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Attitude change in a group of health professionals exposed to a three-day AIDS education course

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ABSTRACT

There are many AIDS prevention programmes which are being conducted in South Africa at present. This research examined one specific programme to assess whether it resulted in a change in attitudes (to AIDS, to homosexuality and to the sexuality of black people), using the information processing approach to attitude formation and change of Fishbein and Ajzen (1975). Subsidiary aspects of the study involved assessing whether there were changes in knowledge about AIDS and whether there were correlations between the variables mentioned above. The study used a version of the Morton and McManus (1986) scale adapted for South Africa. The scale was found to have good construct validity. The results showed that there was a significant change from less favourable to more favourable attitudes in the experimental group as compared to a control group of healthworkers. There was not, however, a significant change in knowledge about AIDS. In both groups there were significant correlations between attitudes to AIDS and attitudes to homosexuality, but only in the experimental group were there correlations between knowledge and attitude. The implications of these findings for AIDS education and research are discussed.

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1. INTRODUCTION

This study intends to examine the phenomenon of attitude change in a group of South African healthworkers who attended a three-day AIDS education programme. There are two subsidiary aims. Firstly, the study will establish whether there is a change in knowledge about AIDS. Secondly, the study will examine correlations between knowledge about AIDS, and attitudes to AIDS, homosexuality and the sexuality of black people. All of these are key issues which affect responses to, and education on, the AIDS pandemic. In this introduction it is important to review the background to the disease as it manifests itself 11 years after the discovery in 1981 of a new and fatal illness. This background will provide the context for the study. The introduction will also deal with terminology, recent developments and the rationale for the study.

1.1 AIDS AND HIV : AN OVERVIEW

Acquired Immune Deficiency Syndrome (AIDS) is a viral infection which damages the immune system of the human body. The virus which causes AIDS is known as the Human Immunodeficiency Virus (HIV). The immmune deficiency disorder caused by HIV is thought to result from a gradual depletion of white blood cells known as T-helper cells, which usually set off the immunising response. In this way HIV cripples and destroys the immune system, allowing opportunistic infections to enter the body. The individual usually dies, not from AIDS itself, but as a result of the opportunistic infections against which the body is no longer able to defend itself. Apart from opportunistic infections, HIV can also directly affect the nervous system. This leads to a number of distinct neurological syndromes. Infection of the brain can result in slowly developing intellectual and emotional changes - this is called AIDS dementia and happens to about one third of

people with AIDS (PWA's). Other neurological manifestations include ataxia and chronic meningitis (Crewe, 1992).

HIV is transmitted by the exchange of three main body fluids (blood, semen, and vaginal fluids) and to a lesser extent through breast milk. So infection would occur through :

(a) sexual intercourse;
(b) transfusions of contaminated blood or blood products;
(c) sharing or re-using contaminated injection needles and syringes; and
(d) pregnancy and childbirth.

Broadly speaking there are two patterns of transmission. The key features of Pattern I, which is prevalent in the Americas, Asia, Australasia and Europe, are the following :

(a) most cases involve homosexual and bisexual men, and intravenous drug users;
(b) there are relatively few heterosexual cases;
(c) the ratio of male to female cases is about 10 to 1;
(d) there is limited incidence of AIDS in children and babies;

Pattern II, which is predominant in Africa, has the following features :

(a) most cases are found in heterosexual men and women;
(b) the ratio of male to female cases is about 1 to 1;
(c) there is a high and rising incidence of AIDS in children and babies;
(d) more people are at risk than for Pattern I (Hamilton, 1991).

The first cases of AIDS were reported in the United States in 1981, although it is believed that the disease had been in existence for at least a decade before then. The first cases reported in South Africa were in 1982, when two homosexual men died of AIDS-related infections (Hamilton, 1991).

Mr Alan Whiteside, a senior research fellow in the economic research unit at the University of Natal, points out that what is particularly significant about AIDS in comparison with other diseases is the time scale involved. The period from infection until antibodies to the virus are detectable (ie. seroconversion) varies in most cases from six weeks to three months. During this phase (the "window" period) body fluids are contaminated and infective, but HIV cannot be detected. Thus blood supplies cannot be completely safe (Whiteside, 1990).

The second phase is from seroconversion until symptoms of the disease appear. This period is an average of seven to ten years in the West. The final phase is the period from the onset of illness to death, and usually lasts from one to three years. Mr Whiteside points out that in Africa it may take a shorter period for people to fall ill and die of AIDS, as they are often less healthy, more malnourished and exposed to a wider range of diseases (Whiteside, 1990).

1.1.1 Terminology

The term HIV positive describes a person who has contracted the virus, and who tests positive for antibodies to HIV. However, the individual has not contracted any of the opportunistic infections. The eventual rate of conversion to AIDS is almost 100%.

The term AIDS is used to describe a person who is HIV positive, and who has also contracted an opportunistic infection. This is often described as full-blown AIDS, and is uniformly terminal.

The acronym PWA will be used in this report to denote people who have full-blown AIDS. This is the preferred term because (and this will become evident later when stigma is discussed in the literature review) it is free of the assumptions of passivity and helplessness associated with the terms "AIDS victim", "AIDS sufferer" or "AIDS patient". In 1983 the Advisory Committee of People With AIDS announced,

"We condemn attempts to label us as 'victims', which implies defeat, and we are only occasionally 'patients', which implies passivity, helplessness and dependence on others. We are 'people with AIDS'" (Hughes, 1992).

This term has at times been amended to PLWA or "people living with AIDS" to deal with perceptions that an AIDS diagnosis implies imminent death. Neither term has been adopted by the mainstream media, although PWA's (and people with HIV), AIDS activists and AIDS workers use them exclusively.

1.1.2 Recent developments

At the recent international conference on AIDS in Amsterdam the following points about HIV and AIDS became clear (World AIDS News, 1992) :

1. It seems that there is greater emphasis on a therapeutic vaccine (rather than a preventive vaccine) and a usable one is only likely to be available towards the end of the decade.

2. There has been a worldwide increase in Tuberculosis (TB) as a result of HIV infection, associated with drug resistance.

3. The presence of other sexually transmitted diseases (STD's) increasss the risk of HIV transmission.

4. The old vision of AIDS is "outdated" and according to the chairperson of the conference we must now see AIDS in the larger contexts of unequal access to health care, education and employment.

5. The issue of gender and power remains a thorny one, especially in developing countries.

6. Before individuals can be empowered to change behaviours, changed attitudes and social support for behaviour change may need to be in place in their communities.

7. More attention needs to be paid to the social and cultural context of education.

8. Social and economic factors leading to poverty are helping HIV to spread rapidly in many countries and there is fear that the epidemic will continue to escalate unchecked unless such factors are addressed.

1.1.3 AIDS in Africa and South Africa

As we enter the second decade of the AIDS epidemic, the predicted gravity of this medical disaster is now being fully realised, especially in sub-Saharan Africa. In South Africa the estimated number of people carrying the Acquired Immune Deficiency Syndrome (AIDS) virus, HIV (the Human Immunodeficiency Virus), is expected to be about 500 000 by the end of 1992. It is estimated that between 300 and 400 people are being infected with HIV every day (Crewe, 1992). These estimates are projections based on HIV statistics drawn from blood donor services, sexually transmitted disease clinics, family planning clinics, antenatal clinics and voluntary test sites). In South Africa the epidemic has become largely heterosexual, as in the rest of Africa. It is affecting mainly, but not exclusively, black people (Schoub, 1992).

According to Schoub the following are some of the key issues confronting South Africa in its second decade of dealing with AIDS :

1. Fear of infection by casual contact has increased dramatically, even though this fear is medically unfounded.

2. Fear of occupationally acquired HIV, especially in the medical fields, has increased.

3. The potentially disastrous economic implications of the pandemic are becoming apparent.

4. Nevertheless, "doomsday" predictions of some forecasters appear to be premature because although many people will die, the population will not be decimated.

5. There is slow progress in developing effective anti-HIV drugs and those that do exist prolong life, they do not save it.

6. Even if a vaccine were developed, the cost of producing the vaccine and distributing it would be daunting.

7. The control of AIDS should focus on primary health care programmes involving education, condom distribution and more effective management of STD's.

Commenting on limiting the spread of HIV and AIDS, Schoub (1992, p55) has the following to say :

"At present, control of the epidemic is based on the premises that the the virus is not readily transmissable and that entrenched population behavioural characteristics and practices are amenable to modification. Two goals need to be reached to achieve this - awareness and empowerment."

To this end he notes the need for a number of issues to be addressed, namely poverty and overcrowding, the economic dependancy of women which promotes prostitution, as well as social conditions like single sex hostels, migrant labour and long distance trucking. Without addressing these issues, education in itself may be insufficient to bring about behaviour change. Despite these problems, Schoub says, education has led to

behaviour change and increased condom usage in well motivated and empowered populations such as gay men in the USA and to some extent in heterosexual populations in Uganda (1992).

1.1.4 Statistics

Figures released by the Department of National Health and Population Development in July 1992 reveal that by October 1992 the number of reported AIDS cases (as opposed to HIV cases) was 1 517 (of whom 457 had died) and since the beginning of 1992, 210 new PWA's (people with AIDS) had been diagnosed. It is important to realise that these figures highlight that clinical AIDS is underreported and underdiagnosed. Furthermore, AIDS figures tell us only that these people were infected on average seven to ten years ago - they do not tell us about current HIV infections. In the Department's figures the male to female ratio was about 1:1 and it was furthermore noted that the heterosexual spread of HIV was accompanied by a corresponding increase in paediatric HIV and AIDS (Department of National Health and Population Development press release, 1992).

1.1.5 Predictions

One of the most widely recognised South African models for predicting HIV prevalence is that of Peter Doyle of Metropolitan Life (Crewe, 1992). He has developed two scenarios : a high projection scenario based on HIV data from other African countries which assumes no behaviour change; and a low projection scenario which assumes significant changes in sexual behaviour 12 years into the epidemic. Even if the second scenario proves to be accurate, AIDS will present South Africa with a massive human tragedy, with more than four and a half million HIV positive South Africans by the year 2005 and nearly two and a half million AIDS-related deaths by that time. As serious as these figures are, though, they refute the "doomsday" scenarios which envisage the

demise of a majority of the population, thereby presenting the problem as intractable.

1.2 RATIONALE FOR THIS STUDY

AIDS is easily the most severe health problem of this century and as we enter the second decade of the disease it is evident that only two things will alter the nature of this pandemic - either social scientists must find a way of changing people's attitudes to the disease through education and social change or there will have to be the discovery of a cure or treatment which no longer makes the disease fatal. Since the consensus is that there probably will not be a therapeutic vaccine (a preventive vaccine seems impossible at this stage) before the turn of the century, the only way to prevent deaths is to find a way of changing the way all people feel about the disease, the way they conduct their relationships and sexual lives, and transforming attitudes towards people who are already infected. The "epidemic of fear ", instigated and proliferated by the mass media, has been reported in many areas to have been more damaging to education efforts than the biological pathogen itself (Watney, 1987).

By changing the attitudes towards the disease and those already infected, it may be possible to create a climate of openness to sex, sexuality, relationships and all those stigmatised by the virus (either the infected or those close to them). In such a climate it may be possible to educate openly and honestly about transmission without fear of rebuke from governments and conservative elements within societies. Similarly, by removing the stigma attached to the infected, the uninfected may see that anyone could be vulnerable to the disease (not just the marginalised), leading hopefully to changes in sexual practices.

Healthworkers have always been at the forefront of this epidemic, firstly in identifying the causative agent of the mysterious new immune deficiency, and secondly in treating the infected. Because of their proximity to the disease in a professional sense, healthworkers have always seen themselves as being particularly

vulnerable. Within this context there has been extreme fear around the possibilities of transmission through working with HIV patients. The fact that the risks to healthworkers have been shown to be exceedingly small has not succeeded in altering this perception. Healthworkers tend to reflect the attitudes of the broader society from which they come. Because they feel vulnerable and because they work with PWA's, healthworkers are often identified as targets for AIDS education.
By examining the knowledge of healthworkers about AIDS, their attitudes to AIDS (and to homosexuality and the sexuality of black people) this study will attempt to understand whether these variables are open to change through education and how these sets of beliefs and attitudes may impinge on their work. Thus, the study may have implications for education in general, for the education of healthworkers in particular, and for understanding the way attitudes may co-vary.

The City Health Community AIDS Information and Support Centre conducts a three-day AIDS education programme to address not only the need for information on AIDS but to challenge attitudes and stereotyping about AIDS.

This then is the background to the study. Chapter two will examine the literature on the themes relating to the study, chapter three presents the methodology, chapter four presents the results, chapter five discusses the results, contextualises them, and provides a conclusion to the study.

2 LITERATURE REVIEW

2.1 INTRODUCTION

From the introduction to this study it is clear that a wide range of issues are pertinent in attempting to confront the AIDS epidemic in South Africa. This study focuses on one aspect of the epidemic, namely the effectiveness of education in addressing the stigma and blame associated with AIDS. What follows is a review of the literature relevant to attitudes to people with HIV and AIDS. In this literature review a range of themes are examined, including attitudes to AIDS, education and attitude change, and research on healthworkers.

2.2 AIDS - ORIGINS OF BLAME AND STIGMA

This section deals broadly with the social labelling associated with the AIDS epidemic and covers several specific areas in which stigma is prevalent. When looking at AIDS and at AIDS education we need to understand how it has come to be conceptualised.

"AIDS challenges more than medicine. Because it is deadly, because it continues to spread quickly, because it is linked to the controversial subjects of sex and drugs, and also because, in the developed world at least, it arose first among gay men and heroin addicts, it provokes deep and complicated feelings in nearly everyone, and those feelings when extended across a society, have political and social consequences. As AIDS moves across the world, it tests each country's ability to act responsibly - or even sanely - in the face of catastrophe" (Stoddard in Carter and Watney 1989, p95).

It is not unusual to conceive of illness as political, for as Altman (1986, p9) says

"even when we recognise the political dimension to health care and research - for example, the fact that prevention of lead poisoning or curing sickle-cell anaemia is less glamorous and less well financed than heart transplants - it is still difficult to conceive of disease itself as a political construct".

He argues that a general tendency is to fluctuate between three models of disease, seeing it as the consequence of random micro-organisms, personal behaviour or socioeconomic factors. However, there is also a powerful tradition of construing epidemics (eg. Black Death) as the result of social collapse and degeneracy. AIDS is the supreme example of this and it is clear that the way AIDS has been perceived, conceptualised, imagined, researched and funded makes it the most political of diseases. There are a number of reasons for this.

AIDS has occurred at a time when modern medicine had made dramatic progress - it was believed to be winning the battle against disease. Ironically, this progress meant it could identify the complex HIV virus and its effect on the immune system. However, the belief that modern medicine could control or cure any disease meant that with the advent of AIDS, pressure was placed on governments to do something about it. This led to disputes about resources, and indeed about theories of origin.

