work place rights of people with HIV/AIDS are protected by legislation. In South Africa, this is the Constitution of 1996; the Labour Relations Act as amended in 1997; the Employment Equity Act of 1998 and the Code of Good Practice. The beliefs, attitudes and intention of owner-managers in SMEs have therefore become relevant in an attempt to explain intentions in dealing with HIV/AIDS in the workplace.

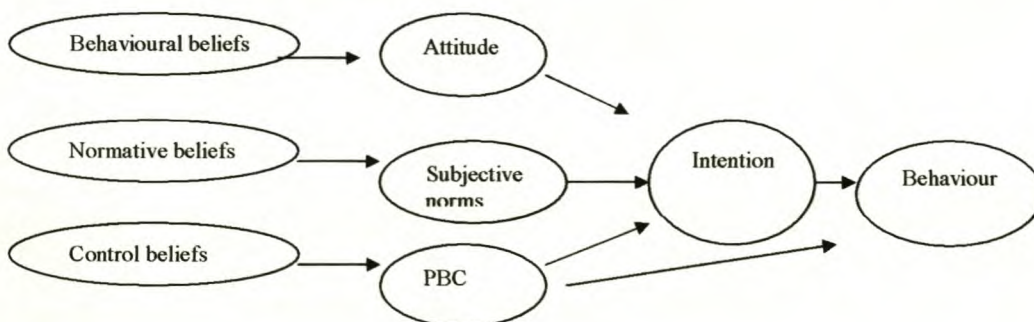
A theoretical model such as the Theory of Planned Behaviour is useful in explaining behavioural intention of SMEs in implementing HIV/AIDS policy and programme in the workplace. The model explicitly focuses on the construct of intention and offers a plausible explanation in explaining behavioural intention from a social cognitive psychological perspective (Ajzen, 1991, 1998).

The need for this research derives from the important role employers in South Africa can play in understanding their intention to implement a HIV/AIDS policy and programme. The benefits of such research will ultimately result in the formulation of preventative strategies and interventions that could add value for the SME sector. Within the South African context, approximately 12 million people are employed directly in the SME sector, with a further 20 million dependents (Whiteside & Sunter, 2000). As a consequence, workplace initiatives can effectively reach a significant percentage of the at-risk population.

Overall, the response to HIV/AIDS by employers is steadily gaining momentum, however, the focus of research tends to be the employees of organisations and, as previously mentioned, the SME sector is often neglected and overlooked (Christianson, 2001). Williamson (2001) supports this in a review of articles in three academic journals (Journal of Applied Psychology; Academy of Management Review and Personnel Psychology) claiming that between 1988 and 1998, only seven out of 207 articles focused on SMEs. SMEs within the South African context therefore have an important role to play in ensuring that their interventions are research based, as they affect not only company policy, but human resource (HR) related policies and strategies for dealing effectively with HIV/AIDS in the workplace.

What should organisations and especially SMEs do to implement an HIV/AIDS policy and programme in the work place? Moreover, the question arises as to why do owner-managers in SMEs differ in their behavioural intention to implement a HIV/AIDS policy and programme in the workplace? The theory of planned behaviour is used in the following paragraph in an attempt to explain this phenomenon.

In recent years the main approach used to explain the relationship of attitudes and behaviour was to integrate models of behaviour, including additional determinants of behaviour, such as social norms or intentions (Olson & Zanna, 1993). It can be argued that the most widely researched of these are the theories of Reasoned Action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) and Planned Behaviour (Ajzen, 1998, 1991). The theory of planned behaviour (TPB) is essentially an extension of the Theory of Reasoned Action (TRA) that includes measures of control beliefs and perceived behavioural control as shown in Figure 1.



**Figure 1.** The theory of planned behaviour

(Ajzen, 1991, p 179-211)



Given the above conceptual framework, the antecedents of intention are: attitude, subjective norms and perceived behaviour control. Research has provided support for TPB (Manstead & Parker, 1995; Jonas & Doll, 1996). The focus of this research will deal with the variables of attitude, subjective norms and perceived behavioural control in explaining behavioural intention of SMEs in dealing with HIV/AIDS in the workplace.

## **2.1 Defining Small, Medium Enterprises (SMEs)**

In mainstream international writings on small enterprise development, attention is usually focused on either MSEs (micro and small enterprises) or SMEs (either small and micro, or small and medium enterprises) (Mead, 1998). In South Africa, the SME sector is segmented into three sets of enterprises (South Africa, 1995). The first set comprises survivalist enterprises. Operating in the informal economy, they are defined as a set of activities undertaken primarily by unemployed people unable to find regular employment. In this group, income usually falls short of minimum standards, little capital is invested, skills training is minimal and scant prospects exist for growth into viable small business enterprises. The second set comprises micro enterprises that involve the owner, some family members and a few employees. The third set comprises small and medium enterprises that constitute the basis of the formal SME economy. SME enterprises are usually owner-managed, operate from fixed premises and bear all the trappings associated with formality (South Africa, 1995).

Manning (1996) argues that South African intervention for SME promotion derives from three key roles for SMEs in the national economy and society, namely employment promotion, economic redistribution and enhancement of competitiveness. The role of employment promotion is significant given that the past-apartheid economy was characterised by growth in unemployment. In terms of economic redistribution, SME promotion contributes to dealing with the economic inequalities inherited from the past. Lastly, SMEs are expected to enhance the economic competitiveness of local industry in order to stimulate growth and even export. However, given the impact of HIV/AIDS, the above promotion efforts may be constrained. Thus the importance of implementing an HIV/AIDS policy and programme becomes all the more important and urgent.



Business Report (2003) reaffirms government support for the SME sector, in which a revised policy document presents a way forward for SME within the next ten years. In South Africa, there are an estimated 3 million SMEs, which are responsible for more than 45 per cent of total employment. Furthermore, SME contribution to the GDP grew from 32,8 per cent in 1995 to about 41 per cent. If this sector has to contribute between 60 per cent and 80 per cent of the GDP in the foreseeable future, HIV/AIDS will affect these targets (Bridge, 2003).

The problem of dealing with HIV/AIDS is often relegated to the health authorities, because SMEs see it primarily as a health matter, requiring specialised skills and great sensitivity. The current reality is that AIDS is affecting people in organisations that make an economic contribution to society but medical advancements and holistic approaches to treatments of persons with HIV/AIDS have been shown to increase mortality rates. However, the workplace issues, such as non-supportive environments and lack of reasonable accommodation for persons with HIV/AIDS, can not only lead to persons with HIV/AIDS to be adversely affected, but it can also have an adverse effect on organisations. The competency for SMEs to deal effectively with HIV/AIDS in the workplace is therefore becoming increasingly important. However, the question as to why SMEs differ in dealing with HIV/AIDS in the workplace and especially the implementation of a HIV/AIDS policies and programmes requires an empirical explanation, which in turn could assist in the formulation of strategies/interventions within the workplace.

However, the question remains, is SMEs behavioural intention to respond to HIV/AIDS linearly dependent on their attitudes, social norms towards the action and the perceived behavioural control? In attempting to answer this, it is necessary to take a closer look at the Theory of Planned Behaviour and focus on key issues affecting workplaces. This remainder of this chapter thus focuses on an overview of motivational models, the Theory of Planned Behaviour and HIV/AIDS in the workplace.

## **2.2 Motivational Models**

A number of motivational models of health behaviour have been proposed, such as: the Health Belief Model, the Protection Motivation Theory, the Social Cognitive Theory and the theories of reasoned action and planned behaviour. These models are designed to



predict behaviour at single points in time and are designed with a view to identifying the variables that influence health related decisions and to assess their ability to predict behaviour (Armitage & Conner, 2000).

### **2.2.1 Health Belief Model**

The Health Belief Model (Janz & Becker, 1984; Rosenstock, 1974) includes six determinants of behaviour. These are: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, health motivation and cues to action. All six determinants are generally regarded as independent predictors of health behaviour. The conceptualisation of the Health Belief Model (HBM) is the combination of perceived susceptibility with perceived severity (to produce perceived threat), and the combination of perceived benefits with perceived barriers (to determine evaluation of the course of action taken). As such, health behaviour is more likely to be carried out if the individual perceives threat of disease (i.e. high susceptibility and severity) and if benefit can be derived from performing the behaviour. Finally, cues to action such as symptom perception or health communication may also prompt performance of the behaviour.

Reviews have tended to be critical of the HBM on the grounds that the components have been formulated without definition and without rules of combination (Sheeran & Abraham, 1996; Stroebe & Stroebe, 1995). For example, although threat may be a combined function of severity and susceptibility, they are presented as separate predictors of behaviours. Congruent with this view, Harrison, Mullen and Green's (1992) meta-analysis of the HBM shows that although the correlations between HBM and behaviour are statistically significant, the effect sizes are small (all  $r$ 's < 0.21). Harrison et al.'s (1992) analysis did not include assessment of the efficacy of the cues to action or health motivation components because of the lack of studies measuring these constructs. Sheeran and Abraham's (1996) review of the HBM concluded that all HBM variables correlated only weakly with behaviour. Sheeran and Abraham (1996) further concluded that the weak predictive validity of the HBM was a function of poor definition of constructs, lack of combination rules and lack of evidence of discriminant validity between HBM components and variables from other models.

### **2.2.2 Protection Motivation Theory**

Rogers' (1983) Protection Motivation Theory (PMT) is closely related to the HBM. Health behaviour in this theory is represented by adaptive coping (beneficial to health) or maladaptive coping (harmful to health). Both forms of coping are determined by "protection motivation". Protection motivation is the function of two appraisal processes, namely threat and coping. Similar to the HBM, the threat appraisal process is determined by perceived vulnerability and perceived severity. This appraisal increases protection motivation unless there are advantages in performing the maladaptive behaviour (which decreases protection motivation). The second appraisal process is coping appraisal. Coping appraisal is determined by the usefulness of the response (response efficacy) and confidence in one's ability to perform the behaviour (self-efficacy). If an individual perceives response efficacy and self-efficacy, protection motivation increases, unless the costs incurred by performing the adaptive behaviour are too big.

Boer and Seydel's (1996) review of PMT shows it to be a useful predictor of behaviour. They illustrate the utility of PMT as a basis for developing a theory based on health interventions, although to date only self- or response efficacy has been manipulated. Congruent with this is Hodgkins, Sheeran and Orbell's (1998) meta analysis of PMT. This reveals that average correlations for all components are small to medium (all  $r$ 's < 0.35). Sutton (1998) states that in spite of the lack of predictive power, variables assessed in PMT have been shown to be particularly sensitive to health interventions and that it seems likely that manipulations of the PMT cognitions would exert minimal impact on subsequent behaviour.

### **2.2.3 Social Cognitive Theory**

Bandura's (1986) Social Cognitive Theory (SCT) posits self-efficacy and outcome expectancies (related to situation and action) as the central determinants of behaviour. Situation-outcome expectancies are based on the perception that the environment determines some consequences and is thus separated from personal control. Action-outcome expectancies are related to the belief that one's action is instrumental to a particular outcome. Self-efficacy relates to confidence in one's ability to carry out a particular behaviour (Bandura, 1986) and can also be found in PMT. Social Cognitive



Theory therefore predicts that behaviours are performed if one perceives control over the outcome, few external barriers, and confidence in one's own ability.

SCT has been used to predict a variety of health behaviours and behavioural intentions (e.g. Ellickson & Bell, 1990; Resnicow, Davis-Hearn, Smith, Baranowski, Lin, Doyle & Wang, 1997). However, the model accounts for only small to medium proportions of variance in behaviour. The central self-efficacy component is typically the dominant predictor of behaviour and is often the principal focus of research attention (Bandura, 1997). The concept of self-efficacy has been shown to be instrumental in coping with stress (Lazarus & Folkman, 1984) and effecting behavioural change (Ellickson and Bell, 1990). It has also been shown that self efficacy plays a role in PMT.

#### **2.2.4 Theories of Reasoned Action and Planned behaviour**

The theory of reasoned action posits intention as the proximal determinant of behaviour (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). Intention is defined as the motivation required to perform a particular behaviour. Therefore the more one intends to perform a behaviour, the more likely is its performance. Within this framework, intention is determined by attitudes (general positive and negative evaluations of behaviour) and subjective norm (global perception of social pressure).

However, as Ajzen (1988, p.127) conceded, "The theory of reasoned action was developed explicitly to deal with purely volitional behaviours". Volitional behaviours are simple behaviours where successful performance of the behaviour requires only the formation of an intention. The implication was that behaviours were dependent on the personal action (i.e. the formation of intention) and that control over behaviour (e.g. personal resources or environmental determinants of behaviour) was unimportant. Ajzen (1988) therefore proposed a conceptual framework that addresses the problem of incomplete volitional control. The Theory of Planned Behaviour (TPB) thus extends the Theory of Reasoned Action (TRA) by including measures of perceived behavioural control (PBC) as a determinant of intentions and behaviour. The inclusion of PBC as a predictor of behaviour is based on the rationale that by holding intention constant, PBC increases the likelihood that the behaviour will be successful. Furthermore, to the extent that PBC reflects actual control, PBC will directly influence behaviour.



Godin and Kok (1996) report on a meta analysis of 87 TPB studies applied to health behaviour. Their analyses shows that TPB accounts for 41% of the variance in behavioural intentions ( $R=0.64$ , 76 correlations) and 34% of the variance in behaviours ( $R=0.58$ , 35 correlations) for a range of health behaviours. In terms of behavioural prediction, TPB provides an improvement on the Health Belief Model, Social Cognitive Theory and Protection Motivation Theory (Conner & Norman, 1994; Quine, Rutter & Arnold, 1998). On the basis of this, TPB was selected as the model to assess behavioural intention in implementing a HIV/AIDS policy and programme and will be further explained in the next section.

## **2.3 Theory of Planned Behaviour**

### **2.3.1 Background**

Since Wicker's (1969) review of research examining the relationship between attitudes and behaviour and his conclusion that attitudes probably do not predict behaviour, social psychologists have sought to improve the predictive power of attitudes (Armitage & Conner, 2001). Ajzen and Fishbein developed the Theory of Reasoned Action (TRA) and concluded that the poor relationships between attitudinal measures and behavioural measures were not a fault in attitudinal theory itself, but were rather due to inadequate methodological and theoretical development. Therefore in recent years the main approach within this area has been to develop integrated models of behaviour, which include additional determinants of behaviour, such as social norms and intentions (Olson & Zanna, 1993). The Theory of Planned Behaviour (TPB) is therefore essentially an extension of the TRA that includes measures of control belief and perceived behavioural control. TRA states that beliefs (cognitive) lead to informing attitudes (affective), which in turn guide behaviour (conative) (Ajzen, 1988). TRA makes the assumption that people process information available to them in a systematic manner when making decisions. An implication of this is that decisions are not always reasonable or appropriate as information is often incomplete or incorrect (Ajzen, 1988). Accordingly, the key variables within the TPB as indicated in Figure 1 (par 4) will now be discussed.

Hardeman, Johnston, Bonetti, Wareham and Kinmonth (2002) reviewed 30 studies about TPB and found that the TPB is mainly used to measure process and outcome variables and to predict intention and behaviour, and less commonly to develop the intervention.



They found that behaviour change methods used are mostly persuasion and information aimed at increasing skills, goal setting and the rehearsal of skills. Furthermore, they conclude that TPB does have utility as a social cognition model for predicting intentions and behaviour.

Kalafatis, Pollard, East and Tsogas (1999) examined the determinants that influence consumers' intention to buy environmentally friendly products. Ajzen's TPB provided the conceptual framework for the research and the appropriateness of the theory was tested in two distinct markets. Although their findings offer considerable support for the TPB in explaining intention, there is some indication that the theory is more appropriate in well-established markets that are characterised by clearly formulated behavioural patterns.

Terry, Hogg, and White (1999) examined the role that self-identity plays in the Theory of Planned Behaviour. There was evidence that the perceived norms of a behaviourally relevant reference group are related to intention, but only for participants who identify strongly with the group. Armitage and Conner (1999) assessed the predictive validity of the Theory of Planned Behaviour in the context of food choice and found that the model was a robust predictor of food choice.

Quine, Rutter and Arnold (2000) reported a prospective longitudinal comparison of the Health Belief Model (HBM) and the Theory of Planned Behaviour (TPB) in which the models were used to predict and understand the use of protective helmets among schoolboys cyclists. For the HBM, the variance explained is 18% compared to 43% for the TPB. The TPB model in the study shows that the leading predictor of intention is subjective norms. The study found that TPB is a more reliable model indicating greater economy and less redundancy than the HBM, and this then substantiates the use of the TPB in the present study.

### **2.3.2 Variable Functioning**

The relationship between variables as represented by the model in Figure 1 (par 4) will now be briefly discussed, followed by a more detailed description of each variable.

According to Ajzen (1988), the TRA suggests that behaviour under the complete volitional control of an individual (volitional behaviour) is determined by the intention to engage in that specific behaviour. Furthermore, intention is described as a first level predictor that represents all motivational forces. According to TRA, the second level predictor affecting intention is attitudes towards the behaviour and the social norms of engage in the behaviour.

As mentioned earlier, the TPB developed from the notion that behaviour is generally characterised by incomplete volitional control and as a result extended the TRA by adding another variable, perceived behavioural control (PBC) (Ajzen, 1988; Sparks, Guthrie & Shepard, 1997). Ajzen (1988) further suggests that PBC is a second level predictor or a third level determinant of intention, directly influencing or affecting behaviour when perceived behavioural control relates to actual control. The link indicating this relationship in Figure 1 shows that this is somewhat dependent on whether there is some agreement between perceptions of control and the person's actual control over behaviour.

Attitude, social norms or subjective norms and PBC are determined by salient beliefs about behaviour. This assumption reflects Fishbein and Ajzen's use of the three-component structure of attitude, which portrays the link between the cognitive aspects of attitudes (beliefs) and the conative aspects (behaviour) (Ajzen, 1988). Although beliefs are not depicted as separate independent variables in Ajzen's (1988) illustration of the model in Figure 1, both Fishbein and Ajzen considered them as such when they refer to the third level of factors determining behaviour (Ajzen, 1988).

### **2.3.3 Behaviour**

According to Ajzen (1988) behaviour refers to the performance of the individual and not the outcomes of behaviour. Behaviour can therefore either be completely volitional or not under complete volitional control. Ajzen (1988, p.127) conceded, "The theory of reasoned action was developed explicitly to deal with purely volitional behaviours". In defining behaviour, Ajzen further contends that behaviour can be defined and measured on different levels of generality or specificity, the most specific level being a single act in a specific time and context. On a general level, regularity of behaviour or behavioural tendencies can be measured by observing a single act on different occasions and within



diverse contexts. Furthermore, a multiple-act index can be used to measure different acts of the same behavioural domain (Ajzen, 1988).

Ajzen developed the Principle of Compatibility that states that it is acceptable to define behaviour in any level of generality or specificity, provided that the other elements have the same level of specificity for different stages of the model. He argues that much of the attitude-behaviour problems of the past were due to the negligence of this principle. When predicting a high level of specificity in behaviours, psychologists are rarely interested in this high level involving a unique context and a specific point in time, but rather predict behavioural tendencies or regularities over a period of time. A constraint to this is the contamination influence of variables other than the disposition of interest (Ajzen, 1988). Central to the TPB is the conception of intention as the first level predictor of behaviour.

#### **2.3.4 Intention**

Intention represents all the motivational forces impacting on the behaviour under consideration. It suggests how much people are willing to attempt to perform a particular behaviour or the amount of effort that they will execute (Ajzen, 1988).

As the principle predictor of behaviour, intention is regarded as the motivation necessary to engage in a particular behaviour. The more one intends to engage in behaviour, the more likely its performance should be (Armitage & Conner, 1999). Fishbein (1963) states that intention continues being a behavioural disposition until that moment arrives when the individual actually makes an attempt to perform the behaviour. If the behaviour was volitional, the attempt probably resulted in the desired act. But if the behaviour was not completely volitional, the attempt could have been unsuccessful or successful only to a certain extent. Although the relationship between intention and behaviour has proved to be well established, a lack of understanding exists about what actually causes people to behave in a certain way (Ajzen, 1988; Manstead & Parker, 1995). The second level predictors such as attitudes toward behaviour, social norms or subjective norms and perceived behavioural control need a brief overview.