Furthermore, the fact that those groups in society who were initially most affected by AIDS, eg. homosexuals, drug users and prostitutes (or sex workers), were marginalised added to the "politicisation" of the disease.

2.2.1 Homosexuality

One group affected most severely by the epidemic in Europe and America (and initially here in South Africa) consisted of homosexual or bisexual men. One consequence of this was that it lead to the conceptualisation of AIDS as a disease of the "other". As Altman (1986, p12) notes

"The epidemiology and the social response to AIDS are both bound up with major changes in the way in which homosexuality is socially constructed in the Western world."

He sees this as a transition from seeing homosexuality as a behaviour to viewing it as an identity and lifestyle. This emergence of homosexuals as a social, cultural and political minority allowed gay people to organise around AIDS, but ironically also to be blamed for it. Indeed, one of the disease's first names was GRID (Gay Related Immune Deficiency) - as if there was something intrinsic to homosexuality that made gay people susceptible to AIDS. A Harvard neurologist wrote

"Why are homosexuals susceptible? My own guess is that they do, indeed, have a special immune configuration based on the sex hormone status during pregnancy which probably has parallel effects, ie. both in altering the sexual orientation and also affecting the immune system" (Altman, 1986, p35).

Although AIDS workers no longer speak of high risk groups, this concept persists. It was assumed that simply belonging to that group put one at risk for HIV. This allowed many people to distance themselves from HIV and also to call for sanctions (quarantine, compulsory testing) against those groups. In this way it was hoped that the "general population" could be saved from AIDS. More recently, the AIDS fraternity speaks of high risk situations or high risk behaviours, hoping not to moralise about people's sexual lives (or to make assumptions about their at-riskness) but to give them information which can help them to have safer sex.

Even this has proved to be controversial, however, because institutions like the church (and those who work with the youth, for example) recommend abstinence as a means of prevention against HIV infection. To promote safer sex, in their view, is to promote sex. This has aroused much controversy.

2.2.2 Sexual practices and behaviour

AIDS is thus firmly linked to sex, although obviously this is not the only way the virus is transmitted. What Sontag (1989) calls "diseases of passion" share certain characteristics: they are ambiguous in origin; they are sufficiently lingering to seem an expression of personality; and they are not highly infectious, seeming to single out specific individual's for judgement and guilt.

AIDS has always been associated with "promiscuity", largely because most of the early infections were indeed in people who had had many sexual partners. However, the consequence of this has been to label all people with HIV and AIDS as "promiscuous", a misnomer because even one unsafe sexual encounter with someone who is HIV positive can allow for transmission of the virus.

Furthermore, this perception allowed people who were not necessarily "promiscuous" to regard themselves as safe from HIV. In addition, there is the problem of defining "promiscuous", which could range from only one sexual experience outside a monogamous relationship to 100 partners a month.

Thus AIDS came to be associated with two controversial issues, homosexuality and promiscuity. This politicised the disease because those who were thought to be homosexual or promiscuous were judged and blamed for starting and spreading AIDS. Implied in this was a distancing process whereby the "general population" saw itself as not being at risk, as long as those groups were isolated and controlled. A similar process was involved in

perceiving AIDS as being linked to those of a different race group or nationality. Here, issues of geography, colonisation and racism predominate.

2.2.3 American versus African origin

One peculiarity about AIDS is that it has been seen by non-Americans as an American disease, Altman (1986) asserts, and therefore something which is imported to other countries from the decadent US. This obsession with finding the "origin" of AIDS leads to blame and finger-pointing. Here in South Africa, the acronym AIDS is said by many black South Africans to stand for "American Idea to Destroy Sex".

However, in America AIDS has consistently been labelled not only as a gay disease but also as an "African" or "Haitian" disease.

"This alleged origin was very much in line with the white American notion that blacks are inherently different, and therefore have a different relationship to the disease. The fact that AIDS was found among heterosexuals in Haiti (and Africa) was cited as evidence that Haiti (or Africa) was the source of the disease. Heterosexual transmission was at first labelled by investigators a more 'primitive' or 'atavistic' stage of the development of AIDS. The pattern of infection in the US, where the disease existed among only marginal groups, was seen to characterise a later phase of the disease's history. It was only in 'higher' cultures that the disease was limited to such specific groups" (Crewe, 1992, p11).

By perceiving AIDS in this way, Americans were able in some way to rationalise their lack of response to a burgeoning epidemic. If the disease was a phenomenon of black and other marginalised people then there was no real danger to the general population. It could justify doing very little about AIDS because there would be no pressure to do so. It seems that it was anathema for the most sophisticated (and thus most developed and "civilised")

nation in the world to confront a disease which was sexually transmitted and which led to painful, undignified and incoherent death. As Patton (in Carter and Watney 1989, p187) has noted,

"The unconscious belief that a strange new virus could not have arisen from the germ-free West led researchers on a fantastic voyage in search of the origins of HIV first in Haiti and then in Africa".

So the dominant myths regarding the origins of AIDS reflect the racism of white first-world culture as well as more generalised homophobia. Nowhere is this more clear than in South Africa. When AIDS only affected the gay community, the rest of society was able to turn a blind eye. When it became evident that like the rest of Africa, AIDS in South Africa was becoming a heterosexual disease, blacks were blamed for spreading the disease through

"gross sexual licence, the collapse of the family structure and the migration from other countries" (Crewe, 1992, p16).

Hence, much of the reporting on AIDS in the early years of the epidemic alluded to a unique strain of AIDS called "African AIDS". This was clearly racist but fed into Western notions of "darkest" Africa where standards and morals were "obviously" lower.

But not only have some elements in society been seen to be blameworthy, conversely there have been others who were seen as not culpable in any way.

2.2.4 Guilt and innocence

Because some people were given HIV infected blood (usually haemophiliacs but also blood transfusion recipients and infants who were infected through blood by their mothers either during pregnancy or at birth) the distinction between "innocent" and "guilty" arose. This is an issue of particular importance for healthworkers who might contract HIV through needle-stick

injuries. They are seen as being "innocent" because they have been infected in the course of humanitarian work. Those who had contracted HIV through sex and drug use were the "guilty". This has led to victimisation of many PWA's and to the double burden of being infected and simultaneously being blamed for one's infection.

2.2.5 AIDS and religion

One consequence of AIDS' association with sex, guilt, "otherness" and marginalised groups has been the resurgence of moral crusaders who see AIDS as a form of divine retribution against sinners and unbelievers. A doctor, writing in the Southern Medical Journal (Altman, 1986, p66), commented

"A logical conclusion is that AIDS is a self-inflicted disorder for the majority of those who suffer from it. For again, without placing reproach upon haemophiliacs or Haitians (once regarded as a high risk group), we see homosexual men reaping not only expected consequences of sexual promiscuity, suffering even as promiscuous heterosexuals the usual venereal diseases, but other unusual consequences as well. Perhaps then, homosexuality is not 'alternative' behaviour at all, but as the ancient wisdom of the Bible states, most certainly pathologic. Indeed, from an empirical perspective alone, current scientific observation seems to require the conclusion that homosexuality is a pathologic condition".

The emergence of AIDS coincided in the US with the politicisation of religious fundamentalism, expressed in groups like Moral Majority. Traditional values were seen as being under siege by these groups as the 1970's and 1980's saw the culmination of greater sexual freedom.

Thus AIDS was seen as God's way of reminding mankind that there was a need for a return to biblical values, to family values, to abstinence and monogamy. Consequently, anyone who did not conform to this philosophy was seen as an unacceptable member of society. So religion was invoked to blame and condemn PWA's.

2.2.6 Media representations

Some commentators contend that the way AIDS has been represented by the media, by scientists and by politicians is in fact a campaign to strengthen rather than to lessen stigma and blame. According to Carter and Watney (1989, p19)

"the widespread resistance to acknowledging the long-established fact of heterosexual transmission is not simply an example of 'ignorance' or 'misinformation': it stems directly from the ideological construction of AIDS as emblematic of otherness. Indeed, the complex history of AIDS-related legislation and official AIDS publicity demonstrates time and time again that the epidemic has been used to articulate values and beliefs that have nothing to do with AIDS. In effect, health education has been recruited to the prior purposes of political and ideological struggle".

The media are often a centralised source of definitions of what people are like in any given society. The HIV virus, like all viruses one of the simplest forms of life on the planet, has been used by a wide variety of groups to articulate a host of issues and concerns, consciously and unconsciously. Media translators fall prey to elisions and simplifications : their use of terms like "AIDS test", "promiscuity", "AIDS carrier" tends to distort the scientific facts and their social implications. Media "science" articulates the same old prejudices in new "objective" language. Science reporters pretend that activists and right wing fanatics have "politicised" AIDS, yet do not acknowledge the political implications of the way the media carve out the AIDS information landscape.

The way AIDS is reported on in the media has led to the development of a whole language of AIDS, through which various agendas are transmitted. Hence we read of "gay plagues", we come to associate HIV with war metaphors, we see only images of thin and deathly people (thereby conflating HIV and AIDS), and the virus becomes personified in ways which give it intent and a mission. One of the most glaring examples of this is the use of the word "victim". As already discussed, this word has been rejected by PWA's and AIDS workers worldwide for it implies passivity, dependance, helplessness and defeat. Furthermore, it has been easy to blame these "victims" for their plight - not only are they (physically) sick, but depraved too. As Crewe (1992, p14) notes

"to be able to blame others is psychologically reassuring: the fact that it is their fault divides 'us' from 'them'. We are innocent - at the mercy of fate - they are guilty, and have behaved in such a way as to put all of us at risk. Thus the desire to know the origin of the disease is in fact the desire to be assured that we are not at fault, that we have been invaded from without, polluted by some external agent."

This desire to know the origin of the disease has led to two main concerns - firstly to locate and isolate the infected (mainly through testing but also through the concept of notification) and secondly to find the source of the virus in a biological sense. Thus the history of AIDS has been marked by a need to blame, leading to stigmatisation of those who have become infected with HIV. At this point it is helpful to examine how social constructions of blame and stigma are internalised.

2.2.7 The public and stigma

Herek and Glunt (1988) researched public reactions to AIDS, which they came to call an epidemic of stigma.

"A stigma is a mark of shame or discredit. The focus of social psychological research on stigma is not on the mark itself, however, so much as on the social relationships in which a particular mark is defined as shameful or discrediting" (Herek and Glunt, 1988, p886).

The authors say that AIDS is stigmatised because serious diseases are often stigmatised and because it has come to be associated with groups which are already stigmatised. On the former point they come to two conclusions :

1. AIDS is incurable and progressive and transmissable. Therefore people with HIV are seen as putting others at risk, as having inflicted the virus on themselves and as upsettingly disfigured when in the late stages of AIDS.

2. AIDS confronts the noninfected with the reality of death, a fundamental anxiety.

According to Schutz (in Herek and Glunt, 1988, p887)

"the pragmatic objective of daily life (the 'natural attitude') is to construct experiences that avoid this fundamental anxiety".

AIDS-related stigmatisation represents such a construction: healthy individuals distance themselves from death by defining the illness as an affliction of others. With some serious illnesses, such attempts to maintain the natural attitude lead to attributions of individual character flaws to diseased persons. Cancer patients, for example, are portrayed as repressing emotions or lacking the will to be well. Although considerable victim-blaming on the basis of individual characteristics has also

occurred with AIDS, blaming the social groups to which most Americans with AIDS belong has been much more common.

AIDS has predominantly affected groups where there is pre-existing stigma. Consequently, the stigma attached to AIDS as an illness is layered upon this pre-existing stigma. The result is that as public perceptions of AIDS become inextricably tied to perceptions of the groups among which it is most prevalent, the stigma of disease and death become attached to the groups themselves. AIDS has become a symbol: reactions to AIDS are often synonymous with reactions to gay men, drug users, racial minorities, or outsiders in general.

Because of its prevalence amongst already stigmatised groups, AIDS can easily be exploited for ideological and political purposes. The American government's initial slow response to AIDS can be understood in part as a response to this politicisation of stigma (Altman, 1986).

2.2.8 The individual psychology of stigma

One of the consequences of the anxiety that AIDS evokes is that individual judgements and decisions associated with AIDS (such as decisions around risk behaviour) are often made under conditions of anxiety and are thus likely to be defective. AIDS anxiety may lead people to believe that not enough time remains to weigh carefully the strengths and weaknesses of various solutions to an AIDS-related problem. This belief is likely to foster a hypervigilant style of decision making in which the easiest or most readily available perceived solution is embraced precipitously without considering its consequences. For example, an overestimation of HIV's infectiousness could (through hypervigilance) lead to calls for quarantine of all HIV positive people without really considering the flaws of such an option. Public misunderstanding of scientists' use of probabilistic statements in describing HIV risks further complicates the problem. A scientist, for example, might accurately state that

the risk of HIV transmission through saliva is theoretically possible but extremely unlikely, since as a person trained to know that the null hypothesis cannot be proved, the scientist will refrain from saying that such transmission is impossible. Lay people may misinterpret this phrasing, however, to mean that such transmission is possible or somewhat likely and may adopt a heuristic of "better safe than sorry" or "you can't be too careful" to guide their behaviour.

When looking at AIDS and already stigmatised minorities, Herek and Glunt (1988) talk of the utility of a functional approach to heterosexuals' attitudes towards lesbians and gay men. Within this perspective, attitudes are understood according to the psychological needs they meet. Anti-gay attitudes appear to fit into two broad functional categories. First, anti-gay attitudes can help a heterosexual person to fit experiences (past or anticipated) with lesbians and gay men into existing cognitive categories, thereby guiding future behaviour with the goal of maximising benefit to oneself (for example, by confirming one's own normality). Second, expressing anti-gay attitudes can help an individual to increase self-esteem, reduce anxiety, or secure social support (Herek and Glunt, 1988).

The psychological functions served by attitudes concerning AIDS may be closely related to those served by attitudes towards gay people. For example, PWA's may be assigned to a cognitive category already existing for gay people and the affect resulting from negative experiences with gay peple may be transferred to PWA's. Negative stereotypes of gay people (eg. as preying on young people) may be imputed to PWA's as well. Alternatively, a fundamentalist Christian might condemn homosexuality as a way of affirming her or his sense of self as a good Christian and thereby increasing self-esteem. AIDS might be interpreted as God's punishment for homosexuality, and expressing a similar condemnation for people with AIDS might bolster self-esteem. Or a person whose hostility towards gay people is based on unresolved intrapsychic conflicts may experience similar anxieties associated

with AIDS. Since AIDS links homosexuality with death, it may offer a focus for anxieties associated with both.

So stigma may serve a number of functions. It may allow for self-protection if one believes that all people with HIV should be avoided. It may guide behaviour and enhance self esteem and it may reduce anxiety.

2.2.9 Research findings on stigma

Having briefly examined the individual dynamics of stigma in a theoretical sense, it would be valuable at this point to review some research findings on stigma in relation to HIV and AIDS.

Henry, Campbell and Willenbring (1990), for example, found that the following variables were highly correlated with positive behaviours and attitudes towards people with AIDS (PWA's) : lower homophobic scores, higher AIDS knowledge scores, expressed confidence in medical information and a greater number of previous contacts with PWA's. Also, those with a family member or close friend with AIDS also showed positive behaviours and attitudes. This suggests that if people are already more tolerant of homosexuality, if they are informed about AIDS, if they believe in the medical information on AIDS and if they have some personal experience of PWA's then they are less stigmatising of PWA's. It would seem that such people are changed by personal experiences with AIDS and thus more open to examining their beliefs.

Another study revealed that high school students who had persistent anxieties about social contacts with HIV infected persons also condoned social ostracism of such people in numerous comments (Skurnick, Johnson and Quinones, 1991). Again the implication is that lack of contact with PWA's could lead to fear and a greater need for social distance. Or conversely, the students used social distance to protect themselves from confronting very real anxieties about AIDS.

A study by Galt, Gillies and Wilson (1989) looked at the knowledge and attitudes of young adults in Britain towards AIDS. Their results showed that the majority were well informed about the main transmission routes and how to avoid infection. However, confusion existed about some aspects, including transmission via blood and saliva. Many did not show sympathy for PWA's who are homosexual or IVDU's (intravenous drug users). Most believed they were not at risk of contacting HIV, including those whose sexual behaviour put them at risk. This could suggest that information per se may not be sufficient to allay fears and that some fears persist in spite of this information. Information also does not always lead to behaviour change. It would appear that by holding on to their beliefs about gays and drug users, young adults are able to deny their own risks and responsibilities.

An interesting Swiss study (Haettich, Helminger and Hornung, 1992) looked at the predictors of discrimination towards people with HIV and AIDS. A random sample of Swiss citizens between 20 and 70 were interviewed face to face using a specially constructed sum index of nine bipolar rating scales. To test for the effect of the social category, four variants (heterosexual, homosexual, IVDU and haemophiliac PWA's) were rotated randomly throughout the sample. The IVDU was evaluated most negatively, only slightly more negatively than the homosexual. The most favourable evaluation was given to the haemophiliac. In every case example, societal authoritarianism was one of the strongest predictors of high discrimination. Interpersonal mistrust had a great influence regarding the IV drug user and the heterosexual variants. Knowing someone with HIV/AIDS, sex, religion and knowledge about transmission were significant predictors in rating the different social categories. Again, social distance seems to play a role in attitudes towards PWA's. Also, the more conservative and rigid one is, the greater the chance of one judging others.

Another stigma study was conducted in California by Grusky, Mearns and Smith (1992). The aim of the research was to construct a theoretically-based measure of people's stigmatisation of individual's with AIDS based on Jones et al's six dimensions of stigma : concealability,

course or outcome, disruptiveness, aesthetic qualities, origin and peril. The assessment of undergraduate opinions was based on this scale as well as a social distance scale, behavioural change questions and AIDS knowledge. Stigma, social distance and behaviour change were moderately intercorrelated with each other. Social distance was negatively correlated with both stigma and behaviour change. Stigma and behaviour change were positively correlated. Individuals scoring high in stigma reported being less willing to accept being in contact with PWA's, and they reported engaging in more behavioural changes to avoid coming into contact with HIV. The authors concluded that

"the revised 30-item stigma scale exhibited adequate internal consistency, as well as significant correlations in the expected direction with criterion measures. The scale was also uncorrelated with the Marlowe Crowne social desirability scale. This research suggests that the stigma scale can be used as a unitary measure of people's attitudes towards PWA's" (Grusky et al 1992, pD523).

This study would seem to confirm the one's already quoted.

Bouton, Gallaher and Garlinghouse, (1987) constructed two scales, one for measuring attitudes towards the fear of AIDS and one for measuring attitudes towards homosexuality, using Thurstone's method of equal-appearing intervals. They were then given to university students to determine their respective reliabilities. Factor analyses were also done to determine what factors underlie the attitudes measured by the two scales and to determine if fear of AIDS and homophobia are in fact simply two facets of the same attitude: fear of homosexuals. The results indicated high reliabilities of both scales and a relatively low correlation between the two scales suggesting that the scales do measure different attitudes.
This study has important implications because if homophobia and "AIDSphobia" are separate phenomena then how is that at times they co-exist? In addition, it would seem to conflict with the findings of Henry et al, as outlined above. Certainly, his

findings have implications for this research report which examines correlations between AIDSphobia and homophobia.

2.2.10 South African studies

A few studies have been conducted in South Africa which have also looked at stigma and HIV/AIDS.

Joffe (1992) looked at the concept of otherness (relating to AIDS) in a society which had pre-existing divisions (South Africa). She found that most of the whites in her study thought AIDS originated in Africa and most of the black people thought it originated in the US, England or the West. One third of the sample associated the spread of HIV with inter-racial sex, and one fifth with inter-racial living. Two thirds of the whites believed AIDS was most prevalent among black South Africans. However, a third of the black respondents thought it most prevalent among white South Africans. Once more, it appears that people deal with their fears about AIDS by projecting these onto other people in society, people who are the most different from them. Interestingly, people who transgress social barriers may be seen as the conduits of infection.

Mathews, Kuhn and Metcalf (1990) looked at knowledge, attitudes and beliefs about AIDS in township school students in Cape Town. The key findings of their study may be summarised as follows :

1. Most students had heard of AIDS and the majority knew it was infectious.

2. More than half were confused or lacked knowledge about the modes of transmission.

3. Two-thirds believed AIDS could be prevented but knowledge of prevention strategies was superficial.

4. Two-thirds were not aware that AIDS was incurable.

5. Students did not acknowledge that AIDS could affect them directly.

6. They attributed AIDS to prostitutes and 'promiscuous people' in 36,4% of the responses and to 'white' people in 23,8% of responses.

7. They expressed intolerance, fear and rejection of PWA's and only 6,4% would accept an infected person into their classrooms.

Mathews et al (1990, p515) note that

"stigmatisation of disease often resolves in denial of personal risk. The results indicate that students will show intolerance, fear and rejection towards PWA's based on their feelings at present. Education needs to instil a non-discriminatory attitude towards people with the disease".

It seems, then, that South African studies show that South Africans invoke the same defences (as people from other countries) when dealing with AIDS but that these are overlaid with issues of race. In sum, these studies reveal that there are complex interrelations in the different attitudes towards AIDS and that ultimately a crucial factor determining attitudes seem to be the defence against admitting personal risk.

2.2.11 Attitude change

Given these levels of stigma, and given that there is an acceptance that there is a need to address stigma if the spread of HIV is to be limited, what can be done? Herek and Glunt (1988, p889) write :

"because of the dialectical relationship between ideologies and individual attitudes, any attempt to eradicate AIDS-related stigma must target both levels. AIDS education programmes must be designed not only to impart information to individuals but also to reduce the stigma attached to AIDS. Public policy must not only respond to the technical issues of treatment and prevention but must also help to establish clear social norms of respect and compassion for HIV-infected persons".

On the issue of changing attitudes, the authors note that to the extent that individuals respond to AIDS primarily as a threat to personal well being (their own or that of their loved ones), they will be most influenced by educational programmes that clearly present factual information about AIDS in a context that reduces anxiety while explicitly countering the misuse of cognitive heuristics. Furthermore, such programmes should address pre-existing stigma because facts in themselves do not.

"AIDS-related stigma is a problem for all of society. It imposes severe hardships on the people who are its targets, and it ultimately interferes with treating and preventing HIV infection. By attacking AIDS-related stigma, we create a social climate conducive to a rational, effective and compassionate response to this epidemic" (Herek and Glunt, 1988, p890).

2.3 HEALTH/AIDS EDUCATION

In the absence of a cure, and recognising that isolation of the infected is neither practical nor morally acceptable, the worldwide response to the AIDS pandemic has been to use education to prevent infection and lessen stigma.

AIDS education needs to be seen in the context of general health education. Tones (1990, p2) has defined health education as

"any planned activity which promotes health or illness-related learning, ie. some relatively permanent change in an individual's competence or disposition. Effective health education may produce changes in understanding or ways of thinking; it may bring about some shift in belief or attitude; it may influence or clarify values; it may facilitate the acquisition of skills and it may even effect changes in behaviour or lifestyle."

Thus most health education needs to take into account broader societal issues rather than merely focusing on behaviour change in disempowered individuals.

2.3.1 Principles of health education

French (1990) has listed the underlying principles of ideal health education as follows :

(a) client involvement in planning and evaluation;
(b) promotion of self esteem and autonomy;
(c) non-coercion and voluntarism;
(d) sensitivity to social, economic and environmental factors;
(e) the valuing of others;
(f) continuous evaluation; and
(g) responsibility for the accuracy of information and the appropriateness of methods used.

Thus health education should try to facilitate genuine free choice rather than coerce or persuade. However, genuine free choice is quite rare and is limited by factors such as "learned helplessness", low self esteem, addictions and structural barriers that exist in all unequal societies. One consequence of ignoring structural barriers is to blame the individual for his or her plight rather than the contexts in which he or she finds himself (Tones, 1990, p2). This is known as victim blaming.

Another goal of health education is to avoid messages which engender fear. Janis and Feshbach (1953) have noted that fear-based education may reduce the effectiveness of giving information, as people may avoid messages which arouse fear. Fear-generating information is unacceptable unless behaviour change can reduce the emotional tension produced. Excessive arousal of fear was, for example, found to be counter-productive in a national drug-abuse information campaign (Sherr, 1990).

Similarly, health campaigns which go beyond the simple presentation of information may offend the target audience in some way, allowing them to distance themselves from pertinent messages. For example, a study of smoking prevention campaigns in Canada between 1981 and 1985 showed that highly defensive high-risk audiences may reject a media programme on the slightest pretext.

"A particular turn of phrase or momentary loss of interest can generate negative attitudes that persist for the remainder of the programme and beyond. Such audiences were particularly critical of attempts at dramatic characterisation and of the realism or relevance of dramatic situations. They suspected all but the plainest of statistical evidence and were apt to detect a preaching or patronising approach where none could conceivably have been intended" (Baggaley in WHO, 1991, p28).

2.3.2 Health education models

A framework for understanding health education models, suggested by Taylor (1990), is based on two dimensions, the nature of knowledge and the nature of society. This leads to a postulation of four models :

1. The traditional perspective which is expert-based, didactic, founded on the belief that information leads to behaviour change and sees health as a social product.

2. The humanist perspective which is underpinned by the belief that individuals develop skills, understanding and awareness through participative learning and can use rational thinking to change the way they act.

3. The radical humanist perspective which aims to raise consciousness and decrease alienation caused by our socialisation. Health education is concerned here with facilitating and supporting the formation of community-based groups to provide a theoretical analysis of the relationship between health, illness and economic class structure. Health education is linked to initiatives which challenge capitalism.

4. The radical structuralist perspective which aims to provide a theoretical analysis of the relationship between health, illness and economic class structure. Health education is linked to initiatives which challenge capitalism.

2.3.3 The health belief model

One health model which has been explicitly tested in relation to AIDS and HIV is the health belief model (HBM). Using Taylor's framework it could be said to be a humanist model because it relies upon the individual's ability to think and act rationally. It also assumes that people can rise above structural limitations through awareness and information.

Within this model four factors account for variation in health behaviour - perceived susecptibility (vulnerability to threat), perceived benefits (effectiveness of one's own strategies), perceived severity (seriousness of the threat) and perceived barriers (the possible negative consequences of health actions). In an attempt to improve the predictive ability of the HBM the concept of self-efficacy has been incorporated, ie. the individual's perception that he or she can successfully execute the behaviour required to produce desired outcomes. With regard to HIV, it has been found by Brown, DiClemente and Reynolds (1991

that the HBM performed considerably less adequately than had been reported for other health behaviours. Brown et al (1991, p57) concluded that

"perhaps the HIV epidemic is a phenomenon that does not neatly fit within the psychological paradigm of the HBM, at least not with the degree of predictive validity necessary to plan prevention programmes."

The HBM may be limited in relation to the AIDS epidemic because it seems to fail to address issues which may underpin the spread of HIV, namely poverty, poor education and health care, unequal power relations between the sexes, racism, sexism, social decay and stigma. Hence even if one could perceive AIDS as a threat, if one was forced into prostitution for economic reasons, one might not be in a position to act on that perception.

2.3.4 Ideology and AIDS education

Education, and especially AIDS education, often claims to be free of any bias or slant. This is clearly not the case. Watney (in Carter and Watney, 1986) contends that most AIDS education reinforces the construction of negative attitudes to AIDS and people with the HIV virus. There are, in his view, two basic approaches to AIDS education, the Terrorist model and the Missionary model.

In the Terrorist model, HIV is regarded as an external invader and an illegal immigrant. From this perspective people with HIV are called AIDS carriers, harbingers of a deadly disease. The only solution to this invasion is to invoke the so called AIDS test (so called because the test is for the HIV virus not the disease AIDS) to root out all the carriers. This thinking is based on the belief that all people with HIV can be detected and the epidemic thereby halted. In this model HIV testing is regarded as a means of primary prevention rather than as a measure of access to health care. The approach is justified on the grounds that it protects the general population while ignoring the needs and rights of

infected individuals. Quarantine and punitive measures abound in this model because people with HIV are a problem for society. Once infected, a person loses his or her membership of this society. The primary focus of this model is on the 'otherness' of PWA's. It is a reductionist view, seeing all those living with the virus as having a unitary set of symptoms. It completely ignores the huge variety of symptoms which PWA's display and it sees all of them as being on the brink of death. By their otherness people with HIV and AIDS lose their right to participate in society. This thinking is not foreign to our country which has for decades denied black people's basic rights on the basis of their otherness.

The Missionary model perceives HIV as an evil spirit which takes over its "victims" through immorality, bestiality, unnatural acts and ungodly practices. The solution to this is a return to the traditional values of Judeo-Christian morality and its core institutions, marriage and the family. Chastity or a monogamous heterosexual marriage are thus invoked as a protection against sinners and deviants who threaten the divine order. A primarily moral solution will thus save the pure from the depraved. If HIV and AIDS are seen as divine retribution or part of the natural order then PWA's have only themselves to blame.

Both models are able to draw on local cultural and ideological constructions in idiosyncratic and unpredictable ways. This has meant introducing conflicting messages and measures to combat AIDS. Britain's government-run AIDS programme has been described as low-profile, anti-interventionist and neo-liberal. Yet at the same time the Department of Health and the Department of Education and Science have felt sufficiently confident to step in and censor education materials produced by the government's own Health Education Authority on the grounds that they do not toe the moral line (Watney in Carter and Watney, 1989).

Similar examples abound here in South Africa (Crewe, 1992) :

1. AIDS educators are told they can tell young people about the transmission of HIV (including sexual transmission) but they may not talk about condoms lest they encourage premarital sex.