### **2.3.5 Attitude**

Within the context of TPB, attitude is described as the individual's positive or negative evaluation of performing a particular behaviour and is viewed as the first determinant of behaviour. In turn, attitudes are derived from salient behavioural beliefs, i.e. the likelihood of particular outcomes occurring multiplied by an evaluation of those outcomes (Armitage & Conner, 1999).

### **2.3.6 Social Norms and Subjective Norms**

The second determinant of intention, a subjective norm is defined as the perception of general social pressure from important others to perform or not perform a given behaviour. Social norms represent the effect that important others have on the individual's intention to engage in the behaviour of interest. Although it is accepted that there are sometimes overlaps between these two determinants, both have proved to significantly explain variance in intention (Ajzen, 1988). Underlying subjective norms are normative beliefs, i.e. the perceived social pressure from salient referents multiplied by the motivation to comply with those referents. Just as behavioural beliefs determine behaviour, normative beliefs determine subjective norms.

Several quantitative and narrative researchers have provided support for the use of TRA in the prediction of a number of social behaviours (e.g. Sheppard, Hartwick & Warshaw, 1988; Van den Putte, 1991). According to Ajzen (1988) TRA was developed to explicitly deal with volitional behaviours, meaning that TRA may usefully predict a narrow range of behaviours. Ajzen (1988, p132) therefore proposed an extension to TRA: "...a conceptual framework that addresses the problem of incomplete volitional control". The extended TRA became known as the TPB. According to Van den Putte (1991), a normative component, as explained above, has been shown to be the weakest predictor of intention in the TPB. Terry and Hogg, (1996) have also criticised the normative component's narrow conceptualisation. TPB (Ajzen, 1988, 1991) was thus designed to predict behaviours not entirely under volitional control by including measures of perceived behavioural control.



### **2.3.7 Perceived Behavioural Control**

Ajzen (1988, p. 132) referred to perceived behavioural control (PBC) as the "...perceived ease or difficulty of performing the behaviour ... assumed to reflect past experience as well as anticipated impediments and obstacles". Ajzen further argued that this perception is influenced by internal as well as external factors and that the greater the PBC, the stronger the individual's intention to perform the behaviour under consideration will be. Ajzen suggested that PBC can also directly affect behaviour to the extent that perceived control corresponds with actual control, indicating the effect over and above the motivational impact. According to Ajzen (1988,1991), PBC thus contributes to the prediction of both behaviour and intention. With respect to the influence of PBC on intention, Ajzen (1991, p. 188) stated that: "the relative importance of attitude, subjective norm and perceived behavioural control in the prediction is expected to vary across behaviours and situations". In situations where attitudes are strong or where normative influences are powerful, PBC may be less predictive of intentions. Thus, Ajzen (1991) argued that the magnitude of the PBC-intention relationship is dependent upon the type of behaviour and the nature of the situation.

The proposed relationship between perceived behavioural control and behaviour is based on two rationales. Firstly, by holding intention constant, the likelihood that behaviour will be carried out increases with greater perceived behavioural control. Secondly, perceived behavioural control will influence behaviour directly to the extent that perceived control reflects actual control. In addition, perceived behavioural control works in parallel with attitudes and subjective norms as determinants of intentions (Armitage & Conner, 1999).

### **2.3.8 Beliefs**

The examination of beliefs that underlie the constructs of attitudes, subjective norms and PBC provide an understanding of prediction and the rationale for the performance of such behaviours (Ajzen, 1988; Manstead & Parker, 1995). Beliefs are the salient information about behaviour and it is therefore assumed that individuals process this information in a systematic way. Ajzen describe three types of beliefs: behavioural beliefs which are assumed to influence attitudes towards the behaviour, normative beliefs which provide the basis for social or subjective norms and control beliefs which amount to the

determinants of perceived behavioural control. According to Ajzen (1991), control beliefs are the antecedents of PBC, and are concerned with the perceived power of specific factors to facilitate or inhibit performance of the behaviour. The terms belief-based attitudes, normative beliefs and control beliefs need further explanation.

#### ▪ **Belief-based attitude towards behaviour**

The antecedents of attitude, subjective norms and PBC are corresponding beliefs, reflecting the underlying cognitive structure. Each behavioural belief links a given behaviour to a certain outcome, or to some other attribute, such as cost incurred in performing the behaviour. The attitude towards the behaviour is determined by the relative strength of these associations and by the beliefs that are salient at the time. This works on the principle of Fishbein and Ajzen's (1975) Expectancy-Value Model: the subjective value of a given outcome affects the attitude in direct proportion to the strength of the belief.

This can be reflected in the Ajzen (1988) formula:

$$A_b \propto \sum_{i=1}^n b_i e_i$$

$A_b$  stands for attitude toward the behaviour B;  $b_i$  is the belief (subjective probability) that performing behaviour B will lead to outcome i;  $e_i$  is the evaluation of outcome i; and the sum is over n salient beliefs.

#### ▪ **Normative beliefs**

A subjective norm is considered to be a function of salient normative beliefs. While subjective norms relate to perceptions of general social pressure, the underlying normative beliefs are concerned with the likelihood that specific individuals or groups (referents) with whom the individual is motivated to comply will either approve or disapprove of the behaviour. This can be reflected in the Ajzen (1988) formula:

$$SN \propto \sum_{j=1}^n b_j m_j$$



SN is the subjective norm;  $b_j$  is the normative belief concerning referent  $j$ ;  $m_j$  is the person's motivation to comply with referent  $j$ ; and  $n$  is the number of salient normative beliefs.

#### ▪ Perceived Behavioural Control (Control beliefs)

According to Ajzen (1991) control beliefs are the antecedents of PBC and are concerned with the perceived power of specific factors to facilitate or inhibit performance of the behaviour. Like the other beliefs, the equation takes account of the relevance of the belief to the individual, in this case by taking a measure of the frequency of occurrence of the promoting or inhibitory factors. Control beliefs are those salient beliefs about factors that may constrain or enhance the behaviour of interest by influencing the perception of an individual regarding the difficulty of performing the behaviour of interest. Ajzen distinguished between internal factors, such as information, skills and abilities, emotions and compulsions, and external factors, such as opportunity and dependence on others. Respondents are asked to rate the frequency of occurrence and multiplied by the likelihood of relevant control factors and sum over the responses. This provides a belief-based measure of perceived behavioural control (Ajzen, 1988; Manstead & Parker, 1995; Sparks, Guthrie & Shepard, 1997) and forms the basis of the rationale for using the TPB model to assess the behavioural intention of owner-managers of SMEs to implement an HIV/AIDS policy and programme.

## 2.4 Implementation of an HIV/AIDS Policy and Programme

The private sector has a crucial role to play in achieving significant economic growth in South Africa in order to raise the general standard of living. It is the main source of employment, creates wealth and supplies the consumer with food, clothing, housing and most essential and non-essential goods and services. The implementation of a HIV/AIDS policy and programme is considered to be a significant step towards reducing the impact of this disease to which Small and Medium Enterprises (SME) are especially vulnerable (Whiteside & Sunter, 2000).

Increasingly, SMEs are seen to play an important role in the South African economy. Given this significance, SMEs potentially provides a rich source of material for

researchers for a range of current themes. One of these themes is the implementation of HIV/AIDS policies and programmes (Cassell, Nadin, Gray & Clegg, 2000). However, Hendry et al. (1995) suggest that much management and organisational theory continues to emphasise large companies. They further suggest that there are two inferences within literature that operate to the detriment of SME research. One is that SMEs are less important than large companies, and the second is that SMEs should learn from large companies. A further potential problem is that of viewing the individual SME in isolation. The SME is often part of a supply chain and therefore considerably dependent on others within that supply chain. For example, to achieve “favoured supplier status”, a large customer may demand that an SME meet certain criteria for HR standards, investors in people and the implementation of an HIV/AIDS policy and programme (Casell, et al., 2000).

The present research therefore focuses on the SMEs and the implementation of a HIV/AIDS policies and programmes. The TPB is used as a model to assess SME behavioural intention to implement an HIV/AIDS policy and programme. For the purposes of the present research SME will be used to refer to owner-managers of SMEs and their behavioural intention will be assessed accordingly. However, it is first important to take a brief look at the impact of HIV/AIDS.

#### **2.4.1 HIV/AIDS and Legislation**

Due to the growing prevalence of HIV in society, employers are experiencing an increasing impact on the workplace. Absenteeism is increasing and speculation about risks to non-infected persons is rampant. Ignorance about the risks related to HIV/AIDS poses a real danger in the discrimination against employees or applicants for employment (Truter, 2003). Furthermore, Truter highlights the growing discrimination against domestic workers due to their HIV/AIDS status. Other employers may also feel that the nature of their business is such that an employee infected with HIV could place others at risk of being infected. Thus, SME employers should be aware of prohibitions, anonymous testing, voluntary testing and discrimination in the workplace.



- **Prohibition**

The Employment Equity Act of 1998 prohibits the medical testing of employees, including prospective employees, unless it is permitted by legislation or is justifiable on certain specified grounds. The Act further prohibits the testing of an employee to determine his/her HIV status, unless the Labour Court determines that such testing of an employee is justifiable. The purpose of these prohibitions and limitations is to prevent employers from discriminating against employees and job applicants on the basis of their medical status. Persons infected with HIV are particularly vulnerable to prejudice, hence the provision that only the court, and not the employer may determine whether it is justifiable to test an employee for HIV/AIDS.

- **Anonymous testing**

Recently, the Labour Court posed the question whether permission from the court was required if testing was done on an anonymous and voluntary basis. Regarding the issue of anonymity, the judge held the view that if the identity of the person being tested remains unknown, the risk of discrimination is absent. The facts of the case in question were such that the purpose of testing was not to identify the employees who were HIV positive, nor would the effect of such testing reveal the identities of such employees. It was the employers aim to assess the potential impact of HIV/AIDS, to do proper manpower planning, provide support structures for those living with HIV/AIDS and to take proactive steps to prevent employees becoming infected. Given these circumstances, the anonymous testing of employees fell outside the ambit of the Act and no permission was required.

- **Voluntary testing**

In the above-mentioned case, the judge found that the prohibitions and limitations mentioned only apply to compulsory HIV testing. In other words, it is quite in order for employees to undergo voluntary testing without the court's permission, provided that the testing is truly voluntary. It does not matter whether the initiative for testing has come from the employer or the employee.

When is testing truly voluntary? It would, for example, not be truly voluntary where a person agrees to be tested for HIV in order to be considered for a job. The case further refers to the Code of Good Practice pertaining to key aspects of HIV/AIDS and employment where workplace HIV/AIDS programmes are recommended and voluntary testing is conducive to openness, disclosure and acceptance amongst all staff. The employer must however respect an employee's right to privacy. In other words, employers must obtain clarity about the conditions under which the employee grants consent.

#### ▪ **Discrimination**

The law protects employees and job applicants against being exposed to circumstances that could give rise to unfair discrimination. Unless an employer has a proper HIV/AIDS programme in place, any attempt to encourage voluntary HIV/ testing of employees or job applicants would cast serious doubt on the motives of the employer (Truter, 2003). Furthermore, researchers are of the opinion that AIDS discrimination in the workplace is not limited to employer-employee relations and among employee's relations, but could also happen between business and its customers.

#### **2.4.2 Consequences of AIDS in the workplace**

The AIDS virus poses a threat to the retail sector, especially to companies that rely on sales and credit extension to the highest-risk group - young, black, urbanised consumers earning less than R1 000 per month (Bisseker, 1999).

Over the next ten years, says Metropolitan employee benefits actuary, Deane Moore, some retailers will experience a marked reduction in consumer demand because of AIDS deaths and falling disposable incomes among those infected and their families,. He says that the disease would hit the following areas of sales hardest: fashionable clothing, sporting and leisure equipment, cosmetics, convenient goods, food, music, beverages, electronic appliances and motor vehicles for the 20-40-year age group. Niche players in the most vulnerable retail sectors will have to be proactive and responsive to clients' needs or they will lose some of their market share because of AIDS. About 20 per cent of the 20-40 age group is HIV-positive. Between now and 2005, it is estimated that about 1,2m or 9 per cent of the people in this age group will die from Aids.



## ▪ Financial

The highest incidence of HIV/AIDS occurs in the Living Standards Measure (LSM) consumer categories two, three and four (see Table 4). The South African Advertising Research Foundation developed the LSM to show how responsive consumer spending is to changes in income. For instance, consumers in LSM categories one to four will not spend significantly less on essential goods like food when their incomes fall, but will cut back heavily on luxury items. About 28 per cent of the total population falls into LSMs one to four, comprising mostly urban blacks earning between R563 and R875 per month. As concluded by the Natal University's Health, Economic and HIV/AIDS Research Division, retail outlets targeting this population are therefore most vulnerable to the impact of AIDS

**Table 4: Market characteristics of most vulnerable groups by earnings category (LSM)**

LSM	Population Characteristics	Furniture & appliances	Food	Vehicles	Apparel & footwear
1 & 2	3% of total pop. Earn R563 pm. Includes many black women aged 50+ and blacks aged 16-24.	Minimal ownership of durables	Shop mainly at non-chain outlets (loose tea, beer, packet soup, frozen chicken)	Do not own vehicles	Lowest purchasing
3 & 4	25% of total population Earn R875 pm. Under 35 years and single, mainly urban blacks	Electrification increasing ownership of durables; 50% own TVs	Bulk shopping at chain stores (groceries, basic toiletries, fruit juice, fresh meat)	10% own vehicles	Average purchasing

(AIDS Analysis Africa, 1999)

Retailers have not yet seen a significant impact in terms of losses to consumer markets, interruptions to supply chains or vulnerability in terms of benefits (AIDS Analysis Africa, 1999). Most believe they have spread the risks sufficiently to curtail the AIDS

storm and that there were more pressing problems to deal with presently. Alastair McArthur, CEO of Speciality Stores, which include Mr Price and Milady's, said the company was worried about AIDS, but are not factoring it into their strategic planning. They were more concerned about employment falling and the resultant impact on disposable income. He disputed Michael's (1999) ratings of Mr Price's customers as LSM three and four - among the most vulnerable to AIDS - saying they were more accurately classified in the higher income LSM five and six, which were less vulnerable to the disease.

Pepkor Group chairman Jan le Roux agreed that unemployment was a far more pressing issue. While conceding that total consumption spending would fall because of AIDS, he believes that affirmative action, increased training and the opening of job opportunities will advance the emergent middle class's spending power. Shoprite/Checkers marketing manager, Brian Weyers, was relieved that retailers of consumables would be least affected by the epidemic. However, he was well aware that AIDS would make all taxpayers and companies poorer because of the overall impact on the economy and the fiscus.

The large retail fashion chains that draw consumers from the bottom end of the market by offering them credit that is written off in the event of death should be especially concerned about AIDS deaths. Cardholders of these schemes were also commonly provided with funeral benefits. Already underwriters of these schemes are reporting a significant increase in the deaths of customers, though it is not known whether these are AIDS related. Premiums are being raised in line with the expected increase in mortality, but the risk is borne primarily by the stores themselves. Hire purchase agreements for furniture normally run over a period of two to four years and consumers are generally obliged to purchase insurance. Rising mortality rates are, therefore, not a top priority for these retailers. Michael (1999) maintains that the main commodity sold by furniture retailers is finance, rather than furniture, because they profit most from providing consumer credit. Moreover, most retailers provide in-house insurance, which means that the retailer is carrying the burden of bad debt. Michael further suggests that they have not seriously considered the risk attached to this practice.

Health consultants advise retailers to analyse the impact of AIDS on their particular market and customer base, as it will vary across the sector. Lifework's head of health



consulting, Wayne Myslik, said that AIDS was not going to shut down retail businesses, but if retailers are engaging in long-term planning and the impact of AIDS is not factored in, it could have a detrimental impact on the business. He claimed that as long as AIDS is not ignored, it may be considered as just one of the pitfalls of doing business in an emerging market (Bisseker, 1999).

#### ▪ Labour

According to Evian (1997) South Africa will experience an accelerating appearance of people with AIDS-related illnesses, serious morbidity and rising mortality in the workplace. The national prevalence of 15-28% of sexually active adults in the 20-40 age group in 1997 compared to figures for 2002 indicates a gap between employers and employees in dealing effectively with HIV/AIDS within the workplace and broader society. This could be due to the lack of behavioural intention to deal effectively with HIV/AIDS in the workplace. A further contention is that epidemiological information reveals the distinct patterns of sexually transmitted diseases. The patterns of migrant labour, hostel life, lack of empowerment, poor access to health care and information, substance abuse, fatalism, violence and a highly mobile society serve to increase the transmission of HIV and exacerbate how HR deals with the impact of HIV/AIDS in the workplace. A variety of responses by large and medium size employers, organised labour, government and non-government organisations have been dealing with HIV/AIDS in the workplace.

Many employers have responded to the threat, but the responses are generally not sustained and inadequate. Evian (1997) predicts that a single death of an employee from AIDS in the lower income group could cost R100 000, taking into consideration productivity, health care and benefit costs. This figure could even be three or four times more. Although management often recognises the problem, a reactive approach is usually followed. Ultimately, HR, who are mandated to deal with HIV/AIDS in the workplace, should align their objectives with the business objectives of the company so that management manifests leadership, vision and direction.

## ▪ Labour Economics

In 1997 the Old Mutual Benefits Survey set out to interpret the thinking and actions of larger South African Companies regarding health benefits. Stratified sampling methodology was used to target employers using the criteria of work force size, economic sector, geographic location and market capitalisation. The researchers discovered that the prevalence of HIV in South African population was rising rapidly and 86% of the respondents were aware of the impact that AIDS could have on the health benefits industry. Awareness and education grew from 40% in 1994 to 83% in 1997. Although education and awareness has grown within many companies, so has the prevalence of HIV/AIDS. Understanding behavioural intention to deal effectively with HIV/AIDS could result in targeted interventions within the HR company-wide perspective. Of the three strategic issues, cost control was ranked first (67%), second was pensioner pre-funding (8%) and lastly, the impact of AIDS (3%) (Old Mutual, 1997). It was recommended that a more collaborative approach was needed if the AIDS threat was to be countered effectively.

## ▪ Employment Equity

Employees and job applicants with HIV/AIDS are subject to a wide range of discriminatory measures in the workplace on the basis of their HIV status, ranging from pre-employment testing, dismissals and demotions and exclusion from employee benefit schemes. The Labour Relations Act of 1995 (as amended) develops the constitutional right to fair labour practices. Despite protection of the Act, discrimination against HIV workers continues. The Employment Equity Act, No 55 of 1998 aims to achieve equity in the workplace, compelling employers to take steps to promote equal opportunity in the workplace by eliminating unfair discrimination in any employment policy or practice. Of special interest is Section 6, which prohibits unfair discrimination. In terms of this strategy, the Act specifies that no person may unfairly discriminate against an employee, directly or indirectly in any employment policy or practice, on one or more grounds, including race, gender, sex, pregnancy, marital status, family responsibility, ethnic or social origin, sexual orientation, age, disability, religion, HIV Status, conscience, belief, political opinion, culture, language and birth. Of special interest to those opposed to HIV testing is Section 7 (2) of the Act. It states that medical testing of an employee to determine that employees' HIV status is prohibited, unless the Labour Court determines



that such testing is justifiable. The definition of employees in this section includes job applicants thus justifying the assumption that pre-employment testing is prohibited. The Employment Act mentions exceptions to the prohibition, and the special circumstances in terms of which testing are permitted. In terms of the Act, testing an employee is accepted under the following conditions:

- If legislation permits or requires the testing.
- If testing is justifiable in the light of medical facts, employment conditions, social policy, the fair distribution of employee benefits or the inherent requirements of a job.