2. AIDS educators may tell prisoners about AIDS and the value of condoms but they may not distribute condoms because officially sex does not occur in prisons (and sex between men is illegal).

3. AIDS training packages are produced for schools but individual teachers may be allowed to choose which modules they wish to teach depending on their relative discomfort with the material.

4. Explicit AIDS education materials are produced for people who have heterosexual sex but when similar explicitness is demonstrated in material for the gay community then there are cautions about promoting homosexuality.

5. Religious leaders present monogamy within the context of a socially sanctioned bond and question the safety of condoms. By doing so they suggest that the only form of safer sex is sex that occurs within a momogamous heterosexual marriage.

6. The State campaigns emphasise the need to reduce the number of partners. The implication here is that the fewer sexual partners one has, the less the risk of infection. The message ignores the fact that a single "unsafe" act with an infected person is sufficient to transmit the virus. A more accurate and clearer message would state that it is what you do sexually, not how many times you do it or with how many partners, that determines the risk of infection.

It would appear, then, that South African AIDS education strategies adopt some of the thinking of both the missionary and terrorist model. They do so by presenting AIDS as something which will not happen to the general population and by invoking moral and religious norms as a protection against infection. There is

implied judgement of people with HIV and AIDS as being un-Christian, immoral and anti-family.

It appears that South African government education programmes are not so much interested in limiting the spread of HIV as in limiting the amount and type of sex that people are having. They have struggled to grasp the notion of "safer sex" (irrespective of how often or between whom it takes place) versus "less sex". Individuals need information which can help to limit risk, information which does not imply a judgement of whether that sex is heterosexual or homosexual, frequent or infrequent.

"The problem is that to 'reduce the number of partners' is an epidemiologist's message, relevant to rates of infection in the overall population, but irrelevant to the individual who wants to eliminate risk" (Crewe, 1992, p62).

It would appear that another government concern in South Africa has been not to offend white people. Publicly, most South African whites have very conservative attitudes about sex, and express moral objections to explicit safer sex campaigns and the promotion of condoms. In addition to posters, the State produced pamphlets in all languages which, because they were not evaluated before being distributed, were largely rejected by the target audience because of faulty, inaccurate and insensitive translation (Crewe, 1992).

Thus AIDS education abroad and here in South Africa has been located within ideological frameworks which are not value free and which reflect the dominant ideologies in these societies. If AIDS programmes are aimed at changing behaviour and attitudes they may in fact be subverting their own intentions. One needs to adopt a critical approach to the evaluation of these programmes.

The education course under study, run by the Community AIDS Information and Support Centre, encompasses elements of both the humanist and radical humanist models in that it looks both at rational thinking at an individual level and at structural issues. It is critical of dominant ideologies and endeavours to give its participants an insight into how societies construct realities and how individuals perpetuate these realities.

2.4 EVALUATION OF AIDS EDUCATION PROGRAMMES

Having examined some of the ideological and theoretical underpinnings of AIDS education programmes it is appropriate to review specific programmes and to see how and why they worked. This will help to explain some of the difficulties in addressing the problem of attitude change.

It is, however, extremely difficult to evaluate the success of education programmes. As Levine (1991, p157) has noted, evaluating the outcomes of AIDS education

"is complicated for many reasons : the difficulty in establishing which intervention, if any, makes a difference; the difficulty in determining the effect of other messages in the background; the problems of establishing controls where it is unethical to withhold prevention information from one group; the problem of generalising; rapidly changing norms; the difficulty in following up reported behaviour change and the problems of assessing any self-reported behaviour change."

Despite these problems, it is imperative to evaluate programmes to understand their effectiveness.

There have been many studies looking at change in attitude to AIDS (and changes in knowledge and risk behaviour) as a result of education of some kind. A very brief review of some studies of AIDS education in the non-health worker population follows. This

review categorises the studies primarily in terms of the way they attempted to change attitudes and beliefs.

2.4.1 Cognitive-based programmes

Bell, Feldman and Grissom (1990) found that hour-long AIDS education sessions resulted in knowledge acquisition and increased confidence among a demographically representative sample of 3966 US trainees. This study recommended that such sessions take into account affective dimensions because this might allow the improved confidence to persist. A problem with this study was that it did not follow up the reported changes.

Platt, Iguchi and Mathis (1992) found that when a cognitively-based skills training programme ("Training in Interpersonal Problem-Solving") was used over eight sessions with a group of intravenous drug users,

"underlying thinking skills could be significantly improved along a dimension related to generating optional ways of coping with high risk situations" (pD448).

Hence these drug users were able to use rational ways of reducing their risks of contacting HIV through their habit. It seems that by offering the sessions over time, even a purely cognitive programme could have some impact.

Strauss et al looked at the impact of an interdisciplinary university course on AIDS which focussed on how societies deal with contagion, stigma, disability, death, social stratification and access to scarce resources. A pre and post course questionnaire was administered to the students who attended the course, which involved weekly lectures, readings and a graduate seminar. Although the students were found at the beginning of the course to be more informed about AIDS than a national sample of US persons aged 18 to 29, they still showed concern about contracting HIV through sharing eating utensils (7%), eating in a restaurant

where the cook has the virus (6%), being coughed or sneezed on by an infected person (8%) and about infection from mosquitoes (10%). This relatively low level of precourse concern was reduced during the course.

In addition, this same study found that attitudes towards the rights of health workers to refuse to care for people infected with HIV changed over the course. There was a significant reduction in the percentage of those who indicated that physicians (-13,7%) and nurses (-13,5%) had such a right. Further attitude changes were found, demonstrating by the course end increased understanding and tolerance for persons who are HIV positive. The particular session of the course most highly ranked was "The human side of AIDS", in which a panel of PWA's discussed the problems they had encountered with their disease.

This study revealed a number of important points : that even where AIDS knowledge was high, prejudiced attitudes persisted; that these attitudes could change through an exchange of ideas; that some kind of experiential input (eg, by meeting with and talking to PWA's) gave greater impetus to attitude change; and that education over time is more powerful than a one-off session.

These points were confirmed in a study by Ordonana, Gutierez and Martinez (1992) which found that a short term intervention on AIDS (four sessions) was effective in increasing knowledge in a group of high school students, but had little or no effect on attitudes or behaviour.

On the other hand, community discussion groups focussing on information, attitudes and high risk behaviour conducted in one-off three-and-a-half hour long sessions resulted in significant positive shifts in all these dimensions (Miller, Booraem and Flowers, 1990).

These cognitive programmes seem to suggest that there is some effectiveness in a discussion-type approach in changing attitudes. An exchange of ideas and an appeal to intellectual and rational understandings can work, although perhaps more effectively in a population which is already reasonably educated. However, it

seems that time is an issue - longer courses of education may produce greater change. Furthermore, when an affective or experiential component is included in cognitive programmes, they are greatly strengthened.

2.4.2 Participative programmes

These programmes go beyond the presentation and discussion of ideas and allow the participants to interact with each other through a variety of techniques and simulations to challenge attitudes.

Gross (in Berger, 1991) reported that interactive teaching methods (adult education with goal setting, games, exercises and group work) were more successful than didactic methods (lectures, case studies) in increasing HIV/AIDS knowledge.

Smith and Katner (1992) assessed the relative effectiveness of three AIDS prevention strategies (role plays, questions and answers, a PWA presentation) in improving knowledge, attitudes and behaviours. The high school students who participated in the study were assigned to three groups, one group participated in role plays, another in a question and answer session and the third in a PWA presentation. They were evaluated on knowledge, attitudes and practices (ie. intentions to take on safer practices relating to AIDS) immediately after the intervention and at five weeks. The role players perceived their intervention as the more worthwhile, more interesting and less embarrassing and evidenced the greatest positive changes in risk behaviours and attitudes.

While this would appear to contradict a previous conclusion that PWA presentations are effective, it adds another dimension, that of experiential learning. By playing roles and games, it seems that one is forced to admit new perceptions to one's mind set about AIDS. It might also suggest that a combination of educative techniques is the most powerful intervention.

2.4.3 PWA-based programmes

As was suggested by Strauss et al's programme, the use of PWA's to assist with HIV/AIDS education is important.

A Kenyan study by Muriuki, Dar and Valdez (1992) showed that the use of people with HIV as educators and facilitators in AIDS education programmes allowed for changes in behaviour and attitudes, mainly through the success a group of such educators had in becoming an established AIDS Service Organisation. Such recognition by the Kenyan authorities is accorded only to organisations which were found to be effective in their work, suggesting that the direct involvement of PWA's in the programme contributed to its efficacy.

2.4.4 Drama-based programmes

Evidence of the power of exploring different educative techniques was revealed in an evaluation of the effect of drama on attitudes to AIDS. McEwan, Bhopal and Patton (1991) found that there was attitude change to a range of HIV and AIDS-related issues (condom usage, safer sex, risk factors, behaviour change) because drama appealed more to affective rather than cognitive thought processes. The drama sought to empower young people rather than simply impart information.

By now it should be clear that one technique on its own may not be sufficient to challenge attitudes and that if educators are to make any headway in informing and challenging people about AIDS they need to employ a range and variety of approaches.

2.5 HIV TESTING AS EDUCATION

Having looked at programmes formally aimed at education, it is also valuable to examine, briefly, other interventions which have an impact on knowledge, attitudes and behaviour. In a sense, these interventions are an extension of experiential interventions and may also be seen as a variation on PWA programmes. In both these interventions (the experiential and the PWA), participants are encouraged to imagine what it would be like to be HIV positive. Similarly, having the HIV test is a way of going through this process.

For example, Gumsiriza, Onen and Bitarabeho (1992) found that significant differences in responses (increased condom usage, reduction in sexual partners and a marked difference in attitudes) six months after pre and post HIV test counselling and education were reported by clients attending an AIDS information centre in Kampala. However this was not the case in a study by Unda, Feliciano and Ofasu-Barko (1992) which found that while there was an increase in knowledge and an improved attitude to people with HIV/AIDS after pre and post test counselling, there was not a significant change in the sexual behaviour.

According to Plasencia (1992), confrontation in the form of the option of HIV testing with pre and post test counselling after a talk on AIDS (in a corporate setting) was a powerful tool in changing attitudes.

"People were confronted with personal questioning of their own risk behaviour, personal involvement in test decision-making and with the empowering of self-responsibility. Attitudes changed and people became involved" (pD464).

The corporation assumed its responsibility to make AIDS information and condoms available; it guaranteed confidentiality by contacting an outside agency to do the testing; it avoided stigma, making it [testing] corporation policy required of all. The authors noted how there was still a tendency to regard the

person with HIV or AIDS as the "other", the "libertine, the degenerate, the prostitute" (pD464).

This short discussion illustrates the power of experiencing an HIV test. It reveals the potential strength of an educative technique which may be able to replicate a situation in which the individual is forced to challenge the idea that he or she is not at risk for HIV.

2.6 HEALTH WORKERS AND HIV/AIDS

This section of the literature review focuses on specific attempts to challenge attitudes and beliefs of healthworkers. This focus may reveal if there are any difficulties or issues which are peculiar to this community. An additional consideration when reviewing education of healthworkers lies in their potential to split off their public and private life experiences. In focusing on the risks within their professional work settings (risks which have been demonstrated to be extremely small), such workers may more readily avoid examining their risk behaviours in terms of personal sexual practices, and may displace anxiety with regard to the latter on to the former. Thus education of healthworkers may offer particular challenges.

2.6.1 The personal/professional divide

Walker and Aggelton (1992) studied the interface between professional and scientific understandings of HIV/AIDS and student nurses' lay beliefs and anxieties about HIV disease. The data was collected fr_ ›emi-structured small group interviews in six colleges of nursing. The following themes emerged from the data :

(a) nurses believe themselves to be relatively well informed and the majority of their information about HIV/AIDS is gathered from the media;

(b) risk is seen almost exclusively in professional terms;

(c) the idea that 'AIDS is everywhere' is prevalent (interestingly, this does not get translated into a fear of contracting HIV through sex but rather the fears are focussed in the workplace, perhaps because this is a less stigmatised way of contracting HIV);

(d) distinctions are made between those labelled "innocent" and "guilty"; and

(e) students feel they receive very little support in relation to dealing with "difficult situations" or when feeling unwell themselves.

The authors suggest that only when both personal as well as professional issues are addressed can researchers begin to have a greater understanding of nurses' responses to AIDS.

Thus as Walker and Aggelton have noted, nurses construct a personal and professional divide in their evalution of their own at riskness for contracting HIV. They see their primary risks as being professional and thus related to the workplace. By so doing they do not have to take on the issue of their own sexuality and thereby confront their relationships and their inner conflicts around sex, death and morality. This may well be true of health workers in general.

Furthermore, health workers are reluctant to challenge their attitudes and beliefs about AIDS because this allows them to distance themselves from people with HIV and AIDS, confirming the "otherness" of the infected. Health professionals may see it as acceptable to contract HIV through, for example, a needlestick injury (pricking themselves with a hypodermic needle after injecting a patient), while stitching a wound or by cutting themselves with a scalpel, as opposed to through a sexual relationship. The protocols for needlestick injuries are well established, but some health workers do not follow them (eg. by

not having the HIV test after the exposure to establish a baseline HIV status) because for the first time they may have to confront their sexual behaviour and the implications of being HIV positive. They also confront being on the receiving end of the very attitudes they have helped to perpetuate.

One consequence of this reluctance to integrate private and professional risk is that health workers exaggerate the risks they are exposed to. Although these risks are real, only some 28 to 41 healthworkers have been documented worldwide to have been infected occupationally (Schoub, 1992). Universal infection control procedures have been devised to protect health workers but many nurses and doctors persist in using their own judgement in deciding who they regard as potentially HIV positive.

Another consequence of the perception of risk is the call by health workers, especially doctors (Crewe, 1992), for the right to test all patients for HIV, irrespective of whether they give consent or not. Some doctors are already illegally testing patients without their consent. They claim that if they know a patient is HIV positive they will then be more careful. As Crewe (1992, p27) notes

"The response to this must surely be that doctors should presumably be uniformly careful, regardless of the HIV status of their patients".

Worldwide, there are very few documented cases of doctors contracting HIV through their work, and the World Health Organisation (WHO) estimates the risk to be high in only 2% of surgical procedures. In addition, WHO indicates that the risk of acquiring HIV infection in related health care areas is also low. At some American hospitals, surgeons who run a high risk of contracting Hepatitis B (a blood-borne virus that annually infects 25 000 health workers and kills approximately 300 worldwide) refuse to operate on people with HIV. In America there is not a single reported case of HIV being transmitted in the operating room; only doctors and nurses who care for patients day after day,

and laboratory technicians who are constantly exposed to the live virus have been infected (Goldstein in Carter and Watney, 1989).

Worldwide figures over a ten-year period for health workers contracting HIV in the course of their duties are very, very low. Nevertheless, there are doctors both in the US and in South Africa who have emerged as spokespeople for surgeons refusing to operate on patients with HIV. One local doctor was cheered by students for his "anti-HIV" stance at a debate at Wits Medical School as recently as May 1991 (Crewe, 1992).

Seen from this perspective, it is clear that health workers are not exposed to unreasonably high risks in the workplace. Yet they, like the rest of society, have attitudinal problems with AIDS and people with HIV. Unlike the rest of society, however, they can draw on their profesional risks to avoid an examination of the risk behaviour in their personal lives. For this reason health education on AIDS aimed at health workers needs to vigorously challenge stigma and blame and their social constructions. In addition, if health professionals can be encouraged to acknowledge their own non-professional risk behaviours, they may be more likely to identify with PWA's rather than distancing from them, as evidenced by some of the previous studies cited.

Examples of discrimination against people with HIV and AIDS are legion. Healthworker-related examples (Altman, 1986, p62) are also plentiful.

"Confirmation that such practices were not isolated examples came from the journal 'Emergency Medicine', which in addition to itemising such abuses pointed to the way in which medical staff, by using precautions far beyond those which are necessary to avoid contamination by bodily fluids - some staff would wear gloves and masks just to enter an AIDS patient's room - cause psychological and emotional problems for both those with AIDS and their visitors".

In a summary of the 1990 International Conference on AIDS in San Francisco the following points on health workers were made :

(a) surveys among health care personnel revealed that health care practices and clinical decision-making were strongly influenced by attitudes and beliefs or perceptions (Berger, 1991);

(b) Kass (in Berger, 1991) reported that denial of health care to homosexual men because of their HIV positive status or diagnosis was not an insignificant problem;

(c) other surveys (Berger, 1991), including those of medical and dental students and nurses, demonstrated wide variances in attitudes and beliefs - and consequently, care practices; and

(d) conference presentations at San Francisco found that a disturbing number of physicians and health care professionals were found to hold negative attitudes towards members of the major risk groups.

One of the clear conclusions to be drawn from this summary is that attitudes have implications for care and practice in health settings. Health care personnel allowed these personal opinions to cloud their professional judgement. Furthermore, the negative attitudes toward "high-risk groups" also meant that healthworkers were unable to envisage personal risk.

In an evaluation of one-day courses run at the launch of the AIDS Centre at the South African Institute of Medical Research in 1988, it was found that of those who rated themselves as highly anxious about being in contact with people with HIV or AIDS, 57,1% were nurses. Sherr, Christie and Sher (1989, p359) state

"it seems that there is some extreme anxiety among health care workers, in particular nurses, which may need addressing urgently".

This illustrates the need for interventions to address the knowledge and beliefs of healthworkers in South Africa. An extra problem here is the racism which often underpins AIDS attitudes - linking HIV and its spread to the "licentiousness" of black people.

In recent years a number of investigations into the attitudes of health workers to AIDS (and their knowledge of AIDS) have been conducted.

2.6.2 Attitudes of healthworkers in general

Guerra, Barollo and Figueira (1992) evaluated health care personnel's perceptions about AIDS, PWA's, their professional role and its consequences on the appearance of occupational stress and burnout. They found that the impact of caring for PWA's was :

(a) an increased workload (PWA's were seen as "demanding, aggressive and non-cooperative"); and

(b) increased mental strain (fear of contagion, difficulties with terminal issues, prejudice).

The authors felt that nurses stigmatised PWA's because of their perceptions of the contagion-related behaviour of PWA's as unacceptable.

Godin, Croteau and Fortin (1992) performed a study of the factors influencing the intention of healthworkers to perform a specific professional act if the HIV status of the patient was unknown. Their results suggested that the one way to decrease the number of healthworkers who do not intend to carry out a particular prescribed professional act, would be to reinforce the importance of behaving according to one's professional code of ethics. However this would not be enough and it was suggested that promotion programmes specific to each healthworker group should be developed. This study also suggests that appealing to "professionalism" is insufficient to address the problem of attitudes and bias.

In a study of the correlation between perceptions of HIV risk and knowledge and experience of AIDS in the Philippines (Balis, Santana and Monzon, 1992), it transpired that hospital workers who worked in a hospital where they had some training on AIDS but no actual experience of working with PWA's, had the highest risk perception of AIDS. This suggests that the information the workers had been given had raised fears and increased the perception of being at risk for HIV/AIDS without addressing those fears in a significant way. This points to a need for education which is contextual and realistic in its assessment of HIV risks. Information in itself may not be sufficient to change attitudes. Furthermore, the hospital workers in one of the hospitals studied where training had happened and there was experience of working with PWA's, did not perceive themselves so much at risk - suggesting that actually working with PWA's can have a positive effect on attitudes. It also implies that this is a demystifying process, allowing healthworkers to confront fears in meeting people with HIV and AIDS.

2.6.3 Attitudes of medical students and doctors

Simon, Weyant and Asabagi (1990) found that the intention to make themselves available to treat HIV infected persons in medical students in the US was correlated significantly with : knowledge of HIV transmission; comfort in providing a physical examination on patients from subgroups with a high HIV prevalence; low level of homophobia and professional altruism. It would appear that if medical students and doctors are more enlightened they are less fearful of PWA's.

It might also be possible that the medical student population, being younger than doctors in practice, is less stigmatising of minorities in general. Another hypothesis is that the training of medical students is becoming more orientated to wholistic care (locating disease in social conditions) as opposed to purely curative care and a narrow conceptualisation of disease.

This hypothesis, that doctors in practice might be more conservative than medical students, would seem to be borne out in a study of Norwegian physicians by Lie, Husdal and Martens (1992). The authors examined the attitudes of these physicians to ethical issues in relation to HIV and AIDS. They found that 59% would give information to sexual partners of HIV positive people against their wishes, 43% were in favour of mandatory testing of people in high risk groups, 10% were in favour of quarantine under certain circumstances, 13% felt that the police should have a list of HIV positive people in their district, 10% believed homosexuality to be immoral and 34% that it is unnatural, 25% would not accept that HIV positive people could be employed in professions that involved food handling and 12% indicated that deep kissing carried a high risk of infection.

These data suggest that a high number of primary care physicians favour quite restrictive infection control measures, that such beliefs are associated with negative attitudes towards homosexuality, and that misconceptions concerning infectiousness are still prevalent among physicians.

Similar findings emerged in a study of the role of general practitioners (GP's) in the care of HIV patients. Lazzaretto, de Bertolini and Baldo (1992) found that 78% found themselves poorly trained to deal with their patients and could not conduct sexual or psychological counselling. The relational difficulties were related to hidden prejudices.

More evidence that doctors overrate the risk to themselves in working with HIV was revealed in a survey by Taylor and White (1992). They examined perceptions of Canadian physicians of HIV/AIDS related risks and benefits versus physicians' rights and obligations. They found that :

(a) 76% said AIDS had no/small impact on their professional lives;
(b) 57% said AIDS care was socially valuable work;
(c) 44% said it was emotionally or intellectually gratifying;
(d) 42% said it would advance their careers;
(e) 49% said physicians are obliged to treat all PWA's;
(f) 75% said physicians have the right to refuse elective surgery for PWA's;
(g) 96% said they had never refused to treat a patient with AIDS (those who had, cited fear of AIDS or lack of expertise);
(h) 54% worried about acquiring HIV in the workplace and 25% of this group regarded it as high risk;
(i) 72% would not tell others if a physician was HIV positive;
(j) 25% said HIV positive physicians would have impaired medical judgement; and
(k) 10% said there was a major risk to patients of being infected by HIV positive physicians.

Interestingly, while being prepared to limit some PWA rights (eg by refusing to perform elective surgery), the physicians were protective of other physicians who might be infected (72% would not inform others of a physician's HIV positive status). This suggests that there is a perception that someone who contracted HIV occupationally (and we have seen that this is rare) has more rights than someone who contracted it sexually.

On the other hand a survey of medical students' beliefs about the rights of physicians with HIV (Culbert and Strunin, 1992) conducted in four Massachusetts medical schools found that 34% felt that such physicians should not be allowed to perform surgery or complete physical examinations of patients. This group was more likely to be male and to believe that HIV is transmitted from donating blood, sharing utensils and french kissing. They believed that someone who tests positive for HIV should not be allowed to go to medical school and that an HIV test should be a criterion for entering medical school. They also indicated that hospitals should

be both allowed and required to test physicians for HIV, and that hospitals should revoke privileges of physicians with HIV.

These results would suggest that those already working in the field are more likely to be tolerant of colleagues with HIV, as opposed to students who wanted, perhaps, to ensure that they would not have to work alongside infected colleagues.

The students in the study also felt that they had a right to refuse care to PWA's both during medical school and as physicians, and that the AIDS epidemic would influence their choice of hospital for residency and their decision to practice clinical medicine.

It would seem that medical students and doctors may hold relatively conservative ideas and display a strong need to protect their rights over those of PWA's. Where they had more liberal ideas, there was a greater parity in these relative rights.

2.6.4 Attitudes of nurses

Anderson (in Berger, 1991) surveyed attitudes of 136 rural and 311 urban nurses in Colorado. Differences on knowledge, attitudes and reported practices were found to exist between the 2 groups - in general the urban-based nurses were more comfortable with PWA's. It was noted, however, that these differences diminished when nurses (either rural or urban) had spent equal numbers of hours caring for PWA's. The authors suggest that clinical mini-sabbaticals be instituted to provide an opportunity for nurses in rural areas to spend time with PWA's. Thus exposure to PWA's helped to allay fears and reduce prejudice.

In a similar study, Elvin (1992) surveyed two populations of American nurses in an urban and suburban setting, and found that a majority of both groups reported fear of contagion and gaps in knowledge. Fear of contagion decreased with increase in knowledge and in the presence of ongoing education.

A four-year longitudinal analysis of knowledge, attitudes and practices of community health nurses in California by Leapley (1992) examined cognitive (knowledge), affective (attitude) and behavioural (practice) responses. Knowledge of symptoms and low risk practices improved over the four years and such change was more significant in nurses with more formal education and more attendance at professional lectures/conferences. Formal and continuing education demonstrated a significant impact on changes in HIV/AIDS knowledge, attitude and practice.

In these three examples, there is evidence that unfamiliarity leads to fear and stigma and that information helps to allay fears too. The studies also suggest that pre-existing stigma results in a refusal to become familiar with PWA's.

In a more in-depth study, Giami and Veil (1992) looked at nurses' representations of AIDS and of people with HIV and AIDS through semi-structured interviews with 74 nurses who had nursed PWA's. They also interviewed 25 social workers who had had mainly "verbal" contact with such persons. A comparative analysis was made of discourse, metaphors and intrapsychic defence mechanisms. They found that

"Among nurses, primary representations persist wherein HIV/AIDS is immediately associated with death, which in turn, is considered a punishment for deviant behaviour. In contrast to other means of transmission (in which nurses do not seem to strongly believe), the sexual dimension is primordial, in these representations. The latter evolve during contacts with HIV positive patients. As AIDS gradually comes to be seen as a serious, chronic illness with a fatal outcome, nurses feel helpless amd overwhelmed. Their representations distinguish between 'good' and 'bad' patients as a function of both the mode of transmission and of patients' attitudes while in treatment in health-care institutions. The representation of the 'homosexual' is complicated, lying on the borderline between the 'bad patient' responsible for being infected and the 'good patient' who cooperates in care and

participates in protecting the professionals against the risks of professional contamination. At last, when a strong patient-nurse relationship forms, representations gradually stop distinguishing between the infected on the basis of group affiliations and the origin of the contamination as well as between PWA's and persons suffering from other illnesses with a similar evolution" (Giami et al, 1992, pD523).

Some important conclusions can be drawn from this study; ie. that there are problems with death, homosexuality and blame; and that ultimately it is when a relationship develops over time that these prejudices and constructions break down.

An even more intensive study conducted on similar lines was carried out by Breault and Polifroni (1992). This qualitative, non-experimental study attempted to identify the feelings and attitudes that nurses associate with caring for PWA's. The cognitive dissonance theory of Festinger served as the theoretical framework to view the experience of caring for someone with AIDS.

The theory is based on the assumption that people want to maintain consistency in their beliefs, attitudes, values and behaviours. If individuals confront examples of their own inconsistency in these areas, they will experience psychological discomfort and be motivated to eliminate the inconsistency. With regard to AIDS, the conflict between the cognitions "I care for AIDS patients" and "AIDS is a fatal, communicable disease" could be viewed as inconsistent, or dissonant, leading to psychological discomfort. The magnitude of the dissonance between these two elements is a function of the importance of the elements to the individual. For example, the dissonance experienced may be tempered by the extent to which that person also feels that it is his or her duty to care for all patients, regardlesss of diagnosis or risk involved. Festinger states that, because dissonance is psychologically uncomfortable, people will be motivated to try to reduce it, and achieve consonance.

This can be accomplished by (a) changing a behavioural cognitive element (eg. refusing to care for AIDS patients); (b) changing an environmental cognitive element (eg. by accepting the need for universal infection control precautions); or (c) adding new cognitive elements (eg. finding out new information about AIDS).

Data analysis of audiotaped, semi-structured interviews resulted in the identification of six mutually inclusive as well as exclusive themes which represent the attitudes and feelings of nurses : fear, anger, sympathy, self-enhancement, fatigue and helplessness. Particularly evident were differences in the way respondents perceived and treated PWA's who were intravenous drug users and those who were homosexuals.

These themes are to be considered in some detail as they explore with clarity and depth some core issues related to this research.

Fear was operationally defined by the researcher as any expression of anxiety, apprehension, fright or concern associated with caring for PWA's. All subjects reported some degree of fear and perceived risk associated with caring for PWA's. It was not uncommon to hear concern about putting spouses and children at risk. Within this context, respondents also "looked ahead" and experienced some anxiety regarding the potential risks to children that they may decide to have in later life. When asked why subjects cared for PWA's in what they considered at least a minimally risky situation, five of the 16 indicated that they cared for PWA's because it was part of the job. The remaining 11 dealt with the perceived risk in one of two other ways. Three rationalised the risk by equating it with other unlikely events that could occur, for example being hit by a car. The other eight expressed the belief that the risks were minimal as long as precautions were taken.

Anger was defined as any expressed indignation, displeasure or blame associated with the patient or their chosen lifestyle. The anger expressed by the majority of respondents had little to do with the diagnosis of AIDS per se. In the majority of interviews, anger was associated with the personality and the behaviour of patients; AIDS as a disease phenomenon was irrelevant. There were clear differentiations made between PWA's who were intravenous drug users (IVDU's) or prostitutes and those who were homosexuals. At the more basic level, generalisations focussed on socio-economic and educational levels implying greater social worth to the homosexual population. Anger was primarily directed at IVDU's rather than homosexuals. Respondents differentiated between "good patients" and "bad patients". Good patients (the homosexuals) were compliant, cooperative and pleasant. Bad patients (the IVDU's and prostitutes) were non-compliant, uncooperative, manipulative and difficult.