Firstly, where pre-employment HIV testing is permitted or required by legislation, this is considered a lawful exception to the general prohibition. If future circumstances arise which justifiably necessitate HIV testing of employees or job applicants, the Employment Equity Act would not disallow such testing as long as it justifies medical facts, employment conditions, social policy and fair distribution of employee benefits or the inherent requirement of the job. Testing must also comply with the equality clause contained in the Constitution of 1996, which prohibits unfair discrimination against anyone on any arbitrary ground including that of disability. The strength of the Constitution should safeguard employees against the unlawful and discriminatory statutory authorisation for medical testing (Barret, 1998). It can however be argued that if employees were to disclose their HIV status, this would assist companies in dealing with HIV/AIDS effectively in the workplace.

In the second instance, HIV testing may be justified on the basis of given conditions, such as the fair distribution of employee benefits, medical facts, employment conditions, social policy or the inherent requirements of the job.

Various medical arguments are often put forward, such as the need to maintain and sustain employee benefit schemes, as reason for pre-employment testing when occupational duties could put others at risk. However, any argument for the pre-employment testing must be justified in terms of the Act and the reasons must be weighted against the criteria of fairness, reasonableness and business necessity. One of the weaknesses of the Employment Equity Act is that it allows for employers to continue



HIV testing, unless challenged by employees when the dispute would be referred to the Council for Conciliation, Mediation and Arbitration. What is meant by social policy? It can be argued that the disclosure would enhance the overall value of the employer-employee relationship in the form of improving working relationships, eradicating discrimination through concerted efforts by management, and ensuring a safe working environment in which the risk to exposure by others are neutralised.

## ▪ IMPLICATIONS

The impact of HIV/AIDS in the workplace is felt in many domains, for example in the loss of productivity, increased cost of employee benefits, high production costs and lower workplace morale due to the prolonged staff illness, increased absenteeism and mortality rates. This, in turn, impacts negatively on the economy of the country, as it slows down economic growth with less economically active persons able to contribute the economy. The loss of an employee requires an appropriate replacement to be selected and trained, which often is at great cost (TAG, 2003). Organisations will, therefore, experience the impact in a number of ways.

As infected employees become ill they will take additional sick leave and this will disrupt organisation operational activities. The disruption will be exacerbated when more qualified and experienced employees are absent, and finding temporary replacement becomes more difficult. Mortality rates attributed to HIV/AIDS infection are expected to increase significantly. The loss of an employee requires an appropriate replacement to be selected and trained. For highly qualified staff, this may prove difficult when skill shortages are prevalent. This could mean that an organisation's remuneration budget could increase. As the HIV/AIDS pandemic advances, an increase in the number of deaths will lead to increased absenteeism, as employees attend funerals of family members, friends and colleagues or take time off to care for sick family members. A fear of infection and death, may lead to increased suspicion of others as well as resistance to taking on additional responsibilities for colleagues who are on sick leave. The fear of employees will also increase when working with PWAs. However, the Department of Health (DOH) guidelines recommend that adequate steps be taken in the event of an occupational exposure to HIV (DOH, 2000). These range from taking immediate control of the infection area, evaluation of the exposure, determining the HIV status of the



exposure source and the provision of post-exposure prophylaxis with ongoing HIV testing at regular intervals in case of high risk exposures.

The response of organisations to HIV/AIDS should have two main focuses, one internal and the other external. The internal response refers to what organisations can do in response to HIV/AIDS in the workplace; the external response refers to recognising and exploiting the comparative advantages of an organisation to “make a difference” to the nature and the course of the epidemic within the sector in which it operates (DOH, 2000; Dept. of Labour, 2003). Furthermore, the workplace response should have four main elements:

- A prevention strategy;
- A wellness strategy;
- A set of management strategies to deal with the direct and indirect cost of HIV/AIDS; and
- A partnership strategy.

It is important to note that these elements are interlinked. In particular, prevention based activities and wellness management are interdependent and form part of a continuum of prevention and care.

In order to make legislation useful in the management of HIV/AIDS, education and awareness is vital. Furthermore, workplace responses should be underpinned by an impact assessment to determine the nature and extent of the problem, a policy framework and a monitoring and evaluation plan. The following should thus be integral when designing interventions for HIV/AIDS in the workplace:

- The formulation of the HIV/AIDS policy should be aligned to the overall business strategy of the organisation.
- Committed leadership from management and labour organisations to deal with HIV/AIDS in the workplace.
- Re-education.
- Workplace assistance programmes.

- Provision for accommodating reasonable needs of those infected.
- Supportive attitudes from management.
- Counselling for pre-/post testing.
- Workplace environment that is free of discrimination.
- Provision of employee's benefits.

According to Stipp (2003) one of the major requirements of good corporate governance, is the disclosure of the status of HIV/AIDS to its stakeholders. An industrial psychologist can effect behavioural change in managers to disclose their HIV/AIDS status to the stakeholders, with the aim of making this an integral part of voluntary sustainability reporting. Smetheram (2003) reports that business leaders are shunting the responsibility of HIV/AIDS onto their human resources staff instead of leading the fight against the pandemic. The University of Witwatersrand's Centre for Health Policy undertook a study into HIV/AIDS policies in 2002. The study found that:

- 93% of the companies had handed out information to staff.
- 90% had distributed condoms at work.
- 74% had conducted prevention activities in the previous year.
- 58% of the companies had an HIV/AIDS policy, but only 45% of this group adhered to the legislation.
- 44% had interviewed workers to determine how much they knew about HIV/AIDS and sexual practices.
- 45% had trained employees to act as peer educators or counsellors.

The study found that business had failed to react strategically to the pandemic. For example, absenteeism was recorded more often to identify those who abused sick leave and to work out payroll implications than for the purposes of investigating illness patterns or how absenteeism affected performance. The study concludes that the private sector is passing on the burdens of responsibility for HIV/AIDS to individuals, households, society and the wider community. It is thus important to look at the psychological issues around HIV/AIDS that could enhance the implementation of a HIV/AIDS policy and



programme in the work place. The Department of Health HIV/AIDS policy guidelines comprise the following:

- The recognition of the rights of each individual as enshrined in the Constitution;
- The acknowledgement the seriousness of the implications of the HIV/AIDS epidemic;
- A commitment to providing resources and leadership to implement a HIV/AIDS workplace programme;
- A commitment to providing a supportive work environment to employees living with HIV/AIDS;
- The encouragement of employees to make themselves available for voluntary testing, and the provision of both pre- and post-test counselling for all volunteers.

### **Policy**

The policy should:

- Raise awareness of the Human Immunodeficiency Virus (HIV) and the Acquired Immunodeficiency Syndrome (AIDS) and Sexually Transmitted Diseases (STDs);
- Ensure a better understanding of HIV and AIDS in the workplace;
- Seek to minimise the socio-economic and developmental effect HIV/AIDS has on the Department, its employees, and their next of kin;
- Prohibit unfair discrimination on the basis of HIV/AIDS status;
- Provide a comprehensive programme to improve health and safety at work and not deal with HIV and AIDS as isolated issues for employees living with HIV/AIDS;
- Ensure the provision of free condoms and health education lessons on HIV/AIDS and STDs;
- Develop minimum standards for the departmental HIV/AIDS programme as an addendum to the policy;
- Promote gender sensitive programmes that empower employees to be able to protect themselves from HIV/AIDS.

### **Principles**

The policy should be founded on the following principles:

- Employees or prospective employees with HIV/AIDS shall have the same rights and obligations as all other employees or prospective employees.

- Employees and prospective employees with HIV/AIDS shall be treated in a just, humane and life-affirming manner.

### **Confidentiality**

- Employees and prospective employees have the right to confidentiality with regard to their HIV/AIDS status.
- If an employee informs an employer of his or her HIV/AIDS status, this information shall not be disclosed to any other employee without that employee's written and express consent.
- A breach of confidentiality in this respect will be subject to disciplinary measures, which may include dismissal.

### **Recruitment and Employment**

- A prospective employee is under no obligation to inform the company of his or her HIV/AIDS status.
- The same legislation, regulations, codes, and policies shall govern all employees or prospective employees with HIV/AIDS.
- Pre-employment testing for HIV/AIDS is prohibited and will not be conducted.
- HIV/AIDS status shall not be a criterion for refusing to promote, train and develop an employee.
- HIV/AIDS status shall not deny an employee full participation in all the activities of the Department.
- Employees who wish to be tested for HIV/AIDS shall have access to counselling and referral to appropriate facilities.

### **Injuries on Duty**

- All Departmental employees and in particular those employed within laboratories shall be provided with a protocol with regards to work place injuries.
- All employees injured on duty must report the incident immediately to their supervisor and must make themselves available for testing in order to be eligible to claim for compensation as a result thereof.
- All employees who are injured on duty must ensure that they are provided with the necessary documentation, which must be completed as soon as possible after the incident. The completion of the documentation is to ensure that correct records are maintained of the incident, in the event of an Injury on Duty claim at a later stage.



- All employees will be provided with pre and post counselling and prophylactic treatment at the Department's expense.
- All personnel who are injured on duty and who refuse to make themselves available for testing forfeit their right to compensation.

### **Termination of Employment**

- No employee shall be dismissed or have his or her employment terminated based solely on his or her HIV/AIDS status.
- Should an individual be unable to continue to perform the duties for which she or he is employed, suitable alternative employment, with the relevant reduction in salary and status, if necessary, will be considered?
- The policies and procedures pertaining to termination of services on grounds of ill health that apply to all employees will also apply to employees who have HIV/AIDS.
- HIV/AIDS *per se* shall not be used as a justification for the non-performance of duties.
- The HIV/AIDS status of an employee shall not be used as a criterion to identify or influence the selection of employees for retrenchment.
- Refusal to work with an employee who is HIV/AIDS positive shall be regarded as a breach of the employment contract.

### **Sick Leave**

- Existing sick leave procedures shall also apply to employees with HIV/AIDS.

### **Record Keeping**

- No flags, symbols or any other means of identification will be used on an employee's personnel or other records to indicate HIV/AIDS status.
- An employee's HIV/AIDS status shall not be required on any medical or personnel report.

### **Information**

- All employees will be supplied from time to time with education and information about the modes of transmission of HIV, the means of preventing such transmission, the need for counselling and care, and the social impact of infection on those who are infected by HIV/AIDS.

### **Dispute Resolution**

- Any dispute between the Department and an employee in relation to or arising from the interpretation of this policy shall be subject to a process of conciliation in the Department of Health Bargaining Chamber.
- Where the alleged dispute remains unresolved, it will be referred for arbitration to the Health Sector Bargaining Chamber.

### **Application**

This policy applies to all employees and prospective employees of the Department of Health.

### **Responsibility**

- All employees shall be held responsible and accountable for complying with this policy.
- All Managers must ensure that all members of staff are aware of and understand the content of the Departmental Policy on HIV/AIDS in the workplace.
- All Managers are responsible for implementing this policy, ensuring compliance with and knowledge of its terms, and for taking immediate and appropriate corrective action where necessary.
- All Managers must ensure that every new employee receives a copy of this policy.
- All Managers must open and maintain communication channels to raise awareness concerning HIV/AIDS.
- The administration of any complaint procedures arising from this policy is assigned to the Directorate: Employment Relations. The Directorate: Human Resources Management shall ensure that any disciplinary procedures are consistently applied.
- The Director: Human Resources Management is responsible for ensuring that this policy is properly distributed in the Department and that every employee has personally received a copy of the policy. New employees will receive a copy during the induction course.
- The Directorate: HIV/AIDS and STDs are responsible for the compilation of information on HIV/AIDS including modes of transmission, preventative measures, addressing the myths, and other general information.



- The Directorate: Communication, in conjunction with the Directorate: HIV/AIDS and STDs, is responsible for the dissemination of HIV/AIDS and STDs information to all staff (DOH, 2000).

## **2.5 Psychological Aspects of HIV/AIDS**

According to Ironson, Antoni, Schneiderman, Chesney, et al. (2002), patients dealing with chronic, life threatening diseases must often confront daily challenges that can undermine even the most resilient coping strategies and overwhelm even the most abundant interpersonal resources. It is thus important to look at the course of the illness, stressors faced by people who have HIV/AIDS and coping mechanisms that can be used.

### **2.5.1 Course of the Illness**

#### **▪ Primary Infection Phase**

During the phase of primary infection, tests can be used to detect its presence for the first two to four weeks. At this time, white blood cell counts decrease dramatically and flu-like symptoms (fever, nausea and sweats) occur. The immune system manifests a response to HIV, trapping HIV in lymph nodes and lymphatic tissue. The illness symptoms then dissipate, prompting individuals to believe that the illness has passed. This is the beginning of clinical latency, where the person feels stronger and the immune system continues to eliminate HIV in the bloodstream.

#### **▪ Clinical Latency Phase**

During the clinical latency phase, (approximately two weeks to six months post infection) the infected person's system begins producing antibodies to HIV, which blood tests such as ELISA and the Western Blot can detect. ELISA is cheaper and easier to use than other screening methods (Gant, 1998; Whiteside & Sunter, 2000). During this phase, the amount of HIV in the bloodstream drops to nearly zero. However, HIV in the lymph nodes continues to replicate at extremely rapid rates undetected (Gant, 1998).

- **HIV Asymptomatic Phase**

During the asymptomatic phase (two to seven years post-infection), HIV disrupts the immune system and the antibody cell count slowly declines. As the cell mediated response weakens, HIV eventually migrates from the lymph nodes through the bloodstream. Eventually the virus attacks vital organs and the brain (Gant, 1998).

- **HIV Symptomatic Phase**

During the symptomatic phase (eight to ten years post-infection), HIV replication is extremely rapid and may mutate into different and more powerful strains. Early warning signs of disease progression develop, such as night sweats, weight loss, skin rashes, persistent fevers, diarrhoea, fatigue or oral rash. In the end-stage phase, lymph nodes collapse and the immune system loses the ability to regenerate, cell counts diminish rapidly and opportunistic infections such as lymphoma, Kaposi's sarcoma and the invasive cervical cancer (among women) occur.

- **AIDS Diagnosis**

During the HIV symptomatic phase, a cell count less than 200 cells per cubic millimetre of blood or the presence of any one of twenty-three AIDS defining illnesses result in the medical diagnosis of AIDS. Once diagnosed with AIDS, death usually occurs within one to two years. (Infants usually die more rapidly). Approximately 90 per cent of those infected with HIV will progress to AIDS, although individuals may progress at different rates. About 13 per cent of persons infected with HIV will be long-term survivors, remaining free of the disease for more than twenty years. "Long-term survivors" are operationally defined as people having gradually declining immune markers without the use of antiretrovirals such as AZT. This group should be distinguished from the smaller group of people (about six per cent) identified as "chronic non-progressors", who operationally defined as those who are HIV positive, but who have stable immune markers with no evident progression from early to end stage HIV. While research is currently underway to understand what makes these individuals "long-term survivors"



and “chronic non-progressors”, there is no definitive knowledge or information to that end yet (Gant, 1998).

### **2.5.2 HIV-associated Dementia**

HIV-associated cognitive/motor complex is the most commonly occurring neuropsychiatric illness in persons infected with HIV (McArthur, Hoover, Bacellar, Miller, Cohen, et al., 1993). It has been estimated that 66 per cent of persons with symptomatic infection exhibit clear cut cognitive and intellectual deficits on formal neuropsychological testing while approximately 20 per cent have impairment sufficiently severe to warrant a diagnosis of HIV-associated dementia (Van Corp, Hinkin, Satz, Miller & D’Elia, 1993).

McArthur et al. (1993) further contend that although HIV can be extracted from the brain and cerebrospinal fluid from more than half of the persons with early stage infection, only five per cent of those with asymptomatic infection demonstrate cognitive and intellectual abnormalities relative to their seropositivity. The likelihood of cognitive impairment increases as the individual becomes increasingly immuno-compromised and symptomatic, and it has been found that 90 per cent of individuals have evidence of brain abnormalities related to HIV infection at death (Navia, Jordan & Price, 1986).

Differential diagnosis is therefore important because HIV-associated cognitive/motor complex can easily be confused with major depression with quite divergent treatment implications. The risks of incorrectly informing a depressed patient that he or she is demented, or a demented patient that he or she is actually depressed and will likely recover with treatment, are obvious. Thus, accurate differential diagnosis is crucial for appropriate psychosocial and medical management. Buckingham (1998) suggests that patients diagnosed with HIV-associated dementia are aware of their declining mental capabilities, and may be depressed as a reaction to these changes. Depression can further encroach upon the mental capacities of an already impaired individual. The author further recommends that consultation with a psychiatrist experienced in treating neuropsychiatric disturbances with psychopharmacology may be an important resource, and that the assessment of suicidal potential is also important in these patients. It is therefore important to look at stress and coping strategies in persons with HIV.

### 2.5.3 Stress and Coping Strategies

The level of stress an individual experiences in his or her organisational context and the extent to which adverse effects occur, such as psychological and other strains, depends on how effectively the individual copes with stressful situations (Bhagat, Ford, Frey, O'Driscoll, Babakus and Mahanyele, 2001). Research supports the contention that the ways people cope with stress and daily living affects their psychological, physical and social wellbeing (Be-Zur, 1999; Cohen & Lazarus, 1979; Greenglass, 1996). In a recent review of personality and stress, Vollrath (2001) states that coping dispositions predict a variety of human faculties. These include information processing, attentive orientation and emotional processing in demanding, ambiguous, anxiety-provoking or irritating situations.

#### 2.5.3.1 Stressors Faced by People with HIV

Notification that one is seropositive for HIV is an early stressor and has been associated with increased depression, anxiety, intrusive thoughts, somatic complaints and suicide ideation (Ironson et al., 1990 and Marzuk, Tierney, Tardiff, Gross, Morgan, Hsu & Mann, 1988). As Chesney and Folkman (1994) note however, studies after 1988 tended to show a reduction of this adverse response after HIV notification. This may have occurred because of the introduction of pre- and post-test counselling (Perry, Jacobsberg, Fishman, Frances, Bobo & Jacobsberg, 1990). During the asymptomatic period, anxiety and depression levels are similar to those of the general population (Rabkin, Williams, Neugebauer, Remien & Goetz, 1990). However, a stressful period occurs when HIV-related symptoms, such as oral thrush, night sweats, diarrhoea, first appear, and this is also accompanied by anxiety. Patients diagnosed with actual AIDS also experience stress. However (Chuang, Devins, Hunsley & Gill, 1989) report that patients with AIDS display significantly less distress than those in the earlier stages of HIV infection.

A study of factors associated with psychological trauma when receiving an HIV-positive result suggests that:

- the more recent the diagnosis the more the psychological distress. (This is reactivated upon the re-emergence of symptoms.)
- the greater the distance of the perceived risk from the risk, the greater the shock is at the time of diagnosis.



- motivation to take the test does not seem to affect the reaction.
- patients who get the test result from trained professionals react in a more positive way, and the information, emotional reception and the person's tranquillity works to decrease shock and calm the person.

Depressive symptoms are common. Socio economic factors, certain coping mechanisms, interpersonal and intra-psychic factors, as well as having less tangible social support were found to be strong predictors of depressions. However, the inverse could also be true. The degree of social support experienced by PWA has an inverse relationship to depression (Mason, 1996). Ironson et al. (2002) suggest that increases in social support could potentially work through ensuring the person goes to the doctor, gets and eats food, takes medication, and has the opportunity to discuss important decisions. The issues of disclosure, assertiveness and emotional expression may also have particular relevance for maintaining or building social support for processing traumatic or stressful medical information, and may be useful in negotiating appropriate and effective healthcare.

In addition to dealing with changes in health and the possible deterioration of quality of life, a number of other stressors add to the burden of dealing with the disease itself. These include fear of stigmatisation and social isolation because of being HIV-positive, concern about continuance of medical insurance, ability to pay increasing medical costs and changes in job status. HIV-positive people may face the additional stigma of responses from family and the death of friends or partners, both of which may lead to greater isolation (Blendon & Donelan, 1988). Poor communities often face chronic stressors, including lack of financial resources, unsafe neighbourhoods, marginalisation, single parenthood and lack of education and opportunities (Greenwood, Szapoczik, McIntosh, Antoni, Ironson, Tejeda, Clarrington, Samuels & Sorhaindo 1996). Thus the burden of stress is invariably high among people who are HIV positive.