A second source of anger was the lack of social responsibility assumed by HIV positive drug users and prostitutes. There was a distinction made by respondents between these two groups and homosexuals. Homosexuals were viewed as socially responsible and concerned about protecting others. This was not perceived as being the case among IVDU's and prostitutes, which led to feelings of anger in subjects. Anger was also precipitated by the belief that IVDU's were at least partly responsible for the fact that they contracted HIV. This expression of anger was specific to the IVDU's and prostitutes. In this respect, there was a "leniency" granted to homosexuals represented by the belief that they were not to blame for having AIDS. This finding seems to contrast quite markedly with other findings about attitudes to homosexuality. It would appear that given the presence of other stigmatised and marginalised groups, homosexuals were seen as being more acceptable.

Sympathy was operationally defined as any expression of compassion or pity associated with providing care to PWA's. Sympathy was identified primarily as a consequence of caring for a population of young, terminally ill patients. It was also related to the terrible death that respondents associated with dying from AIDS. Homosexuals with AIDS were seen as more deserving of sympathy and empathy than IVDU's ("I think I feel sorriest for the gay men because I think it just happened to their community and they seem to have done the most in the way of informing and educating themselves and changing lifestyles"). This response appears to be a sophisticated one and one which reflects a politicised insight into the epidemic. In the US, the gay community organised itself significantly in responding to AIDS (eg. through safer sex practices) and so was seen to be visibly participating in limiting the epidemic. It is still interesting, though, that these subjects needed to blame IVDU's and prostitutes - the liberal approach to homosexuals did not generalise to these groups.

Fatigue was defined as any expression of weariness due to prolonged or excessive physical or mental demands placed on the nurse in the course of caring for a PWA. The emotional stress of caring for PWA's was cited by half of the respondents. Specifically cited was the fatigue resulting from caring for a population which is viewed as being 'demanding and unappreciative'. This led to anger and helplessness in some respondents.

Helplessness was operationally defined by the researcher as any expression of powerlessness or impotence relating to providing care to PWA's. The dominant response in this area involved the frustration experienced when confronted with the non-compliance of PWA's. This was especially disturbing in the context of IVDU's and prostitutes who continued to engage in high risk behaviours even though they were HIV positive.

Self-enhancement was operationally defined by the researcher as any expression of those aspects of caring for PWA's which were associated with good feelings in the nurse - the rewarding components of providing care to PWA's. Within this context, respondents identified the positive outcomes of their nursing care as rewarding (eg. the personal satisfaction experienced by making a patient comfortable, seeing a patient able to go home, or helping a patient die with dignity). In addition, there was a sense of personal satisfaction obtained in the knowledge that respondents were able to provide what they perceived as non-judgemental care to a patient population that had suffered the effects of being lonely and stigmatised. It is noteworthy that, in contrast to the other constructs, the feelings of self-enhancement were typically generated by the nurses' own behaviour as opposed to the behaviour of the patient, which was generally shown to lead to anger, helplessness, sympathy and fatigue.

The authors concluded that, unlike previous studies, fear was not a significant factor in the majority of respondents and this was thought to be partly the result of increased knowledge and experience of PWA's. The also felt that while Festinger's cognitive dissonance theory was an appropriate framework from which to view the experience of caring for PWA's with respect to changes in fear, cognitive dissonance theory cannot be used to explain anger, helplessness, sympathy or fatigue. In these themes, the emotion was linked not so much to AIDS but to the nature of the PWA. Thus homosexuals were generally seen as compliant and participative while the IVDU's and prostitutes were not. The subjects were not able to see the latter two groups as victims of society and thus maintained a dissonant attitude. In general, this study shows that nurses do get used to working with PWA's, that they have inconsistent attitudes, that they are guilty of victim blaming and that they derive satisfaction from themselves rather than from their patients.

In contrast to the group of more enlightened nurses surveyed by Breault and Polifroni; Bond, Rhodes and Philips (1990) surveyed over 5 000 community nurses throughout England about their experience, education, knowledge and beliefs in relation to HIV and AIDS. While experience of HIV positive patients or PWA's was limited, one third had encountered patients worried about HIV infection. However, most lacked confidence to provide health education, counselling and terminal care. A quarter felt that they should have the right to refuse to care for PWA's, (23% thought this about patients who were just HIV positive, 15% thought this about homosexual men, bisexual men and injecting drug users and 7% thought this about haemophiliacs). Eighty five percent were concerned about their lack of experience. In their recommendations the authors noted that

"there is a need for targeting inservice education and training on the specific skills, knowledge and attitudes that have been identified as necessary for different types of staff. The fact that such a high proportion of community nursing staff indicated their needs for more HIV-related health education and training leads us to conclude that there is a committed but insecure workforce where HIV is concerned which would be receptive to educational innovations to prepare them for their role in prevention as well as caring for HIV positive patients" (Bond et al 1990, p254).

It is interesting to note that in their recommendations the authors fail to explore the issue of the nurses' risks in their own sexual relationships and they too have been guilty of the professional/personal divide. This is true of most of the studies on nurse attitudes. In sum, the surveys of nurse attitudes and beliefs show that working with PWA's helps break down fears and stereotypes, that information on AIDS helps with this process, that there are inconsistencies in attitudes, that when relationships form with patients there is a softening of attitude and that because nurses are more in the frontline of patient care they are generally less prejudiced than doctors.

2.6.5 Changing healthworker attitudes

There have, by now, been a number of studies of attempts to alter health worker attitudes, knowledge and practices through education and training.

A four month study of 60 registered nurses in the US showed that there were positive changes in knowledge and attitudes as a result of intense instruction on AIDS and PWA care as part of a class in epidemiology. Not only were the nurses better informed about AIDS than previously, but their attitudes towards the disease and patient care had become considerably more liberal (Armstrong-Esther and Hewitt, 1990).

A similar, but less intensive study of preclinical medical students in eastern Virginia in the US who were exposed to a six-hour training workshop showed that there were significant knowledge gains. The group revealed few discriminatory attitudes towards PWA's. However, it was a self-selected group and the researchers noted that generalisations were hard to make from such a group (Johnson, Campbell and Bell, 1990).

Further evidence that education can help to address attitudinal issues was found by Walton, Troutman and Rukeyser (1992). They examined differences in HIV-related concerns between a group of health providers who had attended HIV education programmes and those who were relatively untrained and found that educational intervention was found to be effective in changing the focus of concern from "self-protection" to the "needs of others" and in enhancing providers' willingness and ability to provide care to HIV infected individuals. The data indicated that as providers placed increased trust in transmission information and accepted that the risk of HIV transmission in the workplace, while real, was minimal, they became more receptive to learning the skills necessary in delivering care to patients with HIV infection.

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In the Philippines, Santana, Monzon and Mandell (1992) compared the effectiveness of an AIDS educational intervention among types of hospitals and among different categories of hospital workers in Manila. The intervention consisted of posters, pamphlets, lectures and role plays. Knowledge, attitudes and needle recappings (an infection control measure) were evaluated. They found that the intervention had the least effect on physicians and worked best for nurses, orderlies and laboratory technologists. This would suggest that physicians are less amenable to change because they are not confronted by HIV in such an intense way as are other hospital workers (an emotional distancing happens, perhaps) and also that in hospital hierarchies they perceive themselves as least in need of education.

Spicer (1992) studied the attitudes of registered general nurses and state enrolled nurses to IVDU's. The nurses were given the services of a psychiatric liaison nurse as part of an intervention to assist with attitude issues. They found that nurses' attitudes impacted implicitly and explicitly on the clinical nursing management of IVDU's. Nurses were not always aware of their subversive and punishing behaviour. The introduction of the expert psychiatric nurse enabled the nurses to explore their own feelings towards these patients while confronting the realisation that their behaviour may itself have contributed to the conflict. To develop effective management strategies, caregivers of people with HIV/AIDS need to acknowledge their own values and beliefs and examine the ways in which they impact on delivery of care.

From this survey of the literature on healthworker attitudes, a number of conclusions can be drawn :

a) there are problems with attitudes to PWA's;
b) education and working with PWA's helps to break some of these down;
(c) a facilitated exploration of attitudes impacts on self awareness;

(d) doctors and medical students may be more rigid than nurses;
(e) healthworkers are no less prejudiced than the rest of the population;
(f) healthworkers see their risks as being primarily work related and do not consider their sexual lives as risky;
(g) information on its own is insufficient to challenge beliefs;
(h) attitudes can impact on health care; and
(i) these need to be vigorously challenged in many ways in innovative and dynamic educational programmes.

2.7 ATTITUDE THEORY AND ATTITUDE CHANGE

In this section of the literature review, the researcher will firstly examine the concepts of attitudes and attitude change in general, followed by an examination of a specific theory of attitude formation and change, an information processing theory. While a number of theories may have explanatory value with regard to AIDS, only one is to be considered in any detail. By understanding how attitudes form and change some light may be shed on how attitudes to AIDS, PWA's and marginilised groups can be altered in the most effective way. As Eiser and Van der Pligt (1988, p184) note

"theories of judgement, attitudes, attribution and decision-making can make important contributions to social issues such as the employment of nuclear energy, health behaviour and medical decision-making. These contributions are most clear cut when the frame of reference or psychological perspective of the people being studied is taken seriously and explicitly incorporated in research efforts".

2.7.1 Introduction to attitude theories

Eiser and Van Der Pligt define an attitude as

"a form of experience that (a) refers to specific objects, events, people or issues, and (b) is primarily evaluative. We express our attitudes by describing the objects of our experience in evaluative terms" (p1).

The attitude theorists Fishbein and Ajzen (1975, p6) define an attitude as

"a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object".

Thus an attitude is a way of evaluating our experience of the world - it is the way we learn to approach "objects" in our mental landscape. As is implied in the latter definition, we learn to construct our attitudes through our experience of the world. Attitudes tend to be consistent but are amenable to change because our experiences of the world change too. So, attitudes are consistent, they are predispositions and they are learned. There have been many theories of attitude in this century but for the purposes of this research, six of the major theories are to be examined.

1. Learning theories are concerned with the processes whereby a given response (eg. an attitude) becomes associated with (or conditioned to) a given stimulus (person or object). Most learning is explained in terms of two basic conditioning paradigms, classical conditioning and operant or instrumental conditioning. An example might be a situation where a child has often eaten certain sweets, producing overt responses such as salivating, sucking etc. In addition, an implicit response with a positive evaluative component has been produced with the overt responses. According to learning theories, there will be a

tendency for this implicit response to become associated with the sweets themselves and the child develops a favourable attitude toward the sweet.

2. Expectancy value theories are concerned with how people learn "expectations" ie. beliefs that a given response will be followed by some event. Since these events could be positive or negative "reinforcers", people learn to perform behaviour that they expect to lead to positive events. This approach suggests that attitude formation and change can only be understood in terms of the functions that attitudes serve for the individual. Thus one of this approach's theorists, Rosenberg (in Fishbein and Ajzen, 1975), could say that the more an object could enhance positive goals or block negative goals for a person, the more favourable the person's attitude towards that object.

3. Balance theories, such as Heider's balance theory (Fishbein, 1967) argue that if the attitudes towards a person and an event are similar, the event is easily ascribed to the person. Thus a balanced state exists when the two entities composing a unit have the same "dynamic character", ie. when the person's attitudes or sentiments vis-a-vis the two entities are both positive or negative. Thus in the case of a man whose son has been drafted into an army, a balanced state exists when the man likes the person responsible for the drafting and approves of the draft. Balance theories suggest that there is a tendency in people to strive for this balance.

4. Congruity principle theories have as a starting point an assertion that links two objects of judgement, eg. cigarettes contain nicotine. These assertions or 'coupling actions' may be either associative or dissociative. Here again, attitude is defined in terms of an evaluative or affective dimension. Thus the congruity principle implies that a person's attitude is influenced by his or her belief that the attitude object is related to some attribute and by the evaluation of that attribute.

5. Cognitive dissonance theories discuss the relationship between two cognitive elements, referring to the things a person knows about him or herself, about his or her behaviour and his or her surroundings. Attitudes develop as a result of attempting to reduce dissonance. Because dissonance is psychologically uncomfortable, the person will be motivated to achieve consonance. An example of such dissonance would be a situation where a nurse believes PWA's to be evil but learns to like a particular PWA over a long period. She or he would be forced to change beliefs about PWA's.

6. Attribution theories have as a central concern the subjective probability that a given trait or disposition is associated with a given actor. Attribution theory deals with the perception of causation and the consequences of such perceptions. A distinction has been made between internal and external attribution, ie. a person's behaviour may be attributed to some disposition of the person or to some external factor. In the latter case, no inferences can be made about the person's stable characteristics. Thus attribution theory deals with the formation and change of beliefs, these beliefs being inferences about the cause of observed events or about an actor's stable dispositions.

In general, then, attitudes are usually spoken of as hypothetical constructs, ie. something unobservable which can only be inferred from certain observable responses that reflect positive or negative evaluations of the attitude object. These observable responses may be of three different types (World Health Organisation [WHO], 1989) : cognitive responses (or beliefs), affective responses (or feelings) and conative responses (or behavioural intentions and tendencies).

For instance, an individual's attitude towards AIDS may be inferred from the feelings she or he expresses while discussing AIDS (affective component), from statments he or she makes regarding the seriousness of AIDS as a health problem (cognitive component), and his or her behavioural reactions (eg. refusal to shake hands with strangers or visit clinics for PWA's).

Although attitudes are often viewed as containing all three components or response categories described above, social psychologists usually emphasise the affective or evaluative aspect of attitudes. Beliefs, intentions and behaviours are viewed as related to but conceptually distinct from attitudes. Indeed, these three components have served as bases for the development of three different theoretical orientations to attitude formation and change among social psychologists. Early functional theories stressed the role of attitudes in meeting certain vital needs through mobilisation of inner resources. Later, behaviourally orientated social psychologists defined attitudes as implicit evaluative responses to various stimuli (attitude objects) and tried to explain attitude formation and change in terms of Pavlovian conditioning. More recently, information processing explanations of social behaviour have stressed the role of the cognitive component of attitudes. This formulation of attitudes would seem to be shared by the majority of social psychologists currently working in this field.

2.8 A FRAMEWORK FOR UNDERSTANDING ATTITUDE CHANGE IN THIS STUDY

This study is being conducted within the context of Fishbein and Ajzen's (1975) approach to the formation (and change) of attitudes. This information processing approach takes as its starting point a distinction between attitudes, beliefs, intentions and behaviours and relationships between these variables. A person's attitude towards an object is based on salient beliefs about that object. Beliefs represent the information a person has about the object. If these beliefs associate the object with favourable attributes (as evaluated by the person), the attitude will tend to be positive. Because many people hold both positive and negative beliefs about an object, an attitude is seen as corresponding to the total affect associated with their beliefs.