Coping strategies represent the efforts, both behavioural and cognitive, that people make in order to deal with stressful encounters (Lazarus & Folkman, 1984). Coping has been differentially conceived in several ways, as stated by Livneh, Antonak and Gerhardt, (2000, p. 236). It is seen as:

- "both as personality trait and situationally determined response";



- a “dynamic process and as static construct”;
- “a strategy, that is mature, adaptive and flexible, but also a reaction, that is neurotic, maladaptive and rigid; and
- “a global, generally dichotomous concept, but also an intricate, hierarchically structured, multilevel concept”.

The most familiar coping taxonomy is the one proposed by Folkman and Lazarus (1980). These authors describe coping as either problem-focused or emotion-focused. Parker and Endler (1992) demonstrated that these dimensions have been recovered in nine out of thirteen studies. Problem-focused coping strategies aim at actively dealing with the problem. In contrast, emotion-focused coping is directed at dealing with the emotional distress that is evoked by the problem. Parker and Endler (1992) further suggest that the third basic strategy that may be used in coping with stress is avoidance. Avoidance can include either person-oriented or task-oriented strategies. Avoidance differs from problem- and emotion-focused coping in that avoiding a situation actually removes the person from the stressful situation, whereas problem- and emotion-focused coping might help the person manage the stressful situation while he or she remains in it (Kowalski & Crocker, 2001).

Appraisal captures the transactional nature of the stress and coping process, of which there are two kinds (Lazarus, 1991). The first is primary appraisal, where the individual gives meaning and significance to the situation, evaluates what is at stake for them, and whether the situation poses a potential or actual threat to their wellbeing. Secondary appraisal refers to the perceived availability of coping resources for dealing with a stressful encounter. Primary and secondary appraisals are the cause of coping and are interdependent, influencing each other and shaping the nature of any encounter (Lazarus & Folkman, 1984).

However, coping with uncertainty can be one of the more challenging aspects of living with chronic illness such as HIV/AIDS, because both short- and long-term planning can be difficult. HIV differs from other diseases and is unusual in the extent of the stigma associated with the disease, common modes of transmission, and the fact that it is infectious and fatal. The need for psychotherapy becomes important. Interventions should focus on various issues, such as coping with initial diagnosis, learning about the disease and making treatment decisions, managing ongoing and fluctuating emotional



reactions and associated psychiatric difficulties, seeking support, renegotiating relationships and facing death and dying.

Adjusting to a seropositive status is a process of integrating new information about oneself into one's existing identity. That translates into questioning assumptions about many aspects of one's life, rethinking priorities and goals, and acquiring new skills that may be necessary to accomplish reformulated goals. This process involves a redefinition of self and it takes time. It can evoke a sequence of grief, loss, fear and rage responses. An added challenge is the feelings of guilt that one should have known better. The individual thus responds to the diagnosis of HIV infection with alternating feelings of shock, disbelief, panic, fear, guilt, anger, despair, hopelessness and numbness (Remien & Rabkin, 2002).

Research has shown that within six to eight weeks after discovering a positive HIV result most men and women return to their baseline level of adjustment (Perry et al., 1990). However, Dilley, Ochitill, Perl & Volberding (1985) report that HIV/AIDS patients display high rates of depression. Although transient depressive feelings and distress are common among individuals living with HIV/AIDS, major depression is not and structured forms of psychotherapy and antidepressants have been found effective in treating patients. Rabkin (1996) concludes that less than ten per cent of people at any stage of HIV/AIDS are currently clinically depressed.

### **2.5.3.2 Adaptive Coping**

In a study by Grassi, Righi, Sighinolfi, Makouti and Ghinelli (1998) that examines the relationship between coping and psychosocial variables, it was found that patients who were adjusting well to their HIV-positive status tended to have a higher level of fighting spirit and lower degree of hopelessness than those patients who were not adjusting well to their HIV-positive status. These patients, 43% of the sample, showed symptoms indicating maladjustment. The researchers also found that coping style was based on the incapacity to face and confront HIV infection or avoidance.

Avoidant coping in a situation amenable to change is related to an increase in psychological distress (Kurdek & Siesky, 1990; Nicholson & Long, 1990), while active behavioural coping in such a situation is associated with decreased distress in the context



of HIV infection (Nicholson & Long, 1990). On the other hand, if the situation is in reality uncontrollable, active coping is unlikely to work and emotion-focused coping strategies are more appropriate. It is therefore important to assist the individual to determine which situations are controllable and which are uncontrollable, and what strategies appear most useful in a given context. People with HIV/AIDS can be taught these appraisal and coping skills which can reduce feelings of distress (Chesney, Folkman, & Chambers, 1996). Folkman, Chesney, McKusick, Ironson, Coates (1991) suggest matching the coping approach to the situation: problem-focused coping is more appropriate in situations that have changeable aspects (for example, problems with a medical insurance company); whereas emotion-focused coping is more appropriate for situations that are not changeable (for example, feelings of sadness encountered when visiting a friend with HIV in the hospital).

Important areas that are within the clients control involve specific behaviours that may influence the course of HIV disease and influence their quality of life and psychological well-being. These behaviours include good nutrition, exercise, control of recreational substance use, and alterations in sexual risk behaviour. Taking charge by making improvements in these areas can enhance the patient's feelings of well-being and mastery of their lives (Remien & Rabkin, 2002). The authors further contend that when the frequency, amount and substance use is judged to be maladaptive, the maladaptive behaviour must be addressed accordingly.

When someone is first diagnosed with HIV or AIDS, there is generally a decline in sexual activity, although intimacy and affection continue to be valued. The process of re-engaging in sexual activity and romantic relationships can be difficult, as many feel inhibited by concerns, such as anxiety over disclosing HIV status and the fear of rejection from potential partners, the fear of infecting others, and negotiating safer sex. Some are reluctant to enter into a relationship with someone who is HIV negative out of fear of infecting them or not being able to relate to them, while others are afraid of forming relationships with HIV positive people out of fear of having to take care of someone that is going to die. These fears cause anxiety, feelings of loneliness and hopelessness.

Ironson et al., (2002) suggest that social support is of central importance in the management of HIV as it increases the ability to cope with HIV-related stressors, lowers levels of psychological distress, and maintains connectedness. Another psychological



variable, anger, has been associated with decreased social support and increased smoking and alcohol use. Assertiveness training may not only be an effective intervention to help these people develop better strategies for handling anger, but may also help people to meet their medical and emotional needs.

When facing a situation involving HIV/AIDS, thoughts of illness and possible death may cloud a person's insight. Counselling is viewed as a delicate balance between factual knowledge, subjective attainable opinions brought to the workplace by all participants in-group interventions, and the effect of the emotions aroused during the sessions. The more sensitive the issue, the more control is required. Denial and disbelief appear to further complicate the situation because they raise underlying questions, like:

- How is it possible that people who are important, fit and full of life can be carriers of a fatal disease?
- How is it possible that modern scientific research has not yet produced a cure or something to prevent the spread of the disease?

In this era of scientific discovery and technological change, values and traditional practices no longer sustain and support PWA in the workplace. A multiplicity of approaches and methods is needed when addressing HIV/AIDS in the workplace. The approach, type, depth, extent, length and duration of counselling in the ideal situation needs to be customised and individualised, so that the atmosphere for the presentation of options and interventions is made as unique as possible. Counselling, therefore, is a vital competency that managers/supervisors should develop in order to exercise in a variety of ways to address the epidemic in the workplace. It is postulated that counselling itself will address the domains of building self-confidence, self esteem and independence of spirit to enable the individual to make choices from available options (Lamond, 1996).

Mason (1996) contends that several research papers have documented the value of counselling as an integral part of care for people living with HIV/AIDS, not only in developed countries but also as part of a model of care and support for people living with HIV/AIDS in resource deprived communities. He reports that a study from India documents the valuable role of supportive psychotherapy in helping couples to deal with accepting the reality of infections, issues of guilt and blame, anxiety and depression. A



meta-analytic study found that interventions using techniques like relaxation, cognitive restructuring and inner communication are more successful in reducing anxiety and depression than other techniques (Mason, 1996). Peer support groups also received favourable review. Mason (1996) found that in Uganda peer support plays an important role in helping people live positively. Peers can act as role models, as well as, providing support for one another. Mason also suggests the importance of client-centred counselling in working more effectively with clients to assess needs, risks and contextual issues and to design a realistic behaviour change intervention that can be implemented over time.

## **2.6 Summary: Workplace Implications**

The strategies for coping with the stress of living with HIV/AIDS have implications for the management of HIV/AIDS in the workplace. The introduction of protease inhibitors and other pharmacological treatments for people living with HIV/AIDS has improved health and increased life expectancies for many persons (Bing, Kilbourne, Brooks, Lazarus & Senak, 1999). However, many people spend a large proportion of their lives at work and therefore the psychological aspects of HIV/AIDS and the workplace is important.

Many people living with HIV/AIDS find it challenging to attend to daily tasks of living, participate in moderate to vigorous physical activities, and to have sufficient vitality to engage in an active social and work life while managing HIV/AIDS. Fatigue or low energy has been associated with both physical and psychological morbidity and quality of life (Zinkernagel, Ledergerber, Battegay, Cone, Vernazza, Hirschel & Opravil, 1999). In addition, fatigue and a CD4 T cell count of less than 500 are associated with physical limitations and disabilities. The manager must therefore be aware of the disease progression in individual employees so as to ascertain the impact on their work performance. By implication, fatigue can reduce the overall work functioning of the individual and thereby impact on the overall productivity of the organisation. Thus, among HIV positive patients, disease progression is related to decreasing energy and increasing difficulties with daily work activities (Sarna, Van Servellen, Padilla & Brecht 1999).

The psychological research presented thus far reflects that people living with HIV/AIDS make a conceptual shift towards perceiving HIV/AIDS as a chronic disease. According



to this perspective, the development and use of adaptive coping strategies to deal with the stress of a chronic life-threatening illness are necessary for improved health outcomes. The opposite holds true in that lack of adaptive coping strategies is associated with poorer outcomes. Schmitz and Crystal (2000) cite research done with a group of 212 people living with HIV/AIDS, where coping by disengagement or avoidance was associated with greater health related stress. In addition, poor social functioning may be associated with greater use of avoidance coping strategies, such as withdrawal from the group and social interactions characterised by conflict. Social isolation and social interactions characterised by conflict at work have been shown to interact to increase stress, resulting in poorer social functioning, thereby affecting work performance either on the individual and/or group level (Fleishman, Sherbourne, Crystal, Collins, Marshall, Bozzette, Shapiro & Hays, 2000). People living with HIV/AIDS who increase their use of avoidance coping strategies, such as behavioural disengagement and self extraction, as well as their use of alcohol and drugs may have poorer physical and social functioning, which may affect their functioning in various roles. The complex role-functioning, such as career, housework and educational pursuits, has been shown to be even more limited than physical functioning in people living with HIV/AIDS, thereby suggesting that coping by avoidance may directly reduce an individual's productivity (Moneyham, Hennessy, Sowel, Demi, Seals & Mizuno, 1998).

Vosvick, Koopman, Gore-Felton, Krumboltz and Spiegel (2003) found that participants' CD4 T cell counts were significantly related to social and role functioning, which suggests that sicker patients are less able to actively engage in social activities, such as visiting friends and close relatives, and makes them less able to perform work-related tasks in their job, home and educational settings. Managers should be aware that conditions that limit the ability of persons with HIV/AIDS to actively engage in interaction with friends, close relatives or work colleagues may significantly decrease the stress buffering effects of social support. Mason (1996) further suggests a positive impact on immune functioning related to interventions aimed at improving psychological coping. However, a summary of the psychological issues and challenges of living with HIV infection, common psychiatric conditions and ways in which these issues can be addressed, considerations involving specialists and other support services is warranted.

### ▪ **Testing HIV Positive**

Managers should be aware of the role of helping patients adjust to the news of a positive test result. The employee needs to integrate this new information into their existing identity. This involves questioning assumptions about many aspects of their life, rethinking priorities and goals, and acquiring new skills that may be necessary to accomplish reformulated goals. An added challenge for many people who have become recently infected is the experience of guilt that they “should have known better”. The manager is required to ensure that a supportive and non-judgemental approach is fostered.

Managers should be able to anticipate and expect an employee to respond to the diagnosis of HIV infection with a wide variety of feelings ranging from shock, disbelief, panic, fear, guilt, anger and despair. Pre-test counselling is useful in that the employee may then anticipate experiencing these feelings. However, management should be aware that empathy is important, and refer the employee to mental health professionals, a support group, a local community based organisation and online resources.

### ▪ **Disclosure of HIV Status**

The psychological research has shown that most people infected with HIV struggle with issues of disclosure to others, particularly when first diagnosed. Health care providers should encourage openness between patients and their sexual partners and discuss issues of safer behaviours in a non-punitive manner, while acknowledging the difficulty in both initiating and maintaining certain behaviours. Organisations should encourage disclosure on the individual level, which would assist in the risk assessment of HIV/AIDS in the workplace. Managers should help employees resist the desire to either withdraw or isolate themselves, refusing to tell anyone, or the opposite tendency to “tell the world”. It can therefore be argued that neither extreme response is adaptive. Employees must be made to realise either individually or during group interventions that there is time for disclosure to take place. The potential for gaining support and for negative consequences needs to be considered.



### ▪ **Making Treatment Decisions**

Employees who take a strong interest in their medical care and participate actively in treatment decisions are more likely to adhere to their treatment plan and medication schedules. Organisations should encourage employees to educate themselves about appropriate treatment options. A particularly useful intervention could be facilitating employees to express their opinions, concerns, disagreements, or doubts about ongoing or proposed treatments to help clear up misconceptions. The active participation of employees should be encouraged.

### ▪ **Maintaining a Healthy Lifestyle**

Important areas within a patient's control may influence the course of HIV disease and influence the quality of life and psychological well-being. These behaviours include good nutrition, exercise, control of recreational substance use, and alterations in sexual risk behaviour. When employees are allowed to make improvements in these areas, employees could experience a sense of well-being and mastery of their lives. Managers and supervisors should encourage employees to maintain a healthy lifestyle by abstaining from substance use as this may interfere with medication and medical care in general. However, when managers judge the substance use to be maladaptive or problematic within the workplace, counselling and referral for treatment of substance use may be entertained.

### ▪ **Assessing Psychiatric Status**

During specific times in the course of the HIV disease, patients are particularly vulnerable to acute distress, such as when first notified of a positive HIV status, the initial onset of physical symptoms, a sudden decline in the number of CD4 cells, the first opportunistic infection or first hospitalisation. Managers must be aware that continuing to maintain hope in the context of the illness progression is a great psychological challenge for patients and care providers. Normal levels of distress in the context of stressful events need to be distinguished from psychiatric conditions deserving special attention (Remien & Rabkin, 2001).

Furthermore, depression is the most common psychiatric disorder observed among HIV positive employees. Whereas early reports based on clinical observations or medical record reviews indicated high rates of distress and depressive symptoms among those infected with HIV or who had AIDS, later studies that used structured psychiatric evaluations and community samples with HIV negative comparison groups showed rates of psychiatric disorder to be largely equivalent between HIV positive and negative people (Remien & Rabkin, 2001). Employers should therefore be aware that psychiatric distress is common among HIV positive employees. Psychiatric illness in the context of HIV infection can contribute to diminished health outcomes in the workplace, increased substance use, poor treatment adherence, increased risky behaviours, or any other maladaptive behaviour. Managers should therefore encourage screening for the presence of depression and substance use and to refer these employees to specialists when problems are suspected and using the services of a consulting psychologist is therefore recommended (Nel, 2003).

Remien and Rabkin, (2001) contend that depression, substance use disorders, and cognitive impairment are the most commonly neuropsychiatric disorders in employees infected with HIV, although any psychiatric disorder may be encountered. Employers must be aware that employees with serious and persistent psychiatric disorders require specialist evaluation and treatment. It is therefore important that organisations and especially SMEs conduct a behavioural risk management intervention to understand the impact of HIV/AIDS in the workplace.

#### ▪ **Behavioural Risk Management**

Employee health related problems do have a negative impact on organisations, including SMEs. Lloyd and Veneziano (2002) contend that the main impact to organisations is related to absenteeism and productivity. Nel (2003) states that it is clear that organisations want to reduce health related costs, improve productivity and adapt to the changing external environment. Bennet, Cook and Pelletier (2003) suggest that in order to manage HIV/AIDS in the workplace, it is important to conduct a behavioural risk analysis. The aims, therefore, of the behavioural risk management (BRM) are to manage and prevent risky behaviours that are associated with the spread of HIV, through organisation-wide health promotion and prevention. This could take the form of an



educational and awareness campaign on HIV/AIDS. However, Bennet et al. (2003) stipulate five steps that need to be followed in achieving the aims of BRM. These are:

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

#### *Individual and Organisational Behavioural Risk Assessment*

According to Nel, (2003) both individual and organisational resources and risks should be identified during a behavioural risk assessment. The individual living with HIV/AIDS has to develop the following resources to effectively deal with the illness:

- vitality and energy.
- personality
- knowledge and expertise and
- coping skills (Heany, 2003).

Nel (2003) also lists the risk factors associated with poor health, which are:

- negative emotional states.
- inadequate motivation to change behaviour.
- lack of coping skills and
- the side effects of treatments.

Finally, the psychological research thus far validates the contention that social support and opportunities to influence decision-making are resources that need to be developed on the organisational level (Heany, 2003). Following the risk assessment, interventions can then be targeted at the individual, group and organisational level and should be multidimensional in approach, which should ideally be part of the HIV/AIDS policy and programme (Lowmann, 2002; Heany, 2003).

## **CHAPTER 3**

### **3. METHODOLOGY**

The chapter focuses on the substantive research hypothesis, research design, statistical hypothesis, sampling design, measures and operationalisation, procedure, statistical analysis and statistical package used.

#### **3.1 Research Objectives**

The main research objective is to:

- To explain behavioural intention of SMEs in implementing an HIV/AIDS policy and programme in the workplace.

The secondary objective is to:

- To assess the constructs of self-efficacy and perceived behavioural control.

#### **3.2 Research Problems and Substantive Research Hypothesis**

##### **▪ Research Problem**

Is SMEs behavioural intention to implement an HIV/AIDS policy and programme in the workplace [ $\eta_2$ ] linearly dependent on their attitude towards the action [ $\xi_1$ ], the subjective/social norm towards the action [ $\xi_2$ ] and perceived behavioural control towards the action [ $\xi_3$ ] (Ajzen, 1985; 1988; 1991)?

##### **▪ Substantive Research Hypothesis**

SMEs behavioural intention to implement an HIV/AIDS policy and programme in the workplace [ $\eta_2$ ] is linearly dependent on their attitude towards the action [ $\xi_1$ ] and the social norm towards the action [ $\xi_2$ ] and the perceived behavioural control towards the action [ $\xi_3$ ].



### 3.3 Research Methodology

The research methodology followed was as follows:

#### 3.3.1. Research Design

The explanatory nature of the research and the importance of the utility of the model of the Theory of Planned Behaviour, using variables of attitude, social norm and perceived behavioural control in explaining behavioural intention to implement an HIV/AIDS policy and programme, justifies an ex post factor correlational design (Kerlinger & Lee, 2000). Furthermore, the authors show that there is systematic variance in the dependent variable measures due to the correlation between the sets of scores on attitude, subjective norm and perceived behavioural intention related to the intention to implement a HIV/AIDS policy and programme.

$Y_1$	$X_{11}$	$X_{12}$
$Y_2$	$X_{21}$	$X_{22}$
....	....	....
$Y_p$	$Y_{1p}$	$Y_{2p}$

#### 3.3.2 Statistical hypothesis

A statistical hypothesis is a conjectural statement of statistical relations deduced from the relations of the substantive hypothesis. A statistical hypothesis expresses an aspect of the original substantive hypothesis in quantitative and statistical terms as contained below (Kerlinger & Lee, 2000).

##### ▪ Hypothesis 1

**Attitude has a positive relationship with intention**

$$H_{o1}: \rho[X1,Y2]=0$$

$$H_{a2}: \rho[X1,Y2]>0$$

- **Hypothesis 2**

Subjective norm has as a positive relationship with intention

$$H_{02}: \rho[X_2, Y_2] = 0$$

$$H_{a2}: \rho[X_2, Y_2] > 0$$

- **Hypothesis 3**

Perceived behavioural control has a positive relationship with intention

$$H_{03}: \rho[X_3, Y_2] = 0$$

$$H_{a3}: \rho[X_3, Y_2] > 0$$

- **Hypothesis 4**

Perceived behavioural control has a positive relationship with behaviour

$$H_{04}: \rho[X_3, Y_1] = 0$$

$$H_{a4}: \rho[X_3, Y_1] > 0$$

The following Null Hypothesis for a model containing three predictors will be tested

- **Hypothesis 5**

$$H_{05}: \beta[X_1] = 0 \mid \beta[X_2] \neq 0, \beta[X_3] \neq 0$$

- **Hypothesis 6**

$$H_{06}: \beta[X_2] = 0 \mid \beta[X_1] \neq 0, \beta[X_3] \neq 0$$

- **Hypothesis 7**

$$H_{07}: \beta[X_3] = 0 \mid \beta[X_1] \neq 0, \beta[X_2] \neq 0$$

**Multiple Regression Equation**

$$E[Y_2/X] = \alpha + \beta[X_1] + \beta[X_2] + \beta[X_3]$$



### **3.3.3. Sampling design**

In the present study, attempts were made to obtain a sampling frame from a SETA. After initially promising to provide the sampling frame, the SETA finally decided that they could not release company information as it was deemed to be confidential. A sampling frame is an actual list of sampling units from which a sample is selected (Babbie, 1998). A cross-sectional non-probability survey design was used. Cross sectional designs are appropriate where groups of subjects at various stages of development are studied simultaneously, whereas the survey technique of data collection gathers information from the target population by means of questionnaires (Burns & Grove, 1993). Thus a cross sectional survey design was used, whereby a sample is drawn from the population at one time (Shaughnessy & Zechmeister, 1997). This design can also be used to evaluate interrelationships among variables within the population. According to Shaughnessy and Zechmeister, (1997), this design is also ideal for describing functions associated with correlative research.

#### **▪ Sample**

A random sampling procedure for selection proved impossible, as the population is so large and trying to obtain a sampling frame from various SETAs proved difficult. A non-probability sample was therefore selected on the basis of availability. Thus, the unit of analysis includes SMEs i.e. owner-managers ( $N = 43$ ) in the Boland area of the Western Cape. A total of 60,5% of the participants in the sample were males and 39,5 % females, with a mean age of 33,97. The mean age of the companies was 8,67 years. The mean number of employees was 11,39 with a range of 38. The race of the participants was not asked for.

### **3.3.4 Measures/Operationalisation**

The development of the materials and subsequent analysis closely followed the methodology set out by Ajzen and Fishbein (1980). A questionnaire was developed, which contained four parts. The first part explained the purpose of the study, while the second part consisted of instructions on how to complete the questionnaire. Assurances of anonymity and confidentiality were also included in the second part of the questionnaire. The third part assessed the various constructs contained in the Theory of

Planned Behaviour, namely, the intention to implement an HIV/AIDS policy and programme, attitudes towards the behaviour, subjective norms, and perceived behavioural control.

The construct of self-efficacy was also assessed. Finally the fourth part solicited demographic information. The variables are therefore contained below.

$$\eta^2 = f[\xi_1, \xi_2, \xi_3]$$

$$Y = f[X_1, X_2, X_3]$$

Y represents the response of SMEs to implement an HIV/AIDS policy and programme in the workplace.

X<sub>1</sub> represents attitude as the multiplicative combination of X<sub>11</sub> and X<sub>12</sub> over outcomes, generated by using individual elicitation semi-structured interview techniques, where X<sub>11</sub> measures beliefs and X<sub>12</sub> measures evaluation.

X<sub>2</sub> represents social norm as the multiplicative combination of X<sub>21</sub> and X<sub>22</sub> over items that can be generated through individual elicitation techniques, through semi-structured questioning, where X<sub>21</sub> measures normative beliefs and X<sub>22</sub> measures motivation to comply. However, the research focused on a using a global measure of social norms/subjective norms, represented by X<sub>2</sub>.

X<sub>3</sub> – control beliefs represents perceived behavioural control (multiplicative combination of frequency and power of control beliefs, generated through individual elicitation semi structured interview techniques). Only these PBC measures were included in the analysis.

X<sub>31</sub> represents measurement of frequency of control beliefs.

X<sub>32</sub> represents power of control beliefs.

*X<sub>4</sub> represents self-efficacy/PCB – These constructs were excluded from the regression model analysis.*



### 3.3.5 Variables/Instruments

**Intention.** Participants' intention to implement an HIV/AIDS policy/programme was assessed using three items, each on a 7-point bipolar scale (-3 to + 3), as suggested by Ajzen and Fishbein (1980); Ajzen (1991) and Armitage and Conner (1999). The items were:

- (i) "I intend to implement a HIV/AIDS policy/programme in the future."
- (ii) "I plan to implement a HIV/AIDS policy/programme in the workplace."
- (iii) "I want to implement a HIV/AIDS policy/programme in the workplace."

All items were assessed using "extremely unlikely-extremely likely" as opposite scale points. The mean of these items produced a composite scale.

**Attitude.** Indirect measure of attitude was assessed and derived from the multiplicative combination of the perceived likelihood of salient outcomes, and the evaluation of those outcomes. The five outcome beliefs were:

- (i) "Implementing a HIV/AIDS policy/programme helps me to eliminate discrimination in the workplace."
- (ii) "By implementing a HIV/AIDS policy and programme, I can create a non-discriminatory workplace."
- (iii) "In implementing a HIV/AIDS policy/programme, I can promote openness/disclosure about HIV status".
- (iv) "By implementing HIV/AIDS policy/programme, helps me to breakdown fear of stigma and rejection".
- (v) "By implementing HIV/AIDS policy/programme will help me assess and reduce impact of HIV/AIDS in the workplace".

Likelihood was measured on a 7-point unipolar scale (+1 to +7) and evaluation was measured on a 7-point bipolar scale (-3 to +3) Ajzen and Fishbein (1980) and Ajzen (1991). Cronbach's  $\alpha$  were 0.8425 ( $p < 0.05$ ) as shown in Table 11.

**Subjective Norm.** A global measure of subjective norm was measured with a composite score, derived from four items. These items were:

- (i) “People who are important to me think (I should implement/should not implement) a HIV/AIDS policy/programme”.
- (ii) “People who are important to me would (approve/disapprove of me implementing a HIV/AIDS policy/programme)”.
- (iii) “People who are important to want me to implement a HIV/AIDS policy/programme (strongly agree/strongly disagree)”
- (iv) “I feel under social pressure to implement HIV/AIDS policy/programme (strongly agree/strongly disagree)” (Ajzen and Fishbein, 1980; Ajzen, 1991). Cronbach’s  $\alpha$  were 0.6151 ( $p < 0.05$ ) as shown in Table 12.

**Control beliefs (PBC).** Indirect measures of six control beliefs were measured on a 7-point Likert scale by assessing respondents’ perception of the frequency of occurrence of factors, which would facilitate or inhibit the implementation of an HIV/AIDS policy/programme in the workplace. Items were anchored by “never/frequently”. The items were multiplied by the perceived power of the factors to facilitate or inhibit the behaviour (anchored by “less likely/most likely”). These beliefs reflected both internal and external factors. The measures of the following items were included in the model analysis:

- (i) “I do not have time to implement HIV/AIDS policy/programme”.
- (ii) “Implementing HIV/AIDS policy/programme costs too much money”.
- (iii) “I do think about implementing a HIV/AIDS policy/programme”.
- (iv) “To implement HIV/AIDS policy/programme is inconvenient”.
- (v) “I do not know where to get help to implement HIV/AIDS policy/programme”.
- (vi) “I lack the ability to implement HIV/AIDS policy/programme” (Ajzen & Fishbein, 1980; Ajzen, 1991). Cronbach’s  $\alpha$  were 0.7296 ( $p < 0.05$ ) as shown in Table 13.

**Perceived behavioural control.** Three items (Ajzen and Madden, 1986) were used. Items were assessed using a 7-point unipolar scale (+1 to +7) and were:

- (i) “Even if I wanted to, I might not be able to implement HIV/AIDS policy/programme in the workplace”.



- (ii) Two semantic differential scales were included using the stem: “For me to implement a HIV/AIDS policy/programme would be: (difficult/easy) and (outside my control/within my control). Both were anchored by (-3 to +3) (Ajzen and Fishbein, 1980; Ajzen, 1991).

**Self-efficacy and PCB.** Both self-efficacy and PCB were assessed using four 7-point unipolar items each (Armitage and Conner, 1999). The mean of the items produced a composite score and the Cronbach’s  $\alpha$  were 0,7482 (Table 15). These items are:

- (i) “I believe I have the ability to implement a HIV/AIDS policy/programme”.
- (ii) “To what extent do you see yourself as capable of implementing a HIV/AIDS policy/programme”.
- (iii) “How confident are you that you will be able to implement a HIV/AIDS policy/programme”.
- (iv) “If it were entirely up to me, I am confident that I would implement a HIV/AIDS policy/programme” and the Cronbach  $\alpha$  for the above four items (self-efficacy) were 0,7433 (Table 14). The remaining four items measured (PBC, which was excluded from the model analysis).
- (v) “Whether or not I implement a HIV/AIDS policy/programme, is entirely up to me”.
- (vi) “How much personal control do you feel you have over implementing a HIV/AIDS policy/programme”.
- (vii) “There are plenty of opportunities for me to implement a HIV/AIDS policy/programme”.
- (viii) How much do you feel that implementing a HIV/AIDS policy/programme is beyond your control” and the mean of the eight items produced a composite score and the Cronbach’s  $\alpha$  were 0,7482 (Table 15).

**Behaviour.** Three behaviour measures were included in order to assess the extent to which implementing an HIV/AIDS policy/programme may be prone to reporting biases. The first was a 2-item self-perception behaviour measure: “I implemented a HIV/AIDS policy/programme in the last six months” and “ How often did you implement a HIV/AIDS policy/programme in the last six months”. Items were measures on a 7-point scale (anchored by “strongly disagree/strongly agree”). The second item was a question “I am currently implementing a HIV/AIDS policy/programme, (Yes/No)”.



### **3.3.6 Procedure**

Small and medium enterprises were selected within the Boland business district. This was done after difficulty was experienced in obtaining a sampling frame from a SETA. The only criterion for inclusion in the study was that participants were either owners or managers of SMEs. The sample is, however, not totally representative of the all SMEs, given the large number and diverse sectors of SMEs. The sample was however drawn from the Boland area due to availability (Kerlinger & Lee, 2000).

After the literature review, free response, semi-structured interviews among 12 business owner-managers in the Boland area, as proposed by Ajzen and Fishbein (1980), were conducted to elicit salient outcome beliefs and facilitating or inhibiting factors that were associated with implementing an HIV/AIDS policy and programme. Individuals were asked for their perceptions of the likelihood of the existence of resources or barriers that may help or hinder the performance of implementing an HIV/AIDS policy and programme (Ajzen, 1991). Content analysis was performed and the items were then included in the questionnaire. The purpose of the questionnaire was to establish the beliefs and attitudes towards implementing an HIV/AIDS policy and programme. The questionnaires (see Appendix A) were individually administered (by the researcher) to the owner-managers of the respective SMEs. Respondents were given the choice of participation in the study. It was explained that the research was voluntary and that responses were anonymous and confidential. To further ensure anonymity, names of participants and company names were not included in the questionnaires. The purpose and instructions were included in the questionnaire. The questionnaires were administered to owner-managers of randomly selected SMEs in the Boland business district by the researcher during July and August 2003.

### **3.3.7 Statistical analyses and statistical packages**

Statistical Package for the Social Sciences (SPSS) was used to perform bivariate and regression analyses (Kinnear & Gray, 2000). Correlation analyses were performed to determine linear relationships between attitude and behavioural intention; subjective norm and behavioural intention and perceived behaviour control, and behavioural intention and behaviour in implementation of an HIV/AIDS policy and programme. A standard simultaneous multiple regression analysis was performed to test the significance



of the model containing the three predictors of attitude, subjective norm, and perceived behavioural control (multiplicative combination of frequency and power of control beliefs) which yielded an equation that could be used to predict behaviour intention in implementing an HIV/AIDS policy and programme in the SME workplace. Although direct measures were obtained for PBC, only control beliefs (indirect measures of PBC) were used in the model analysis. This was done in order to maintain the scope of research. The above-mentioned analyses were based on the application of the Theory of Planned Behaviour (Ajzen & Fishbein, 1980; Ajzen, 1991).

The Theory of Planned Behaviour is an extension of the TRA, and was created to provide an adequate model to explain how behaviours are produced. The TPB proposes that behaviour is not determined solely by intentions, but also by an individual's actual degree of control over the behaviour, such as perceived behavioural control. The constructs of TPB, such as attitude, subjective norm and perceived behavioural control, were assessed using the standard regression analysis. The data analysis was carried out with the help of the SPSS-program. Cronbach-alpha coefficients were used to assess the internal consistency of the measuring instruments (Clark & Watson, 1995).

## **CHAPTER 4**

### **4. RESULTS**

A total of 43 completed questionnaires were received back at the time of the analysis. A great deal of personal time and resources were used to administer the questionnaire. The researcher also experienced difficulties in trying to get owner-managers to complete the questionnaires whilst running their businesses. Finally, however, 43 owner-managers of SMEs completed the questionnaire.

#### **4.1 Descriptive Information**

A final sample of  $N = 43$  was used for the analyses. The mean age of owner-managers who participated in the study was 33,97 ( $SD=9.99$  years) as reflected in Table 5. Of the respondents, 60,5% were male, and 39,5% were female, as shown in Table 7.

**Table 5: Descriptive Information ( $N = 43$ )**

<b>Descriptive Statistics</b>						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
number of employee	43	38.00	2.00	40.00	11.3953	10.11397
company age	43	35.50	.50	36.00	8.6744	9.59469
owner-manager age	43	39.00	21.00	60.00	33.9767	9.99878
Valid N (listwise)	43					

Table 5 shows that the number of employees in the various SMEs ranged from 2 to 40, with a mean of 11,3 ( $SD=10.1$ ). The mean age of the companies was 8,67 ( $M=8.67$ ) years and ranged from 0,5 to 36 years ( $SD=9.59$ ).

**Table 6: Means**

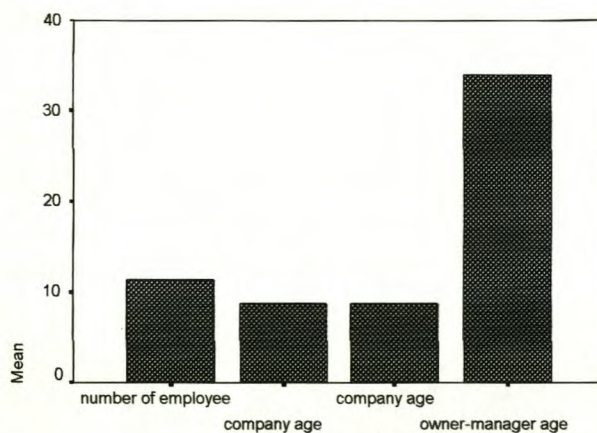




Table 6 show the means for the number of employees ( $M=11.39$ ); company age ( $M=8.67$ ) and owner-manager ( $M=33.97$ ).

**Table 7: Gender**

		gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	26	60.5	60.5	60.5
	female	17	39.5	39.5	100.0
	Total	43	100.0	100.0	

Of the respondents, 60.5% were male, and 39.5% were female as shown in Table 7.

#### 4.2 Implementation of an HIV/AIDS policy and programme

The implementation of an HIV/AIDS policy and programme were compared with gender and the company size (number of employees). The results are shown in Table 8.

**Table 8: Implementation of an HIV/AIDS policy and programme in the last six months by gender**

implementedlastsixmnts \* gender Crosstabulation

Count		gender		Total
		male	female	
implementedlastsixmnts	1.00	21	14	35
	2.00	1	2	3
	3.00	1		1
	5.00	1	1	2
	6.00	1		1
	7.00	1		1
Total		26	17	43

The comparison between implementation in the last six months and gender, indicate that 21 males and 14 females strongly disagreed with the item "I implemented a HIV/AIDS policy and programme in the last six months" anchored with a scale "Strongly Disagree (1)/ Strongly Agree (7). Overall, 49% of males indicated that they strongly disagreed with implementing an HIV/AIDS policy/programme in the last six months, whereas 33% of females indicated that they strongly disagreed with implementing a policy/programme in the last six months (Table 8).

**Table 9: Implementation of HIV/AIDS and number of employees**

**implementedlastsixmnts \* number of employee Crosstabulation**

Count		number of employee																			Total
		2.00	3.00	4.00	5.00	6.00	7.00	8.00	10.00	11.00	12.00	13.00	15.00	16.00	20.00	22.00	25.00	26.00	30.00	40.00	
implemente	1.0	7	1	3	3	2	4		2	1	2	1	3		2	1		1		2	35
	2.0					1	1												1		3
	3.0																		1		1
	5.0		1					1													2
	6.0																1				1
	7.0													1							1
Total		7	2	3	3	3	5	1	2	1	2	1	3	1	2	1	1	1	2	2	43

The comparison between implementation of an HIV/AIDS policy and programme in the last six months and the number of employees show that the company size of three and eight employees rated 5 on a 7-point scale (strongly disagree/strongly agree), whereas company size, with 25 employees rated 6. Only one company with certainty rated 7 i.e. strongly agreed (i.e. they had implemented a policy and programme) with implementing a HIV/AIDS policy and programme in the last six months. Overall 35 companies (81%) rated “strongly disagree” to implementing an HIV/AIDS policy and programme (Table 9).

**Table 10: Currently implementing HIV/AIDS and gender**

**currentlyimplement \* gender Crosstabulation**

Count		gender		Total
		male	female	
currentlyimplement	yes	2	1	3
	no	24	16	40
Total		26	17	43

On a categorical scale Yes/No “I am currently implementing a HIV/AIDS policy/programme”, 93.2% of males and 94.1 % females responded “No”. Overall, 93% of the respondents (owner-managers) of SMEs indicated that they were not currently implementing an HIV/AIDS policy/programme, whilst only 7% of the owner-managers were currently implementing an HIV/AIDS policy and programme (Table 10).



### 4.3 Reliability Analyses

The reliability of the items was analysed. Cronbach-alpha coefficient and inter-item correlation coefficients were used to assess the internal consistency of the measuring instruments (Clark & Watson, 1995).

**Table 11: Reliability Attitude beliefs**

Item	Mean	Std Dev	Cases			
B1	4.6512	1.8501	43			
B2	4.7907	1.9464	43			
B3	5.3953	1.5757	43			
B4	5.3256	1.4916	43			
B5	5.4186	1.3668	43			
<b>Covariance Matrix</b>						
	B1	B2	B3	B4	B5	
B1	3.4230					
B2	2.9967	3.7885				
B3	1.6412	1.8704	2.4828			
B4	1.2353	1.4983	1.5111	2.2248		
B5	0.9590	1.0183	0.7829	0.7414	1.8682	
<b>Correlation Matrix</b>						
	B1	B2	B3	B4	B5	
B1	1.0000					
B2	0.8322	1.0000				
B3	0.5630	0.6099	1.0000			
B4	0.4476	0.5161	0.6429	1.0000		
B5	0.3792	0.3828	0.3635	0.3637	1.0000	
<b>Scale Alpha (N=43)</b>						
		Mean	Variance	Std Dev	N of variables	
Scale		25.5814	42.2968	6.5036	5	
Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	5.1163	4.6512	5.4186	0.7674	1.1650	0.1339
Item Variances	2.7575	1.8682	3.7885	1.9203	2.0279	0.6640
Inter-item Covariances	1.4255	0.7414	2.9967	2.2553	4.0418	0.4238
Inter-item Correlations	0.5101	0.3635	0.8322	0.4686	2.2891	0.0226
<b>Item-total Statistics</b>		Scale Mean if Item Deleted	Scale Variance if Item	Corrected Item-total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
B1		20.9302	25.2093	0.7355	0.7008	0.7852
B2		20.7907	23.7409	0.7786	0.7293	0.7718
B3		20.1860	28.2027	0.6938	0.5288	0.7989
B4		20.2558	30.0997	0.6093	0.4504	0.8211
B5		20.1628	33.4252	0.4431	0.1992	0.8579
Reliability Coefficients 5 items						
<b>Alpha = 0.8425</b>			<b>Standardized item alpha = 0.8389</b>			

Thus, the Cronbach's alpha for attitude is 0,8425.