Similarly, attitude towards an object is related to the person's intention to perform a variety of behaviours with respect to that object. Each intention is viewed as being related to the corresponding behaviour. Barring unforseen events, a person should perform those behaviours he or she intends to perform.

To summarise, a person's attitude is determined by his or her salient beliefs about the object's attributes and by his or her evaluations of those attributes. At any point in time, a person holds a limited number of salient beliefs about any given object, action or event, and those beliefs serve as the primary determinants of his or her attitude towards that object, action or event.

Within the context of this theory, attitudes can be changed by changing one or more of the existing salient beliefs, by introducing new salient beliefs, or by changing the person's evaluations of the attributes.

"Beliefs about the object and attribute evaluations can therefore be viewed as two different determinants of attitude at which an influence attempt can be directed" (Fishbein and Ajzen, 1975, p396).

Changing beliefs can be achieved by personally observing that an object has a given attribute or by being told that the object has the attribute in question. These two alternative ways of directly influencing beliefs correspond to the two basic strategies used in attempts to produce change, namely, active participation and persuasive communication.

Changing attribute evaluations is accomplished in the same way, ie. through influencing evaluations of the attributes.

Thus the two broad approaches to attitude change within this framework are :

(a) active participation; and
(b) persuasive communication.

2.8.1 Active participation

Looking first at active participation, Fishbein and Ajzen argue that an interaction experience allows the participant to directly observe objects, people and events. This situation entails a large number of informational items ie. a large number of object-attribute links. Each informational item corresponds to a proximal belief. Since a person rarely questions his or her own observations, the participation experience is likely to produce changes in many of these proximal beliefs. By changing proximal beliefs, external beliefs may also change, and thus primary beliefs are changed.

"It can thus be argued that the actor, by virtue of his participation in the behavioural situation, acquires new descriptive beliefs about himself, about other people, about the consequences of his or others' behaviours and about his environment - or that he changes some of his existing descriptive beliefs" (Fishbein and Ajzen, 1975, p412).

So as beliefs in the self change, they are generalised to beliefs about others. With change in belief comes change in attitude.

Some active participation techniques suggested by the authors are interpersonal contact, role playing, counterattitudinal behaviour (being forced to adopt a position contrary to one's own) and choice behaviour (based on dissonance approaches where the person is forced to choose between two alternatives and to increase the evaluation of an unfavourable choice to reduce dissonance).

An example of the role playing technique would be a situation where a prejudiced role player has to generate arguments in favour of letting black people move into white neighbourhoods. At the outset, the subject has a hierarchy of beliefs linking integration to positive and negative attributes. The first belief coming to his/her mind might be "integration increases interracial conflict". Since the task is to argue in favour of integration, he/she may either reverse this belief and argue that integration reduces interracial conflict or reject it and consider the next belief in his/her hierarchy. As this process continues, the role player comes to entertain beliefs that were not initially part of his/her salient belief structure.

2.8.2 Persuasive communication

The persuasive communication approach to attitude change provides the person with items of information from some outside source. As the authors note :

"perhaps the most fundamental principle underlying our entire approach to persuasion is our general assumption that man is basically a rational information processor whose beliefs, attitudes, intentions and behaviours are influenced by the information available to him" (Fishbein and Ajzen, 1975, p508).

So, when presented with information from an outside source, a person performs an informational analysis.

"Such an informational amalysis involves specification of informational items or source beliefs, change in corresponding proximal beliefs, impact effects on external beliefs, and change in primary beliefs which provide the informational foundation for the dependent variable" (Fishbein and Ajzen, 1975, p509).

What constitutes a persuasive communication? It is a message consisting of a series of belief statements provided by a source, with each statement linking some object to an attribute, such as another object, a concept, an event or a goal. So each statment is an informational item that represents a source belief. Corresponding to each source belief is the receiver's proximal belief or subjective probability that the object has the attribute specified in the message. If the source belief is accepted, there may be change in the proximal belief (the potential amount of change in proximal belief depends on its discrepancy from the source belief). Similarly, there may be changes in external beliefs and primary beliefs, and finally, attitudes may change.

Fundamentally, change in attitude will occur when the persuasive communicator addresses the range of beliefs a person holds about an object. Hopefully in this process the communicator is able to challenge the beliefs about the object which are most amenable to change and which result in change in attitude. Also important are facilitating factors such as the credibility of the communicator and the type of appeal the communicator uses eg. fear appeals.

Implicit in fear appeals is the assumption that when emotional tension is aroused, the audience will become more highly motivated to accept the reassuring beliefs or recommendations advocated by the communicator. However, the fear appeal may have an adverse effect :

(a) because subjects may be motivated to avoid a message that arouses fear and may thus fail to receive it;

(b) if the communicator is perceived as being responsible for producing the fear, his/her statements may be rejected; and

(c) if the communicator fails to reassure the subject or if the subject fails to provide his/her own reassurance in some other way.

2.8.3 Recent thinking on information processing theories

The WHO (1989) has examined the phenomenon of attitude change from an information processing perspective in its evaluation of AIDS research. It confirms that beliefs representing people's subjective knowledge about themselves and their world are the primary determinants of attitudes. Each belief links the attitude object to a positively or negatively valued attribute. Thus, smoking (the object) causes lung cancer (the attribute). Generally speaking, the greater the number of beliefs associating an object with positive attributes, and the smaller the number of beliefs associating it with negative attributes, the more favourable will be the resultant attitude towards the object. A more precise formulation of this relationship between beliefs and attitudes is provided by expectancy value or expected utility models of attitude. According to these models, the value or utility of each attribute contributes to the attitude in direct proportion to the person's subjective probability (strength of belief) that the object has the attribute in question. So, the more a person believes an object has an attribute, the more that attribute contributes to the attitude.

In view of this growing recognition of the importance of the cognitive component of attitudes, they have come to be treated separately under the title of beliefs. This separation of attitudes and beliefs would seem also to be necessary to take care of attitudinal elements which do not have a clearly specified object as required by the definition of attitude. For instance, there is a large body of evidence indicating that people vary along a continuum of external versus internal attribution of causation in interpreting various events or experiences. Some tend to attribute these events to forces outside of themselves and feel that they are in no position to influence the course of these happenings. Others think that they are personally responsible for what may happen to them and believe that they can influence the course of events by planning, perseveration and personal initiative. This dichotomy of external versus internal locus of control has been found to apply across a wide range of situations

and events, including health and illness. Such a general cognitive framework is further believed to influence the relationship between attitudes and behaviour. For instance, two individuals may have equally negative attitudes to a particular illness and wish to avoid it. The individual with an internal locus of control will probably adopt the necessary preventive measures more quickly and successfully than the individual with an external locus of control who does not believe that one can influence the course of events by taking action. In this scenario, the belief component of the attitude would relate to the general thinking pattern of external versus internal locus of control.

The WHO (1989) has utilised this understanding of attitudes and beliefs to inform its approach to AIDS research. Specifically, it has studied the Knowledge, Attitudes and Practices (KAP) research technique from an information processing perspective.

2.8.4 KAP studies

Knowledge and beliefs, like attitudes, are hypothetical constructs which cannot be directly observed or measured. They are mainly inferred from other observable behaviours, including verbal behaviour or self report. In KAP surveys, respondents' verbal reactions to a series of questions or verbal stimuli are taken as indicative of knowledge, attitudes and beliefs. This kind of assessment is based on two related assumptions : first, that people know (are clearly aware of) what they know, feel and believe about objects or issues in their environment and secondly, that they will be willing and able to share these with an outsider. Although debated for centuries by philosophers, the first assumption is taken almost for granted by both scientists and laymen. Indeed, if this assumption was not reasonably correct, no meaningful dialogue and communication between human beings would have been possible and science, which is primarily dependent on sharing of observations and cumulative experiences could hardly have started (WHO, 1989).

The second assumption is also partly borne out by day to day experience. People are able and often eager to share their experiences with others. Such sharing of knowledge, attitudes, beliefs and practices is, however, often circumscribed by certain cultural norms and social rules of discourse as well as personal traits and experiences. In almost all cultures, there are certain taboo subjects that one is not supposed to enquire about or reveal to others in general. The same topic may, however, be discussed with relative ease and candour in certain social settings (eg. a doctor's office) and with someone who occupies a particular social status (eg. a priest or psychiatrist).

Yet it is always possible for an individual to refrain from reporting his or her experiences or, if forced to do so, to protect himself by falsifying or misreporting his or her verbal report of his knowledge, attitudes, beliefs, plans and intentions. The early experience of Freud with his hysterical patients is clear evidence that even an intense and long term doctor-patient relationship is no guarantee that patients will not grossly distort their reported recollections of some early experiences (WHO, 1989).

KAP surveys are often designed as purely descriptive studies aimed at meeting the information needs of programme administrators who want to obtain some data on the knowledge, attitudes and practices of their target populations before launching an educational campaign. Such purely descriptive studies are, however, seldom entirely lacking in some theoretical orientation or conceptual guideline. In fact, the mere choice of a particular population to be studied and the selection of certain items (rather than others) to be included in the questionnaire usually imply some kind of plan or conceptual analysis, however implicit and vaguely defined it may be. KAP surveys dealing with relatively new social and health issues, are more likely to be of a descriptive, exploratory nature.

KAP surveys can also be of a more analytical nature explicitly designed to test certain hypotheses derived from other observations or a well established theory. Hypotheses currently guiding such analytical KAP surveys are mostly derived from social psychological theories regarding the nature of attitudes and their relationship with behaviour. Among these theories, Ajzen and Fishbein's Reasoned Action Theory and Becker's Health Behaviour Model (WHO, 1989) have received a good deal of attention from social scientists interested in health behaviour. Both of these theories are aimed at explaining the often noted inconsistency between knowledge and attitude, on the one hand, and overt behavioural responses, on the other. For example, why does an intelligent, knowledgable and health seeking student who is well aware of the risks involved in smoking not stop smoking? Why do women who claim to want no more children and both know about and have access to contraceptive methods not use them? Why do well educated young men and women who are perfectly aware of the dangers involved in having unprotected intercourse and have easy access to condoms fail to use them?

2.8.5 Some KAP hypotheses

The WHO (1989, p11) argues that KAP surveys should test a number of important hypotheses, partly derived from a conceptual analysis of the relationship between the major variables covered by these studies and partly taken from the social psychological theories mentioned above. Some of these hypotheses relating to AIDS in particular that can be tested include :

1. There will be a positive association between knowledge of and attitudes to AIDS. People with more detailed and accurate information on the cause and routes of transmission of HIV will demonstrate a more realistically negative attitude towards HIV infection and AIDS. At the same time, individuals with higher levels of knowledge on AIDS will show more positive attitudes, better tolerance and understanding towards people with HIV and AIDS.

2. As better knowledge on AIDS and other health and social issues is largely the result of learning, people who, either because of their socio-economic status or education, have a better access to sources of accurate and unbiased information, will be more likely to demonstrate the favourable attitudes described above. Thus, it is anticipated that measures of formal education and media exposure will correlate positively with measures of AIDS-related knowledge and attitude.

3. The anticipated correlations between measures of knowledge, attitude and education may, however, be significantly affected - if not completely neutralised - by socio-cultural factors emanating from membership in certain religious groups and traditional social organisations.

4. The transition from changes in knowledge and attitudes to modification of target behaviours will be largely determined by an individual's beliefs regarding the imminence and seriousness of the threat implied by present behaviours, and the possibility of controlling such feared consequences through behavioural adaptation. Thus, individuals who do not believe in either AIDS being a serious problem or in their personal vulnerability to HIV infection will be less likely to adopt the behavioural changes they have endorsed as desirable or necessary. Similarly, individuals who believe that their efforts are unlikely to affect the course of events will be less likely to make the necessary efforts.

5. According to currently dominant theories of behaviour modification, behaviour is shaped, maintained and modified by reinforcement, that is environmental events that follow it. It is further believed that most socially significant behaviours are reinforced by responses shown by other members of society, particularly those individuals who constitute the individual's reference group. Thus, people whose close friends or relatives have fallen prey to the AIDS epidemic will be more likely to adopt

required behavioural changes earlier. Similarly, individuals whose close friends have changed their behaviours in response to AIDS are more likely to adopt similar behavioural changes.

These hypotheses are particularly pertinent to this research report and will be utilised in the discussion of results. It will be interesting to see whether knowledge about AIDS correlates with more liberal attitudes to PWA's and other minorities, whether healthworkers are amenable to change in attitude because they are more educated, and whether healthworkers are limited in their ability to change given the nature of their work and their conceptualisation of private versus professional risks.

Further the WHO (1989) comments on two distinct beliefs regarding AIDS and other health problems that are believed to be of major significance in determining behavioural responses: perceived seriousness and cost of the problem and perceived personal vulnerability to that problem. If an individual does not regard AIDS as an important problem and/or does not think that he or she is personally at risk of getting HIV, the chances of changing behaviour in response to AIDS-related publicity will be very low.

Thus within the context of Fishbein and Ajzen's theory (and its recent reworkings) the study hopes to examine :

(a) whether attitudes change and whether changes correlate to increased knowledge; and

(b) which attitudes are more intractable to change and whether the course is able to address these attitudes in any significant way.

In South Africa, AIDS educators are confronted by homophobia, racism (an element not always present in American and European epidemics), sexism and victim blaming. Such factors may impact on attitude change with some complexity.

3. METHODOLOGY

3.1 DATA COLLECTION

3.1.1 The design

This study employed a two factor design, the two factors being group and time interval. Thus a measure (a questionnaire) was administered to an experimental group before an intervention (a three-day AIDS education course) and after the intervention, one month later. The measure was also administered to a control group on two occasions, at one month intervals, to control for plausible confounds.

This between groups comparison attempted to establish whether the intervention succeeded in changing knowledge about AIDS and attitudes to AIDS (as well as attitudes to homosexuality and to the sexuality of black people). Furthermore, it attempted to establish whether these changes, if they occurred, would persist and were not a short term consequence of the AIDS course.

3.1.2 The subjects

The subjects consisted of 51 health workers in the control group and 36 healthworkers in the experimental group.

Subjects for the experimental group were selected on the basis of their presentation for training on the three-day AIDS education programme run by the Community AIDS Information and Support Centre of the Johannesburg City Health Department. This course is run every month at the Centre at 17 Esselen Street in Hillbrow. While the questionnaire was administered to all course attenders, only questionnaires completed by the healthworkers attending the course were used for the research. Subjects were obtained for this group over a five month period, from June 1992 to November 1992. The subjects were representative of all race groups in South Africa

and were all nurses and virtually all women (there were four men).

Subjects for the control group were obtained from the JG Strijdom Hospital in Johannesburg, with permission of the Superintendent of the hospital. They were representative of all departments in the hospital and a cross section of race and language backgrounds was ensured. Each department in the hospital was requested to send one or more representatives on the day when all the data was collected and thus there was no preconceived pattern in the assignment to the control group, within the confines of one hospital. They were also all nurses and virtually all women (there were two men in the sample). The measure was administered in a one month period over September and October 1992.