**Table 12: Reliability Subjective Norm**

Item	Mean	Std Dev	Cases			
SN1	5.3488	1.3253	43			
SN2	5.4186	1.3493	43			
SN3	5.0233	1.5195	43			
SN4	3.4186	1.9424	43			
<b>Covariance Matrix</b>						
	SN1	SN2	SN3	SN4		
SN1	1.7564					
SN2	1.3743	1.8206				
SN3	1.4679	1.4900	2.3090			
SN4	-0.1257	-0.1080	0.0377	3.7730		
<b>Correlation Matrix</b>						
	SN1	SN2	SN3	SN4		
SN1	1.0000					
SN2	0.7685	1.0000				
SN3	0.7289	0.7267	1.0000			
SN4	-0.0488	-0.0412	0.0128	1.0000		
<b>Scale Alpha (N=43)</b>						
		Mean	Variance	Std Dev	N of variables	
Scale		19.2093	17.9313	4.2345	4	
Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	4.8023	3.4186	5.4186	2.0000	1.5850	0.8807
Item Variances	2.4147	1.7564	3.7730	2.0166	2.1482	0.8808
Inter-item Covariances	0.6894	-0.1257	1.4900	1.6157	-11.8546	0.6257
Inter-item Correlations	0.3578	-0.0488	0.7685	0.8174	-15.7402	0.1611
<b>Item-total Statistics</b>		Scale Mean if Item Deleted	Scale Variance if Item	Corrected Item-total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
SN1		13.8605	10.7420	0.6254	0.6533	0.3965
SN2		13.7907	10.5980	0.6275	0.6503	0.3906
SN3		14.1860	9.6312	0.6352	0.6016	0.3553
SN4		15.7907	14.5504	-0.0265	0.0086	0.8932
Reliability Coefficients 4 items						
<b>Alpha = 0.6151</b>			<b>Standardized item alpha = 0.6903</b>			

Thus, the Cronbach's alpha for subjective norm is 0,6151.



**Table 13: Reliability Control Beliefs (measure of PBC)**

Item	Mean	Std Dev	Cases			
CBFREQ1	3.6977	1.7666	43			
CBFREQ2	3.9767	1.6831	43			
CBFREQ3	3.5814	1.9546	43			
CBFREQ4	2.7907	1.5820	43			
CBFREQ5	3.6977	2.0991	43			
CBFREQ6	3.3953	2.0718	43			
<b>Covariance Matrix</b>						
	CBFREQ1	CBFREQ2	CBFREQ3	CBFREQ4	CBFREQ5	CBFREQ6
CBFREQ1	3.1207					
CBFREQ2	1.7071	2.8328				
CBFREQ3	0.3942	-0.1290	3.8206			
CBFREQ4	0.6971	1.0903	0.3627	2.5028		
CBFREQ5	1.4064	1.2785	0.3466	1.4590	4.4064	
CBFREQ6	1.5748	1.3189	0.5742	1.2276	2.9557	4.2924
<b>Correlation Matrix</b>						
	CBFREQ1	CBFREQ2	CBFREQ3	CBFREQ4	CBFREQ5	CBFREQ6
CBFREQ1	1.0000					
CBFREQ2	0.5741	1.0000				
CBFREQ3	0.1142	-0.0392	1.0000			
CBFREQ4	0.2494	0.4095	0.1173	1.0000		
CBFREQ5	0.3793	0.3619	0.0845	0.4393	1.0000	
CBFREQ6	0.4303	0.3782	0.1418	0.3745	0.6796	1.0000
<b>Scale Alpha</b>						
		Mean	Variance	Std Dev	N of variables	
Scale		21.1395	53.5039	7.3146	6	
Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	3.5233	2.7907	3.9767	1.1860	1.4250	0.1646
Item Variances	3.4959	2.5028	4.4064	1.9037	1.7606	0.6271
Inter-item Covariances	1.0843	-0.1290	2.9557	3.0847	-22.9099	0.5456
Inter-item Correlations	0.3130	-.0392	0.6796	0.7188	-17.3302	0.0375
<b>Item-total Statistics</b>		Scale Mean if Item Deleted	Scale Variance if Item	Corrected Item-total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
CBFREQ1		17.4419	38.8239	0.5251	0.4001	0.6751
CBFREQ2		17.1628	40.1395	0.4938	0.4284	0.6850
CBFREQ3		17.5581	46.5858	0.1161	0.0599	0.7897
CBFREQ4		18.3488	41.3278	0.4756	0.2830	0.6913
CBFREQ5		17.4419	34.2049	0.6065	0.5084	0.6445
CBFREQ6		17.7442	33.9092	0.6342	0.5074	0.6350
Reliability Coefficients 6 items						
<b>Alpha = 0.7296</b>			<b>Standardized item alpha = 0.7321</b>			

Thus, the Cronbach's alpha for control beliefs is 0,7296.

**Table 14: Reliability Self Efficacy**

Item	Mean	Std Dev	Cases			
SELFEEF1	4.6279	1.7324	43			
SELFEEF2	4.4186	1.7893	43			
SELFEEF3	4.5116	1.6672	43			
SELFEEF4	4.9767	1.4879	43			
Scale Alpha (N=43)						
Mean		Variance	Std Dev	N of variables		
Scale		18.5349	25.3023	5.0301	4	
Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	4.6337	4.4186	4.9767	0.5581	1.1263	0.0596
Item Variances	2.7990	2.2137	3.2016	0.9878	1.4462	0.1819
Inter-item Covariances	1.1755	0.2004	2.1379	1.9374	10.6657	0.7250
Inter-item Correlations	0.4034	0.0753	0.7167	0.6414	9.5183	0.0743
Item-total Statistics		Scale Mean if Item Deleted	Scale Variance if Item	Corrected Item-total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
SELFEEF1		13.9070	13.7530	0.6653	0.4894	0.6062
SELFEEF2		14.1163	13.2481	0.6797	0.6189	0.5948
SELFEEF3		14.0233	13.9756	0.6857	0.5433	0.5967
SELFEEF4		13.5581	20.8239	0.1668	0.0617	0.8530
Reliability Coefficients 4 items						
Alpha = 0.7433			Standardized item alpha = 0.7301			

Thus, the Cronbach's alpha for self-efficacy is 0,7433. The same self-efficacy items were also included in Table 15.



**Table 15: Reliability Self Efficacy and Perceived Behavioural Control**

Item	Mean	Std Dev	Cases
SELFEEF1	4.6279	1.7324	43
SELFEEF2	4.4186	1.7893	43
SELFEEF3	4.5116	1.6672	43
SELFEEF4	4.9767	1.4879	43
PERBEHC1	4.1163	1.9421	43
PERBEHC2	3.8372	1.7719	43
PERBEHC3	4.1860	1.6221	43
PERBEHC4	3.5581	1.3680	43
Scale Alpha (N=43)			
	Mean	Variance	Std Dev
Scale	34.2326	65.4684	8.0913
Item Means	Mean	Minimum	Maximum
	4.2791	3.5581	4.9767
Item Variances	2.8263	1.8715	3.7719
Inter-item Covariances	0.7653	-0.1534	2.1379
Inter-item Correlations	0.2580	-0.0754	0.7167
Item-total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-total Correlation
SELFEEF1	29.6047	45.1971	0.7414
SELFEEF2	29.8140	47.8217	0.5837
SELFEEF3	29.7209	48.2536	0.6232
SELFEEF4	29.2558	59.4330	0.1666
PERBEHC1	30.1163	53.7719	0.2782
PERBEHC2	30.3953	46.6257	0.6490
PERBEHC3	30.0465	51.5216	0.4859
PERBEHC4	30.6744	62.7962	0.0369
Reliability Coefficients 8 items			
<b>Alpha = 0.7482</b>		<b>Standardized item alpha = 0.7356</b>	

Thus, the Cronbach's alpha for self-efficacy and PCB is 0,7482.

#### 4.4 Discriminant and Convergent Validity

Items designed to measure self-efficacy and PCB were subjected to a principal components analysis with varimax rotation, not only to establish the validity of the measures of self-efficacy and perceived behavioural control to determine whether the same constructs are tapped, but also to establish some form of standard operationalisation of the constructs of self-efficacy and PCB (Kinnear & Gray, 2000; Kerlinger and Lee, 2000; Armitage & Conner, 1999). The methodology and analysis appears below (Armitage and Conner, 1999).

**Table 16: Descriptive statistics****Descriptive Statistics**

	Mean	Std. Deviation	Analysis N
selfefficacy1	4.6279	1.73237	43
selfefficacy2	4.4186	1.78929	43
selfefficacy3	4.5116	1.66722	43
selfefficacy4	4.9767	1.48786	43
PBC1	4.1163	1.94213	43
PBC2	3.8372	1.77187	43
PBC3	4.1860	1.62211	43
PBC4	3.5581	1.36804	43

The items measuring self-efficacy as shown in Table 16 have means that range from 4,4186 to 4,9767, with the range of standard deviations from 1,48786 to 1,78929. The items measuring PCB, as shown in Table 16, have means that range from 3,5581 to 4,1163, with the range of standard deviations from 1,36804 to 1,94213.

**Table 17: Correlation matrix****Correlation Matrix**

	selfefficacy1	selfefficacy2	selfefficacy3	selfefficacy4	PBC1	PBC2	PBC3	PBC4
Correlation selfefficacy1	1.000	.674	.587	.191	.317	.631	.457	.029
selfefficacy2	.674	1.000	.717	.075	.260	.382	.145	.107
selfefficacy3	.587	.717	1.000	.178	.091	.504	.404	.028
selfefficacy4	.191	.075	.178	1.000	.034	.053	.288	-.075
PBC1	.317	.260	.091	.034	1.000	.338	.152	-.016
PBC2	.631	.382	.504	.053	.338	1.000	.591	.087
PBC3	.457	.145	.404	.288	.152	.591	1.000	-.005
PBC4	.029	.107	.028	-.075	-.016	.087	-.005	1.000

The correlation matrix in Table 17 above shows that selfefficacy1 correlates with selfefficacy2 (0,674), selfefficacy3 (0,587), PBC2 (0,631), PBC3 (0,457); selfefficacy2 correlates with selfefficacy3 (0,717); PCB2 correlates with selfefficacy1 (0,631), selfefficacy3 (0,504), PCB3 (0,591); PCB3 correlates with PBC2 (0,591). This pattern is what one would expect if the two items were measuring the same construct (Kinnear & Gray, 2000).



**Table 18: Communalities**

Communalities		
	Initial	Extraction
selfefficacy1	1.000	.759
selfefficacy2	1.000	.707
selfefficacy3	1.000	.647
selfefficacy4	1.000	.550
PBC1	1.000	.178
PBC2	1.000	.627
PBC3	1.000	.617
PBC4	1.000	.327

Extraction Method: Principal Component Analysis.

The communality of a variable is the squared multiple correlation ( $R^2$ ) between the variables and the factors emerging from the factor analysis. The communality is therefore the proportion of the variance of the test that is accounted for by the factors (see Table 18).

**Table 19: Total variance explained**

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.244	40.550	40.550	3.244	40.550	40.550	3.167	39.582	39.582
2	1.170	14.619	55.170	1.170	14.619	55.170	1.247	15.588	55.170
3	.998	12.477	67.646						
4	.957	11.963	79.609						
5	.810	10.123	89.732						
6	.369	4.617	94.349						
7	.297	3.710	98.059						
8	.155	1.941	100.000						

Extraction Method: Principal Component Analysis.

Table 19 displays information about the factors (components) that have been extracted. An eigenvalue is a measure of the total variance that is accounted for by a particular factor, the total variance for each test being unity. Therefore, following Kaiser's criterion, factors with an eigenvalue of less than 1 (i.e. factors 3 – 8) were excluded (Kinnear & Gray, 2000). Thus, the factors that meet Kaiser's criterion accounted for 55,170% of variance. Items designed to measure self-efficacy loaded on factor 1, accounting for 40,550% of the variance; while items measuring perceived behavioural control loaded on factor 2, account for 14,619% of the variance.

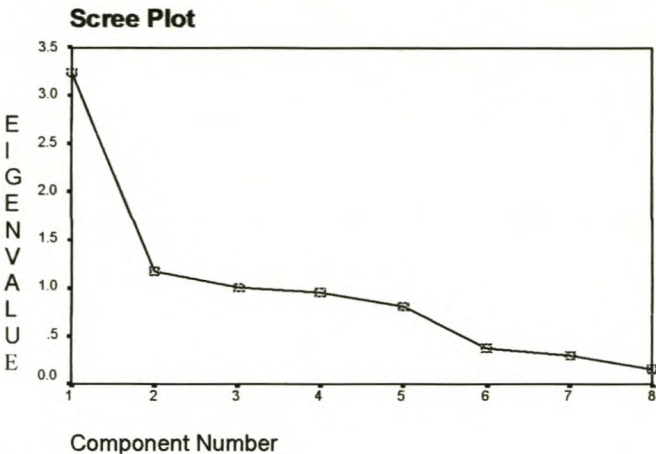


Figure 2. Scree Plot

Figure 2 shows the Scree Plot, which provides a graphic image of the eigenvalue for each component extracted. The amount of variance accounted for (the eigenvalue) by successive components plunges sharply as successive factors (components) are extracted. It is shown in Figure 2 that the “scree” begins to appear between the second and third factors. Thus only the first two factors are retained in the analysis and the rest of the factors with an eigenvalue value less than 1 are excluded (Kinnear & Gray, 2000).

Table 20: Component matrix

	Component	
	1	2
selfefficacy1	.870	5.178E-02
selfefficacy2	.753	.375
selfefficacy3	.800	8.575E-02
selfefficacy4	.267	-.692
PBC1	.409	.105
PBC2	.792	-6.35E-03
PBC3	.640	-.456
PBC4	7.484E-02	.567

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Table 20 shows the component (factor) matrix containing the loadings (partial correlations) of the eight items (self-efficacy and PBC) on the two factors extracted. When the factors are orthogonal (i.e. uncorrelated with each other), the factor loadings are the partial correlation coefficients between the variables and the factors.



Thus the higher the absolute value of the loading, which can never exceed a maximum of 1, the more the factor accounts for the total variance of scores on the variable concerned. These analyses could therefore provide some evidence for convergent and discriminant validity of items designed to measure self-efficacy and PCB.

This analysis is important in that it may offer a standard operationalisation of the construct of perceived behavioural control (Kerlinger & Lee, 2000, Armitage & Conner, 1999).

**Table 21: Correlation Matrix**

		Correlations				
		Attitude	Subjective Norm	Perceived Behavioural Control	Intention	Behaviour
Attitude	Pearson Correlation	1	.449**	-.033	.353*	-.157
	Sig. (1-tailed)	.	.001	.417	.010	.157
	N	43	43	43	43	43
Subjective Norm	Pearson Correlation	.449**	1	.232	.526**	.002
	Sig. (1-tailed)	.001	.	.067	.000	.496
	N	43	43	43	43	43
Perceived Behavioural Control	Pearson Correlation	-.033	.232	1	.014	.054
	Sig. (1-tailed)	.417	.067	.	.464	.365
	N	43	43	43	43	43
Intention	Pearson Correlation	.353*	.526**	.014	1	.019
	Sig. (1-tailed)	.010	.000	.464	.	.453
	N	43	43	43	43	43
Behaviour	Pearson Correlation	-.157	.002	.054	.019	1
	Sig. (1-tailed)	.157	.496	.365	.453	.
	N	43	43	43	43	43

\*\* . Correlation is significant at the 0.01 level (1-tailed).

\* . Correlation is significant at the 0.05 level (1-tailed).

Attitude correlates ( $r = 0,449$ ) with subjective norm and is significant at the 0,01 level (1-tailed). Attitude also correlates with intention ( $r = 0,353$ ) and is significant at the 0,05 level (1-tailed). Subjective norm correlates with intention ( $r = 0,526$ ) and is significant at the 0,01 level (1-tailed).

#### 4.5 Regression Analysis

Multiple regression analysis is a method for studying the effects and magnitudes of the effects of more than one independent variable on one dependent variable, using the principles of correlation and regression (Kerlinger & Lee, 2000). The effects and magnitudes of the effects of the independent variables (attitude, subjective norm and perceived behavioural control) on the dependent variable (behavioural intention to implement an HIV/AIDS policy and programme) are analysed below.

**Table 22: Variables Entered**

Variables Entered/Removed <sup>b</sup>			
Model	Variables Entered	Variables Removed	Method
1	Perceived Behavioural Control, Attitude, Subjective Norm		Enter

a. All requested variables entered.

b. Dependent Variable: Intention

The 3 predictor variables - attitude, subjective norm and perceived behavioural control - were entered simultaneously in the model. In simultaneous multiple regression, all the available independent variables are entered in the equation directly, as shown in Table 22 (Kinnear & Gray, 2000). The results are contained in the model summary in Table 23.

**Table 23: Model summary**

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.550 <sup>a</sup>	.302	.248	3.80391	.302	5.629	3	39	.003

a. Predictors: (Constant), Perceived Behavioural Control, Attitude, Subjective Norm

Table 23 shows the multiple correlation of the model containing the independent variables attitude, subjective norm and perceived behavioural control is  $R = 0,550$  and the adjusted R squared is 0,302. The estimate of the proportion of variance on intention accounted for by the regression is therefore 0,302 (30,2%). The statistics are:  $F 5,629$



with degrees of freedom (3,39) and the regression is significant  $p < 0,01$ . The Analysis of Variance (ANOVA) as shown below yield similar results. See Table 24.

**Table 24: ANOVA**

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	244.332	3	81.444	5.629	.003 <sup>a</sup>
	Residual	564.319	39	14.470		
	Total	808.651	42			

a. Predictors: (Constant), Perceived Behavioural Control, Attitude, Subjective Norm

b. Dependent Variable: Intention

In Table 24 the p-value (Sig.) for the F ratio of 5,629 is given as 0,003, which means that it is significant. Thus, the F statistic is:

$$F(3,39) = 5,629; p < 0.01$$

**Table 25: Regression Coefficients**

**Coefficients<sup>a</sup>**

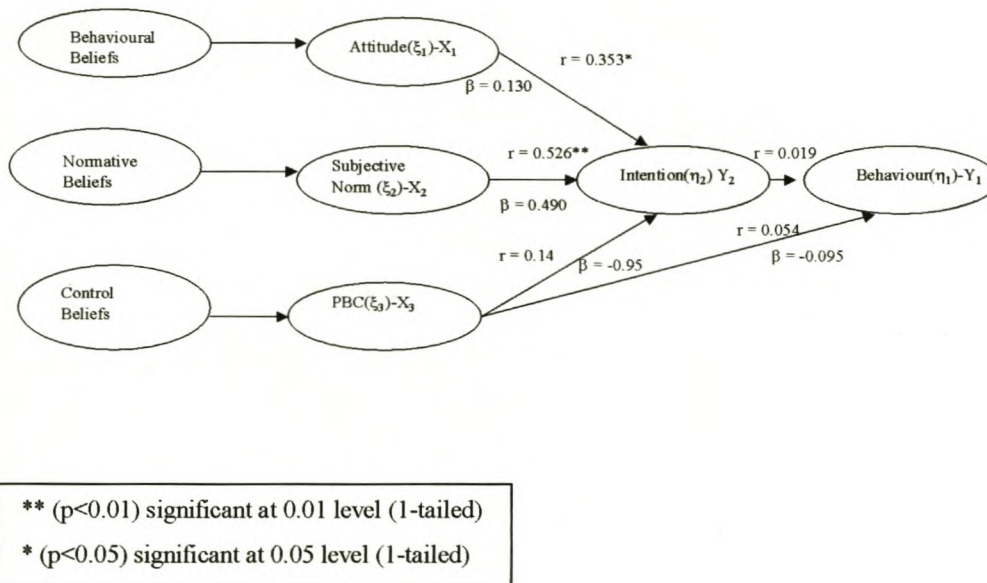
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	-7.203	2.776		-2.595	.013			
	Attitude	.716E-02	.020	.130	.856	.397	.353	.136	.115
	Subjective Norm	.508	.161	.490	3.145	.003	.526	.450	.421
	Perceived Behavioural Control	-9.10E-03	.013	-.095	-.684	.498	.014	-.109	-.092

a. Dependent Variable: Intention

A t-test of a regression coefficient, if significant, indicates that the regression weight differs significantly from zero, which means that the variable with which it is associated contributes significantly to the regression. Furthermore, in order to find the contribution of each independent variable of attitude, subjective norm and perceived behavioural control, the Beta weights (standardised regression weights) should be used (Kerlinger & Lee, 2000).

Table 25 shows the standardised beta coefficients ( $\beta$  = attitude and intention = 0,130); ( $\beta$  = subjective norm and intention = 0,490); and ( $\beta$  = perceived behavioural control and intention = -0,095). Only subjective norm is a significant predictor  $p < 0.01$  of intention and therefore could contribute to 30,2% of the variance on intention ( $R^2$  Squared = 0,302).

The overall the findings are represented in Figure 3 below.



**Figure 3.** TPB model data

Figure 3 provides a summary of the standardised beta coefficients of the three predictors (independent variables) of attitude, subjective norm and perceived behavioural control which are:

( $\beta$  = attitude and intention = 0,130); ( $\beta$ =subjective norm and intention=0,490); and ( $\beta$  = perceived behavioural control and intention = -0,095).

The **zero order correlations** (Table 25) of the independent variables attitude, subjective norm and perceived behavioural control with the dependent variable intention are: attitude and intention ( $r = 0,353$ ), subjective norm and intention ( $r = 0,526$ ) and perceived behavioural control and intention ( $r = 0,14$ ) and are shown in Figure 3 and used for hypothesis testing (par 4.6). Thus, subjective norm seems to be the strongest predictor of intention, whereas perceived behavioural control is weakly correlated with intention.



#### 4.6 Testing of Hypotheses

##### ▪ Hypothesis 1

**Attitude has a positive relationship with intention**

$$H_{o1}: \rho[X1, Y2]=0$$

$$H_{a2}: \rho[X1, Y2]>0$$

The correlation between attitude and intention is  $r = 0,353$  ( $p < 0,05$ ) (see Table 25). The null hypothesis is therefore rejected. Attitude is positively related to intention.

##### ▪ Hypothesis 2

**Subjective norm has as a positive relationship with intention**

$$H_{o2}: \rho[X2, Y2]=0$$

$$H_{a2}: \rho[X2, Y2]>0$$

The correlation between subjective norm and intention is  $r = 0,526$  ( $p < 0,01$ ) (see Table 25). The null hypothesis is therefore rejected. Subjective norm is positively related to intention.

##### ▪ Hypothesis 3

**Perceived behavioural control has a positive relationship with intention**

$$H_{o3}: \rho[X3, Y2]=0$$

$$H_{a3}: \rho[X3, Y2]>0$$

The correlation between perceived behavioural control and intention is  $r = 0,14$ . The null hypothesis could not be rejected. Given the insignificance of PBC, PBC is therefore weakly related to intention.

#### ▪ **Hypothesis 4**

**Perceived behavioural control has positive relationship with behaviour**

$$H_{04}: \rho[X_3, Y_1] = 0$$

$$H_{a4}: \rho[X_3, Y_1] > 0$$

The correlation between perceived behavioural control and behaviour is  $r = 0,054$ . The null hypothesis is accepted given the insignificant effect of PBC on behaviour. Perceived behavioural control is thus not significantly related to behaviour in this study.

**The results showed that subjective norm showed the highest correlation with intention  $r = 0,526$  ( $p < 0,01$ ) (Table 25).**

The standardised coefficients of the independent variables and intention are: ( $\beta$  = attitude and intention = 0,130); ( $\beta$  = subjective norm and intention = 0,490); and ( $\beta$  = perceived behavioural control and intention = -0,095). Only subjective norm is a significant predictor ( $p < 0,01$ ) of intention and could therefore contribute to 30,2% of the variance on intention. The predictor, subjective norm with the largest beta coefficient, also has the largest correlation with the dependent variable intention as shown in the Table correlation matrix (see Table 25).

The following Null Hypotheses for the regression model containing the above three predictors are tested as follows (see Table 25):

#### ▪ **Hypothesis 5**

$$H_{05}: \beta[X_1] = 0 \mid \beta[X_2] \neq 0, \beta[X_3] \neq 0$$

The  $\beta$  for attitude is 0,01716,  $t$  statistic = 0,856 and  $p = 0,397$ , which indicate that the slope is insignificant. The null hypothesis cannot therefore be rejected. In the sample, the slope of the regression on intention for attitude is slight (0,01716). The standardised beta coefficient of attitude on intention is 0,13, meaning that a change of one standard deviation on attitude will produce a change of 0,13 standard deviation on intention (Kerlinger & Lee, 2000). The  $t$  statistic = 0,856 and  $p = 0,397$ , indicate that the slope is therefore insignificant. Attitude, therefore, does not significantly explain variance in intention.



### ▪ **Hypothesis 6**

$$H_{o6}: \beta[X_2]=0 \mid \beta[X_1] \neq 0, \beta[X_3] \neq 0$$

The  $\beta$  for subjective norm is 0,508 and  $p = 0,003$ . The null hypothesis can be rejected. In the sample, the slope of the regression on intention for subjective norm is 0,508. The standardised beta coefficient of subjective norm on intention is 0,490, meaning that a change of one standard deviation on subjective norm will produce a change of 0,490 standard deviation on intention (Kerlinger & Lee, 2000). The  $t$  statistic = 3.145 and  $p = 0,003$  indicate that the slope is therefore significant. Subjective norm therefore does explain variance in intention (see Table 25).

### ▪ **Hypothesis 7**

$$H_{o7}: \beta[X_3]=0 \mid \beta[X_1] \neq 0, \beta[X_2] \neq 0$$

The  $\beta$  for perceived behavioural control is  $-0,00910$  and  $p = 0,498$ . The null hypothesis cannot be rejected. In the sample, the slope of the regression on intention for perceived behavioural control is  $-0,00910$ . The standardised beta coefficient of perceived behavioural control on intention is  $-0,095$  meaning that a change of one standard deviation on perceived behavioural control will produce a change of  $-0,095$  standard deviation on intention (Kerlinger, 2000). The  $t$  statistic =  $-0,684$  and  $p = 0,498$  indicate that the regression coefficient is insignificant. Perceived behavioural control therefore does not explain variance in intention (see Table 25).

Given the above statistics, the standard multiple regression equation is:

### ▪ **Standard Multiple Regression Equation**

$$E[Y_2/X] = \alpha + \beta[X_1] + \beta[X_2] + \beta[X_3]$$

$X_1$ -attitude

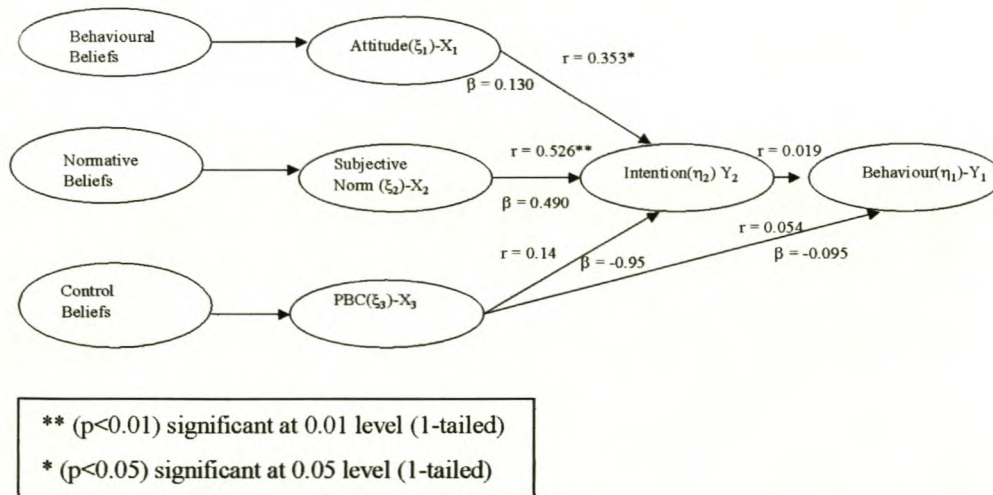
$X_2$ -subjective norm

$X_3$ -perceived behavioural control

According to Table 18, Intention =  $-7.203 + 0.01716 \times (\text{attitude}) + 0.508 \times (\text{subjective norm}) - 0.00910 \times (\text{perceived behavioural control})$

Thus, behavioural intention to implement an HIV/AIDS programme can be predicted by substituting beta coefficients ( $\beta$ ) of the independent variables of attitude, subjective norm and perceived behavioural control into the equation.

In summary, although attitude is positively related to intention, the regression analysis shows that attitude does not significantly explain the variance in intention to implement an HIV/AIDS policy and programme. Perceived behavioural control (control beliefs) is not significantly related to intention and behaviour. It has been shown that subjective norm is the strongest predictor of behavioural intention to implement an HIV/AIDS policy and programme. The multiple correlation of the model containing the independent variables attitude, subjective norm and perceived behavioural control is  $R = 0,550$  and the  $R$  squared is  $0,302$  (see Table 25). The estimate of the proportion of variance on intention accounted for by the regression is therefore  $0,302$  (30,2%). The statistics are:  $F$  5,629 with degrees of freedom (3,39) and the regression is significant  $p < 0,01$ . Thus, the  $F$  statistic is:  $F(3,39) = 5,629$ ;  $p < 0.01$



**Figure 3.** TPB model data



## **CHAPTER 5**

### **5. DISCUSSION**

The results of this study indicate that intention to implement an HIV/AIDS policy and programme by SMEs is mainly influenced by subjective norm factors, with attitudinal factors and perceived behavioural control playing an insignificant (or lesser) role. These factors explain a large proportion of the variability of the intention scores, confirming the predictive usefulness of the Theory of Planned Behaviour. The data obtained thus support the validity of the theory of planned behaviour in assessing behavioural intentions in owner managers in implementing a HIV/AIDS policy and programme to some extent. Moreover, there is some evidence for discriminant and convergent validity between self-efficacy and perceived behavioural control and self-efficacy which could therefore serve as a standard operationalisation of the construct of perceived behavioural control, as noted by other research using this model (Armitage & Conner, 1999). Finally, subjective norm shows a reasonably strong relationship with intention and offers the best predictor of intention to implement an HIV/AIDS policy and programme. Although attitude was significantly related to intention, it did not significantly explain variance in intention. Perceived behavioural control (control beliefs) was found to have a weak or no relationship to intention and did not explain variance to implement an HIV/AIDS policy and programme.

#### **5.1 Overall findings**

The present study of the TPB variables (Figure 3) focused on the behavioural intention of SMEs to implement an HIV/AIDS policy and programme. An interesting finding (see Table 25) showed subjective norm to contribute strongly as a predictor of intention. The research, however, focused on past behaviour as a self reported measurement in implementing an HIV/AIDS policy and programme. The intention-behaviour zero order correlation (Table 21) was ( $r = 0.019$ ), indicating that there is an extremely small/no relationship with past behaviour in implementing an HIV/AIDS policy and programme. The research shows that 81% (see Table 8) of the owner-managers indicated that they had not implemented an HIV/AIDS policy and programme in the last six months. The high percentage (81%) of SMEs that have not implemented an HIV/AIDS policy and programme in the last six months and the weak relationship of intention and behaviour ( $r$

= 0,019), may indicate that SMEs experience difficulty in dealing with HIV/AIDS in the workplace. However, the results indicate that female owner-managers are marginally more likely to deal with HIV/AIDS. This is evident from the 49% of males (Table 8) who indicated that they strongly disagreed with implementing an HIV/AIDS policy/programme in the last six months (i.e. they had not), as opposed to the 33 % of females (see Table 8) who had not implemented an HIV/AIDS policy and programme in the last six months. The implication is that females as owner-managers will most likely respond favourably to implementing a HIV/AIDS policy and programme.

Further limited support for the efficacy of the TPB is provided by the multiple correlations of attitude, subjective norm and PBC with intention, as shown in Table 23. The findings of the present research in Table 18 ( $R=0.550$ ,  $R^2=0.302$ ) provide strong evidence for the significance of the TPB, and especially subjective norm in its current application. Armitage and Conner (1999) in their study of 185 independent empirical studies showed that the average multiple correlation of attitude, subjective norm and PBC with intention is  $R = 0,63$ , accounting for 39% of the variance ( $R^2 = 0,43$ ). Godin and Kok (1996) reported a meta analysis of 87 TPB studies applied to health behaviour. Their analyses showed that TPB accounted for 41% of the variance in behavioural intentions ( $R = 0,64$ ; 76 correlations) and 34% of the variance in behaviours ( $R = 0,58$ ; 35 correlations) for a range of health behaviours. The present study found  $R = 0,550$  ( $R^2 = 0,302$ ) for the multiple correlation of attitude, subjective norm and perceived behavioural control with intention (see Table 23) and therefore the TPB accounts for 30,2% of the variance in behavioural intention in implementing an HIV/AIDS policy and programme.

Attitude and perceived behavioural control does not significantly explain variance in intention to implement an HIV/AIDS policy and programme. Attitude, however, was found to have a significant positive relationship with intention. Thus, the present study could demonstrate (to some extent) the efficacy of TPB in assessing behavioural intention of SMEs to implement an HIV/AIDS policy and programme. The lack of significance could be due to the limited number of items measured.



## 5.2 Self-report vs. objective behaviour

Many TPB studies do not employ prospective designs or measure behaviour. The present research only focused on self-reported behaviour in implementing an HIV/AIDS policy and programme. Congruent with Hessing, Elffers and Weigel's findings (1988), intention and PBC were better predictors of self-reported behaviour than observed behaviour. Sutton (1998) further suggests that showing respondents the measure of behaviour on which they will later be assessed could be a way of dealing with subjective and objective measures. Although a small correlation between intention and behaviour ( $r = 0.019$ ) was found, self reported behaviour could still be used in its current practical application. Armitage and Conner (1999) showed that TPB accounts for large, highly significant proportions of variance in prospective measures of both observed ( $R^2 = 0,20$ ) and self reported ( $R^2 = 0,31$ ) behaviour. The implication is that in the present study which found ( $R^2 = 0,31$ ) as shown in Table 23 to be significant, therefore shows the efficacy of the TPB model is assessing self reported behaviour by SMEs in implementing an HIV/AIDS policy and programme within the past six months. However, researchers should be cautious about self-reported data and, wherever possible, use accurate multiple measures of actual behaviour.

## 5.3 Attitude and Intention

The attitude towards the behaviour is determined by the relative strength of these associations and by the beliefs that are salient at the time. This works on the principle of Fishbein and Ajzen's (1975) Expectancy-value Model: the subjective value of a given outcome affects the attitude in direct proportion to the strength of the belief.

In the TPB model (Figure 1), attitude is described as the individual's positive or negative evaluation of performing a particular behaviour, which in this case is implementing an HIV/AIDS policy and programme in the workplace (Ajzen, 1980, 1991). The alpha of attitude-beliefs measured ( $\alpha = 0.8425$ ), as shown in Table 11, with a standardised item alpha of 0,8389, proving acceptably. The findings on the correlation between attitude and intention ( $r = 0.353$ ) were significant at  $p < 0.05$  (1-tailed) (see Table 25) and shows that attitude is related to intention in implementing an HIV/AIDS policy and programme in the SME workplace. However with standardised  $\beta = 0.130$  attitude was found to be not a significant predictor of the intention to implement an HIV/AIDS policy and



programme. The implication is that owner-managers may not have a positive attitude about implementing an HIV/AIDS policy and programme, and this could reduce the ability of the SME in dealing with HIV/AIDS in the workplace.

#### 5.4 Subjective Norm and Intention

In the TPB model, subjective norm is considered to be a function of salient normative beliefs. While subjective norm relates to perceptions of general social pressure to implement an HIV/AIDS policy and programme, the underlying normative beliefs are concerned with the likelihood that specific individuals or SME groups with whom the individual is motivated to comply will either approve or disapprove of the behaviour. As previously indicated, a global measure of subjective norm was obtained ( $\alpha = 0,6151$ ) and standardised ( $\alpha = 0,6903$ ), as shown in Table 12 with multiple measures of subjective norm.

The findings show a strong correlation between subjective norm and intention ( $r = 0,526$ ) and the standardised  $\beta = 0,49$  and the unstandardised  $\beta = 0,508$  was significant at  $p < 0,01$ , as shown in Table 25. Furthermore, the findings show that subjective norm is the strongest predictor of the behavioural intention to implement an HIV/AIDS policy and programme in the workplace, contrary to the views of some researchers (Sparks, Shepherd, Wieringa & Zimmermanns, 1995 as cited in Armitage and Conner, 1999). The implication is that if business leaders show commitment towards the HIV/AIDS policy and programme, employees will feel the social organisational pressure to effect the behavioural changes required in implementing the HIV/AIDS policy and programme (Smetherham, 2003). Business leaders should, therefore, sit on committees, allocate budgets and make important decisions about the implementation of the HIV/AIDS policy and programme.

Armitage and Conner (1999) conclude that the component of subjective norms points to measurement as its principle weakness, given that the majority of TPB studies use single-item measures. An interesting finding in Table 21 shows a strong correlation between attitude and subjective norm ( $r = 0,449$ ) with significance at 0,01 level (1-tailed). Although attitude should not be seen as a causal factor influencing subjective norm, cognisance should still be taken of its positive relationship with subjective norm. Ajzen (1991) has thus shown that subjective norm can be operationalised as a global perception



of social pressure either to comply or not with the wishes of others. The formation of perceptions about important others in implementing an HIV/AIDS policy and programme is therefore related to the individual's positive or negative evaluation of implementing an HIV/AIDS policy and programme. This finding could prove useful in the design of interventions, which should take into consideration the influence of social pressure in the implementation of HIV/AIDS policies and programmes within the SME workplace (Ajzen, 1991).

### **5.5. Perceived Behavioural Control (Control beliefs) and Intention**

According to Ajzen (1991), control beliefs are the antecedents of PBC and are concerned with the perceived power of specific factors to facilitate or inhibit performance of the behaviour. Like the other beliefs, the equation takes into account the relevance of the belief to the individual, in this case by taking a measure of the frequency of occurrence of the promoting or inhibitory factors. Control beliefs are salient beliefs about the factors that may constrain or enhance the behaviour of interest, by influencing the perception of an individual regarding the difficulty of performing the behaviour of interest (Ajzen, 1988, 1991). Ajzen further distinguishes between internal factors, such as information, skills and abilities, emotions and compulsions, and external factors, such as opportunity and dependence on others.

Respondents were asked to rate the frequency of occurrence and then this was multiplied by the likelihood of relevant control factors (means are shown in Table 13). A composite summation was computed. This provides a belief-based measure of perceived behavioural control (Ajzen, 1988; Manstead & Parker, 1995; Sparks et al., 1997). The findings in Table 25 show  $r = 0,14$  and a regression coefficient of standardised  $\beta = -0.095$ . The weak correlation is supported by findings by Armitage and Conner (1999). Thus, the present study shows that a weak intention-behaviour interaction yields a weak PBC-behaviour interaction. Although perceived behavioural control shows a positive relationship with intention (see Table 25), the findings indicate that perceived behavioural control does not significantly explain variance in intention. Correlation does not necessary imply causation, and lack of correlation does not necessary imply lack of causation (Tafimow & Finlay, 2002). Ajzen distinguishes between internal factors, such as information, skills and abilities, emotions and compulsions and external factors such as opportunity and dependence on others. The practical implication for the present study is



that SMEs that lack information, skills and abilities pertaining to HIV/AIDS, will perceive these as inhibiting factors in implementing an HIV/AIDS policy and programme.

Ajzen, (1991) argues that the PBC and self-efficacy constructs are interchangeable and the present findings show that self-efficacy explains 40.550% of the variance, whereas PBC only explains 14.619% of the variance (Table 19). The findings show that self-efficacy is easier to operationalise than the construct PBC. These results thus have theoretical and conceptual implications. The theoretical and conceptual implication is that self-efficacy can be used to augment the TPB. Armitage and Conner (1999) supports the assertion that self-efficacy can augment TPB. The present study found that self-efficacy could be used to augment the Theory of Planned Behaviour and could prove useful for future research.

In summary, the study offers evidence that the Theory of Planned Behaviour can be successfully applied in a small business domain when cognisance is taken of subjective norm as the strongest predictor of the intention to implement an HIV/AIDS policy and programme. The roles of attitudes, subjective norm and perceived behavioural control of SME owner-managers' intention to implement an HIV/AIDS policy and programme was examined. The present study found  $R = 0,550$  ( $R^2 = 0,302$ ) for the multiple correlation of attitude, subjective norm and perceived behavioural control with intention (see Table 23) and the TPB therefore accounts for 30,2% of the variance in behavioural intention in implementing an HIV/AIDS policy and programme. The formation of perceptions about important others in implementing an HIV/AIDS policy and programme is thus related to the individual's positive or negative evaluation of implementing an HIV/AIDS policy and programme. This finding could prove useful in the design of interventions, which should take into consideration the influence of social pressure by owner-managers in implementing an HIV/AIDS policy and programme within the SME workplace (Ajzen, 1991). The practical implication for the present study is SMEs that lack information, skills and abilities about HIV/AIDS will perceive these deficits as inhibiting factors in implementing an HIV/AIDS policy and programme. The results also suggest that females as owner-managers are more likely to respond favourably than male owner-managers when considering implementing an HIV/AIDS policy and programme. The present study proves the efficacy of TPB in assessing behavioural intentions of SMEs. The present study also found that self-efficacy could be used to augment the Theory of



Planned Behaviour and could prove useful for future research, however the insignificance of attitude and perceived behavioural control could be due to the limited number of items measured.

## **CHAPTER 6**

### **6. CONCLUSION**

The research has, to some extent, confirmed the usefulness of the Theory of Planned Behaviour in understanding owner-managers intentions with respect to implementing an HIV/AIDS policy and programme. It has been shown that only the variable subjective norm significantly explains variance in intention to implement an HIV/AIDS policy and programme.

The progression of the HIV/AIDS epidemic has made it imperative to put measures in place at all levels to minimise its impact. The 2003 UNAIDS report estimates that more than 5 million South Africans were infected with HIV at the end of 2003. Furthermore, about one quarter of South Africans of employable age could be infected. Given these statistics, it is clear that HIV/AIDS is poised to have a significant effect on every facet of the population, and small and medium enterprises (SMEs) are not immune. As pointed out earlier in this study, small businesses are more at risk due to their poor ability to absorb the effects of the HIV/AIDS epidemic.

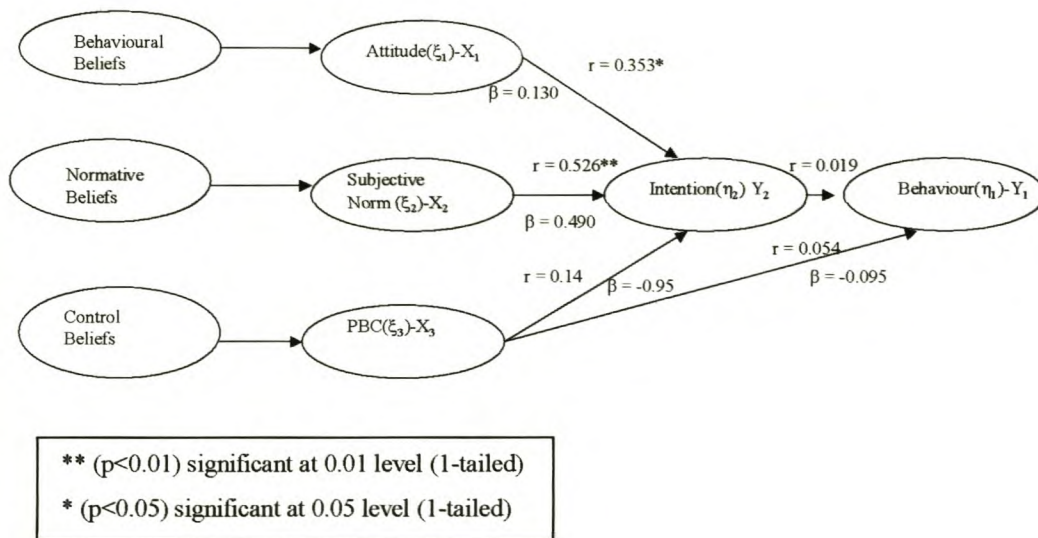
The impact on businesses could be felt through reduced productivity, poor staff morale, increased absenteeism, increased staff turnover, increased recruitment and training costs and increased costs of employee benefits. The overall research objective was to assess the behavioural intentions of SMEs in the implementation of an HIV/AIDS policy and programme. The hypotheses and results are shown below:

The following can be concluded from the figure below, as demonstrated in Chapter 5 (see Figure 3):

- Although attitude has a positive relationship with intention, attitude does not significantly explain variance in intention. Intention is however linearly dependent on attitude (see Table 25).
- Subjective Norm has a positive relationship with intention and significantly explains variance in intention. Attitude also is positively related to subjective norm. Intention is linearly dependent on subjective norm (see Table 25).



- The findings show that there is no relationship between perceived behavioural control (control beliefs) and intention. Furthermore, this construct does not significantly explain variance in intention (see Table 25).
- No significant relationship between perceived behavioural control and behaviour was evident from the data.



**Figure 3. TPB Model**

Although the overall regression equation was significant  $F(3,39) = 5,629$ ;  $p < 0.01$  with ( $R^2=0.302$ ) in which 30.2% of the variance in intention is explained by the predictors attitude, subjective norm and perceived behavioural control, further analysis of the regression coefficients of the sample indicates that only subjective norm ( $\beta = 0,508$ ) significantly explains variance in intention to implement an HIV/AIDS policy and programme.

Researchers should be aware of the problems of self-reported data with respect of bias (Gaes, Kalle & Tedeschi, 1978) and wherever possible take an accurate multiple measures of actual behaviour in implementing an HIV/AIDS policy and programme,

however difficult this may be in the practical business environment. If a linear relationship exists between attitude and subjective norm in the behavioural intention to deal with HIV/AIDS, then it implies that SME owner-managers need to understand attitudes and their influence in shaping perceptions about what other SMEs are doing to successfully implement an HIV/AIDS policy and programme in the workplace. **SMEs should focus on positive attitudes towards other SMEs and or significant others, which could favourably influence their perceptions about implementing an HIV/AIDS policy/programme.** Ultimately, this could lead to the formation of a behavioural intention to implement an HIV/AIDS policy and programme. The dimensions of an HIV/AIDS policy and programme should include the following number of focus areas.

#### *Total management commitment*

In order to ensure optimal success of their HIV/AIDS initiatives, SMEs should take cognisance of the needs, attitudes and demands of all its employees, suppliers and clients (Whiteside & Sunter, 2000). The present study shows that subjective norms are the strongest predictor of the intention to implement an HIV/AIDS policy and programme. The formation of perceptions about important others, such as the business manager-owner, in implementing an HIV/AIDS policy and programme is related to the employees' positive or negative evaluation of implementing an HIV/AIDS policy and programme. This finding could prove useful in the design of interventions, which should take into consideration the influence of social pressure exerted by the owner-mangers in their implementation of HIV/AIDS policies and programmes within the SME workplace (Ajzen, 1991).

#### ▪ *Managing the impact of HIV/AIDS on the business*

According to Christianson (2001), a cost-benefit analysis both internally (company workforce) and externally in the market should be developed. The analyses should consider the impact of HIV/AIDS due to increased absenteeism, increased sick leave, escalating medical care and overall productivity losses. Steps should be taken to raise the level of HIV/AIDS knowledge, attitudes and perceptions. A possible re-evaluation of existing policies and procedures should also take place. However, SMEs that lack information, skills and abilities about HIV/AIDS may perceive these deficits as factors which would inhibit their implementation of an HIV/AIDS policy and programme, which in turn could limit the management of the impact of HIV/AIDS on a business.



- *Evaluation of products and services*

SMEs need to evaluate the loss of existing products and services against the HIV/AIDS impact. HIV/AIDS could thus influence the provision of products and services to various clients.

- *Prevention of new infections*

HIV/AIDS will lead to an increase in costs related to deaths, disabilities, dreaded diseases, recruitment and training, medical care, and low morale due to disruptions of frequent deaths of colleagues. This is why employees and clients need to be educated and empowered to practice a healthy lifestyle, including responsible sexual behaviours (Remien & Rabkin, 2001; Whiteside & Sunter, 2000).

- *Prevention of functional impairment (disability) due to HIV Infection*

The optimal disease management of HIV/AIDS in the workplace determines the speed of progression from HIV infection to AIDS. The optimal disease management can focus on disclosure (knowing one's status), which requires the provision of voluntary counselling and testing (VCT); treatment (including medication) that enhances the immune system; preventing re-infection and counselling and support (Remien & Rabkin, 2002). Furthermore Volpe (2003) says that an HIV/AIDS programme should motivate people to engage in voluntary testing in order for employees to seek early intervention, to remain healthy, to be positive and keep work and to focus on home based care and support. Such a programme should also encourage employers to provide a supportive work environment for those infected and affected, helping them to understand the progression of HIV, to adjust to loss, to grieve and to continue living with hope and dignity.

- *Elimination of discrimination against people living with HIV/AIDS (PWAs)*

The creation of an environment free from discrimination is crucial to ensure that PWAs are treated equitably in all employment and work place practices. Every employer should take steps to promote equal opportunity in the workplace by eliminating unfair discrimination in any employment policy or practice when confronted with persons with HIV/AIDS (Employment Equity Act No 55, 1998).

Some further recommendations for a helpful HIV/AIDS policy and programme include the following:

- An integration of treatment and prevention programmes.
- Extensive education about HIV/AIDS and its transmission and management.
- Comprehensive treatment and support for HIV-infected individuals.
- Comprehensive mental health screening and care.
- Economic and environmental support and support in the workplace are essential for people infected and affected with HIV.
- Consulting psychological issues include counselling and psychological support in various forms (including both professional counselling and peer support). This could be valuable in enhancing coping skills and improving the quality of life of employees. Counselling can be useful across cultures (the implication being that the counsellor must be culturally competent). Psychological factors affect general health and well-being and show close links with the immune system. Ironson et al. (2002) suggest that social support is of central importance in the management of HIV by increasing the ability to cope with HIV-related stressors, lowering levels of psychological distress, maintaining connectedness with others and having someone to remind the PWA to take the medication. Another psychological variable, anger, has been associated with decreased social support and increased smoking and alcohol use. Assertiveness training may not only be an effective intervention to help these people develop better strategies for handling anger but may also help employees to get their medical and emotional needs met.

A long term sustainable response from business will only be achieved if all stakeholders (leaders, managers, personnel, shareholders) are convinced of the real business rationale behind implementing an HIV/AIDS policy and programme in the workplace. In particular, committed and knowledgeable leadership is needed to ensure that the policy and programme get implemented. A clear understanding of the specific impact of HIV/AIDS on the SME and the context in which this occurs is a critical factor in the development of an effective and appropriate HIV/AIDS policy and programme. The implementation of an HIV/AIDS policy and programme will be a significant step towards reducing the impact on various organisations and companies. Thus, the importance of



identifying the impact and implementing an HIV/AIDS policy and programme on individual SMEs cannot be overemphasised.

### **Limitations**

There are various methodological limitations to the study that must be acknowledged, one of which is the generalisability of the findings. Although the sample chosen did produce findings that showed the limited usefulness of the application of TPB in assessing behavioural intention of SMEs to implement an HIV/AIDS policy/ programme, a larger sample would have been preferable. However, given the large size and diversity of the population this specific sample could still be relevant. Nonetheless, since many owner-managers of the population are confronted with HIV/AIDS in the workplace, the study may prove insightful into which factors affect the behavioural intention to implement HIV/AIDS policies/ programmes, especially subjective norm.

Secondly, the study used a global measure of subjective norm. Although this may be in violation of Ajzen and Fishbein's earlier conceptualisation, the study showed that a global measure using multiple scale items could be useful for TPB studies.

Notwithstanding these limitations, the present study has demonstrated that subjective norms largely govern the decision to implement an HIV/AIDS policy/ programme in the SME workplace. The limited number of items measured may have influenced the insignificance of perceived behavioural control on intention. Future researchers must therefore take cognisance of this possible limitation in future studies of a similar nature. However, the interesting finding is that subjective norm is a strong predictor of the intention to implement an HIV/AIDS policy and programme in the workplace.

### **Recommendations for future research**

There are two possible avenues for future research. The first is to investigate salient beliefs underlying perceived behavioural control and self-efficacy across various SME sectors, such as retail, manufacturing, and services toward implementation of HIV/AIDS policy and programme in the SME workplace. The second is to validate whether self-efficacy and PBC correlate with intention and behaviour significantly more strongly than perceived control over behaviour in implementing an HIV/AIDS policy and programme.

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107

**APPENDIX A**

**Purpose:** As part of a research study project within the SMME sector and approved by Stellenbosch University and conducted by Adrian Parsadh.

**Instructions:** Please respond honestly to the questions below. Your co-operation is appreciated and responses will be treated anonymously and with confidentiality. Mark with X and where applicable write your rating score (in the column below, your rating) using the scale below the relevant questions.

1. How likely are each of the following outcomes given that you have chosen to implement a HIV/AIDS policy/programme in the workplace?

Extremely unlikely			Extremely likely			
1	2	3	4	5	6	7

Your Rating

▪ Implementing a HIV/AIDS policy/programme helps me to eliminate discrimination in the workplace.	
▪ By implementing a HIV/AIDS policy/programme, I can create a non-discriminatory workplace.	
▪ In implementing HIV/AIDS policy/programme, I can promote openness/disclosure about HIV status.	
▪ Implementing HIV/AIDS policy/programme, helps me to breakdown fear of stigma/rejection.	
▪ By implementing HIV/AIDS policy/programme, will help me assess and reduce impact of HIV/AIDS in the workplace.	

2. How good or bad are each of the following outcomes?

Bad			Good			
-3	-2	-1	0	1	2	3

Your Rating

▪ Implementing HIV/AIDS policy/programme helps me to eliminate discrimination in the workplace.	
▪ By implementing a HIV/AIDS policy/programme, I can create a non-discriminatory workplace	
▪ In implementing HIV/AIDS policy/programme, I can promote openness/disclosure about HIV status	
▪ Implementing HIV/AIDS policy/programme, helps me to breakdown fear of stigma/rejection.	
▪ By implementing HIV/AIDS policy/programme, will help me assess and reduce impact of HIV/AIDS impact in the workplace	

3a. People who are important to me think I (should implement HIV/AIDS policy/programme/ should not implement HIV/AIDS policy/programme)

Should Not Implement			Should Implement			
1	2	3	4	5	6	7

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108

3b. People who important to me would (disapprove of me implementing HIV/AIDS policy/programme/ approve of me implement HIV/AIDS policy/programme.

Disapprove

Approve

1	2	3	4	5	6	7
---	---	---	---	---	---	---

3c. People who are important to me want me to implement HIV/AIDS policy/programme

Strongly Disagree

Strongly Agree

1	2	3	4	5	6	7
---	---	---	---	---	---	---

3d. I feel under social pressure to implement HIV/AIDS policy/programme

Strongly Disagree

Strongly Agree

1	2	3	4	5	6	7
---	---	---	---	---	---	---

4a. How frequently does the following occur?

Never

Frequently

1	2	3	4	5	6	7
---	---	---	---	---	---	---

Your rating

▪ I donot have time to implement HIV/AIDS policy/programme	
▪ Implementing HIV/AIDS policy/programme costs too much money	
▪ I do think about implementing HIV/AIDS policy/programme	
▪ To implement HIV/AIDS policy/programme is inconvenient	
▪ I donot know where to get help to implement HIV/AIDS policy/programme	
▪ I lack the ability to implement HIV/AIDS policy/programme	

4b. How likely is the following to occur?

Less Likely

Most Likely

1	2	3	4	5	6	7
---	---	---	---	---	---	---

Your rating

▪ I donot have time to implement HIV/AIDS policy/programme	
▪ Implementing HIV/AIDS policy/programme costs too much money	
▪ I do think about implementing HIV/AIDS policy/programme	
▪ To implement HIV/AIDS policy/programme is inconvenient	
▪ I donot know where to get help to implement HIV/AIDS policy/programme	

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109

5a. I intend to implement HIV/AIDS policy/programme in the future

Extremely unlikely

Extremely likely

-3	-2	-1	0	1	2	3
----	----	----	---	---	---	---

5b. I plan to implement HIV/AIDS policy/programme in the future

Extremely unlikely

Extremely likely

-3	-2	-1	0	1	2	3
----	----	----	---	---	---	---

5c. I want to implement HIV/AIDS policy/programme in the workplace

Extremely unlikely

Extremely likely

-3	-2	-1	0	1	2	3
----	----	----	---	---	---	---

6a. Even if I wanted to, I might not be able to implement HIV/AIDS policy/programme in the workplace

Strongly Disagree

Strongly Agree

1	2	3	4	5	6	7
---	---	---	---	---	---	---

6b. For me to implement a HIV/AIDS policy/programme would be:

Difficult

Easy

-3	-2	-1	0	1	2	3
----	----	----	---	---	---	---

Outside my control

Within my control

-3	-2	-1	0	1	2	3
----	----	----	---	---	---	---

7a. I believe I have the ability to implement a HIV/AIDS policy/programme

Definitely do not

Definitely do

1	2	3	4	5	6	7
---	---	---	---	---	---	---

7b. To what extent do you see yourself as capable of implementing a HIV/AIDS policy/programme

Very incapable

Very capable

1	2	3	4	5	6	7
---	---	---	---	---	---	---

7c. How confident are you that you will be able to implement a HIV/AIDS policy/programme

Very unsure

Very sure

1	2	3	4	5	6	7
---	---	---	---	---	---	---

7d. If it were entirely up to me, I am confident that I would implement a HIV/AIDS policy/programme

Strongly Disagree

Strongly Agree

1	2	3	4	5	6	7
---	---	---	---	---	---	---

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110

7e. Whether or not I implement a HIV/AIDS policy/programme, is entirely up to me

Strongly Disagree			Strongly Agree			
1	2	3	4	5	6	7

7f. How much personal control do you feel you have over implementing a HIV/AIDS policy/programme

Very little control			Complete control			
1	2	3	4	5	6	7

7g. There are likely to be plenty of opportunities for me to implement a HIV/AIDS policy/programme

Strongly Disagree			Strongly Agree			
1	2	3	4	5	6	7

7h. How much do you feel that implementing a HIV/AIDS policy/programme is beyond your control

Strongly Disagree			Strongly Agree			
1	2	3	4	5	6	7

8. I implemented a HIV/AIDS policy/programme in the last 6 months

Strongly Disagree			Strongly Agree			
1	2	3	4	5	6	7

9. How often did you implement a HIV/AIDS policy/programme in the last 6 months

Never			Frequently			
-3	-2	-1	0	1	2	3

10. I am currently implementing a HIV/AIDS policy/programme Yes / No

THANK YOU

For statistical purposes, please complete the following  
Demographics

Number of employees: \_\_\_\_\_

Industry Type: \_\_\_\_\_

Company Age: \_\_\_\_\_

Your age: \_\_\_\_\_

Gender: Male / Female

Confidential, when completed