Because subjects could not be randomly assigned to experimental and control groups, this study takes the form of a quasi-experimental design.

3.1.3 The instrument

The questionnaire used in the study was based on a scale developed by McManus and Morton (1986) to assess knowledge and attitudes of healthworkers in Britain. This scale incorporates three areas of concern : knowledge about AIDS, attitudes to AIDS and attitudes to homosexuality. A further sub-scale has been developed for use in the South African context, attitudes to the sexuality of black people (Eagle and Bedford, 1992). This scale was developed because of suggestions that in South Africa it is black people who have also come to be regarded as a "high risk" group, like homosexuals in Europe and America. In all, there are 54 questions in the questionnaire.

The four sections of the questionnaire cover the following areas:

(a) knowledge about AIDS (questions 1 - 18). This includes general knowledge about AIDS, questions about transmission, symptoms and presentation of AIDS and about the incidence of AIDS in the South African context;

(b) attitudes to AIDS (questions 19, 23, 26, 28, 31, 33, 35, 40, 43, 46, 48 and 50). This includes questions on reponsibility for treatment, moral judgement, fear-based prejudice and the rights of people with HIV and AIDS;

(c) attitudes to homosexuality (questions 20, 21, 24, 27, 30, 34, 37, 39, 45, 49, 51 and 53). This includes questions on the normality or deviance of homosexuality, on moral judgement and the rights of homosexuals; and

(d) attitudes to black sexuality (questions 22, 25, 29, 32, 36, 38, 41, 42, 44, 47, 52 and 54). This includes questions on the degree to which behaviour meets "civilised" standards, moral judgement, the rights of black PWA's and perceptions of normality and deviance.

The first part of the questionnaire consists of the 18 knowledge questions and the latter part is comprised of the 36 attitudinal items in random sequence. It requires approximately 30 minutes for completion. Knowledge questions require a true/false or right/wrong answer, whereas attitudinal questions are rated on a 5-point Likert scale, from strongly disagree (1) to strongly agree (5).

3.1.4 The procedure

The researcher administered the questionnaires himself with co-operation of the course instructors in the case of the experimental group and of a matron of the JG Strijdom Hospital in the case of the control group. Subjects were assured of confidentiality and were urged to respond as honestly as possible. They were told that their responses would be used to help modify AIDS education programmes.

In the case of the experimental group the first administration of the measure was conducted when course attenders presented for the

AIDS education programme. Included with the questionnaire were four biographical questions, excluding name. Approximately one month later, the researcher mailed the same questionnaire to the course attenders, using the registration forms used by the Centre. These were sent with a covering letter restating the aims of the research and its confidentiality. Stamped and addressed envelopes were included with this letter so that respondents would have to go to no extra trouble to return the questionnaire. Only the responses of the healthworkers were used for the purposes of the study. The questionnaires which were returned were "matched" to the "before" questionnaire using the four biographical questions already mentioned. Thus each subject's score for the "before" measure was linked to their score for the "after" measure. Only the scores "matched" in this way were used for the data analysis. This accounts for the reduced sample size.

In the case of the control group, the same group of healthworkers was used for the before and after measure and their responses were "matched" in the same way as those of the experimental group. The administration of questionnaires to the control group was conducted in the same time period as the administration as the experimental group in order to limit other possible influences on the results. (Events in the AIDS world which could have influenced the results obtained include the international conference on AIDS in Amsterdam in July 1992 and the National AIDS Committee of South Africa (NACOSA) conference on AIDS in South Africa in October 1992. There was also some publicity on the HIV/AIDS Charter of Rights, produced by the AIDS Consortium Project based at the Centre for Applied Legal Studies at the University of the Witwatersrand, which was launched in December 1992).

3.1.5 The intervention

The intervention is the three-day AIDS education course run by the Community AIDS Information and Support Centre in Hillbrow. It is run for three full days and attendance at all three days is

required to obtain an attendance certificate. The course is presented by the same presenters every month, an educationist, a doctor, a nurse and a social worker.

The course aims to furnish any person who attends with the necessary skills and training to enable them to educate their communities and the general population about the spread and prevention of HIV and AIDS. Because it is attended by many healthworkers it has tended to develop a bias in this direction. The objectives of the course are to help attenders examine :

(a) the basic facts about HIV and AIDS, including infection, transmission and prevention;
(b) HIV tests and testing issues, especially confidentiality;
(c) misconceptions about AIDS and from where these misconceptions originate;
(d) workplace issues;
(e) human sexuality and how it relates to HIV;
(f) the nature and dynamics of the epidemic;
(g) legal and ethical issues;
(h) how responses to AIDS in the media and the State collaborate with prejudice, racism and discrimination;
(i) socio-political interventions;
(j) strategies and methods for designing HIV education programmes; and
(k) critically evaluation of participant's role as educators.

The course specifically focuses on attitudinal issues and does so in the following way :

1. It examines who should be tested for HIV and why, through discussions in small and large group format.

2. It looks at the issue of voluntarism and victim blaming, also in discussion format. These discussions revolve around how free individuals are to make choices to have safer sex, to become prostitutes (or sex workers) and to limit their partners.

3. It tries to give participants an understanding of the political economy of AIDS and the structural and contextual issues that confront people like migrant workers.

4. It looks at where attitudes come from, at why and how the media shape perceptions and attitudes and why these are so hard to change.

5. It uses social theory (mainly through didactic input) to explain who defines reality, how one's ideological framework is constructed and defined and why this is so hard to challenge.

6. It attempts to examine the phenomenon of blame in the development of conceptualisations of AIDS eg. through discussions of theories of origins of HIV. This discussion is preceded by a controversial video.

7. It uses experiential exercises to encourage attenders to examine their own responses to difficult issues. One such exercise challenges the group to decide who should benefit from the main anti-HIV drug, AZT. In the exercise, the attenders take on roles assigned to them, such roles covering the spectrum of South African society, including so-called "high-risk" groups. Through the subsequent discussion, the attenders are encouraged to analyse their perceptions of the different roles and how their own attitudes cloud their judgement.

8. Attenders are encouraged to examine the private/professional divide and the role of attitudes in this. This is particularly used with healthworkers who tend to see their risk for contracting HIV as being solely linked to the workplace.

9. The course examines legal and ethical issues like notification, contact tracing, pre and post employment testing, State responsibility for caring for PWA's, insurance and the HIV positive person, and the rights of healthworkers versus the rights of their patients.

10. Finally, the course helps attenders to look at confidentiality in various settings (the workplace, clinics, hospitals) and the issues that confront healthworkers.

In terms of information procesing theories and the aspects of attitude change discussed in the literature review, the course is aimed at addressing attitude change in the following way : it is attempting to change attitudes towards an object (eg. a PWA) by changing the salient beliefs about that object. Thus the course directly challenges the notions that PWA's are promiscuous, evil and contaminated. By allowing course attenders to alter these beliefs about PWA's, eg. by beginning to perceive of PWA's as ordinary people, who like anyone else are in need of support and care, attitudes may start to shift.

Furthermore, if course attenders have problems with PWA's because they link the HIV infection to sexual behaviour, by changing the evaluation of this belief and by helping attenders to reframe sexuality as a healthy and normal human function, attitude change may also be facilitated. In addition, by examining the course attender's intention to perform a specific act in relation to the object, eg the intention to treat a PWA in a medical setting, the course hopes to allow healthworkers to reconceptualise the way they treat PWA's. This reflects a change in attitude.

By using experiential exercises the course helps attenders to experience themselves as PWA's. The attender is thus able to see him or herself as acceptable and also as a PWA. This is then generalised to all or most PWA's.

Finally, the course uses communicators and educators who have credibility (they are regarded as experts in their field), who use persuasive rather than coercive techniques and who are skilled in challenging attitudes in a non-judgemental way. While the discussion of results will explore attitude change in more detail, it is evident that elements of the three-day AIDS course attempt to produce attitude change as envisioned in an information processing approach.

3.1.6 Aims of the study

The aims of this study, therefore, are :

(a) to assess whether healthworker attitudes about AIDS are amenable to change through an education course specifically aimed at addressing these issues;

(b) to examine whether there are correlations between the variables of knowledge about AIDS, attitudes to AIDS, attitudes to homosexuality and attitudes to black sexuality; and

(c) to evaluate the usefulness of an information processing model of attitude formation and change in relation to the attitudes of healthworkers.

3.2 DATA ANALYSIS

The questionnaires were coded by the researcher and then subjected to statistical analysis. Since preliminary analysis of the data indicated that the two groups were not different on their pre-intervention measures and furthermore that the distribution of the differences in the scores was approximately normal, one-sample and two-sample T-tests were performed on the data using change scor s. It was also felt that the design was strengthened by being able to "match" each subject's before and after score on the measure.

Correlation coefficients were calculated in each group to establish whether there were correlations between the different elements of the measure. Thus correlations were calculated between the four variables of knowledge of AIDS, attitudes to AIDS, attitudes to homosexuality, and attitudes to black sexuality. The correlations were calculated on the before scores of both groups.

An item analysis was done on each component or sub-scale of the measure and alpha coefficients were computed to ensure that the items were adequately reliable in the sample.

4. RESULTS

Table 1 : Item analyses

Attitudes to AIDS		
	Alpha coefficient	Cronbach's coefficient
Question 19	0.696	0.725
23	0.716	
26	0.716	
28	0.691	
31	0.704	
33	0.695	
35	0.707	
40	0.711	
43	0.686	
46	0.731	
48	0.720	
50	0.708	

If question 46 is removed from the sub-scale, the reliability of the scale improves slightly, to 0.731

Attitudes to homosexuality		
	Alpha coefficient	Cronbach's coefficient
Question 20	0.845	0.858
21	0.851	
24	0.853	
27	0.832	
30	0.850	
34	0.859	
37	0.858	
39	0.838	
45	0.853	
49	0.840	
51	0.834	
53	0.845	

If question 34 is removed from the sub-scale, the reliability coefficient will rise slightly, to 0.859.

Attitudes to black sexuality		
	Alpha coefficient	Cronbach's coefficient
Question 22	0.729	0.763
25	0.739	
29	0.723	
32	0.764	
36	0.735	
38	0.803	
41	0.738	
42	0.717	
44	0.721	
47	0.740	
52	0.729	
54	0.795	

If question 38 is removed from the subscale, the reliability coefficient will rise significantly, to 0.803.

Hence the items seem to correlate well with each other within each attitudinal sub-scale, resulting in high reliability coefficients.

The overall construct validity of the scale as a measure thus appears to be good.

Table 2 : Group differences

Variable	Group	N	Mean	Standard deviation	Degrees of freedom	P value
Knowledge on AIDS	Contr	51	-0.0196	4.0124		0.4125
	Exper	36	-1.0556	7.6231	85	
Attitudes to AIDS	Contr	51	1.2549	6.9133		0.0529
	Exper	36	4.0833	6.1754	85	*
Attitudes to homo-sexuality	Contr	51	1.6470	7.1297		
	Exper	36	5.0278	8.0764	85	0.0423 **
Attitudes to black sexuality	Contr	51	-0.6275	7.1860		
	Exper	36	3.2778	6.4966	85	0.0111 **

* = approaching significance (p almost < 0.05)

** = significant (p < 0.05)

These results indicate that there were statistically significant differences between the control and experimental group in changes in attitudes to homosexuality and attitudes to black sexuality. There is also a result which is approaching significance, that of changes in attitudes to AIDS.

The results suggest that while the intervention (the three-day AIDS education programme) was able to significantly change attitudes, it did not have a significant impact on knowledge.

Table 3 : Correlations

Control Group

	Attitudes to AIDS	Attitudes to homosexuality	Attitudes to black sexuality
Knowledge about AIDS	-.069	-.013	-.122
Attitudes to AIDS		.361 *	.570 **

* p < 0.05 ** p < 0.001

Experimental Group

	Attitudes to AIDS	Attitudes to homosexuality	Attitudes to black sexuality
Knowledge about AIDS	.321 *	.312 *	.191
Attitudes to AIDS		.643 **	.673 **

* p < 0.05 ** p < 0.001

For the control group, these results indicate that :

(a) there is a statistically significant correlation between attitudes to AIDS and attitudes to homosexuality; and
(b) there is a statistically significant correlation between attitudes to AIDS and attitudes to black sexuality.

For the experimental group, these results indicate that :

(a) there is a statistically significant correlation between knowledge about AIDS and attitudes to AIDS;
(b) there is statistically significant correlation between knowledge about AIDS and attitudes to homosexuality;
(c) there is a statistically significant correlation between attitudes to AIDS and attitudes to homosexuality; and
(d) there is a statistically significant correlation between attitudes to AIDS and attitudes to black sexuality

5. DISCUSSION

The main findings of this study may be summarised as follows :

(a) The three-day AIDS education course produced significant amounts of change in a group of healthworkers attending the programme. The change occurred in attitudes to homosexuality and attitudes to black sexuality. A result approaching significance was found in the amount of change occurring in change in attitude to AIDS.

(b) The change in knowledge about AIDS was not significant.

(c) There is evidence that there were intercorrelations between some of the dependent variables. In the case of the control group there were significant correlations between the variables of attitudes to AIDS, attitudes to homosexuality and attitudes to black sexuality. For the experimental group there were significant correlations between the variables of knowledge about AIDS, attitudes to AIDS, attitudes to homosexuality and attitudes to black sexuality.

(d) The three attitudinal sub-scales were shown to be reliable and, with minor exceptions, all the items in each sub-scale were measuring the same construct.

These results suggest that the three day AIDS programme at the Community AIDS Information and Support Centre is able to address attitudes, but does not at this stage, as far as healthworkers go, address the issue of information change. Given that one of the chief aims of the course is to impart knowledge about AIDS, it is interesting that it did not seem to do so.

Each of the major findings will be discussed separately and then integrated. The research will be critically evaluated and implications for further research will be presented.

5.1 KNOWLEDGE OF AIDS

A possible explanation for the lack of a significant gain in knowledge ($p = 0.4125$) may relate to the previous knowledge base of this specific group of subjects, ie. healthworkers. If healthworkers are generally beginning to become more aware of AIDS and PWA's, they may be entering a course with greater knowledge about the disease and with a slightly greater tolerance of people who might be HIV positive or who already have the full syndrome. By now, most hospitals and clinics have had AIDS training of some kind, they have developed policies around testing and healthworker rights relating to HIV patients, and many healthworkers have seen or dealt with people with HIV or AIDS. Thus the course would, possibly, have little impact on these aspects.

It is also possible that the course itself did not impart knowledge about AIDS in enough detail. Since it is an explicit aim of the course to address attitudes and the social contexts of AIDS, it is conceivable that this aim has begun to supercede the imparting of information. If the conveyance of facts about AIDS is seen as a secondary goal, then course attenders might not be given as much information as they need to be fully equipped as AIDS educators. As was seen in the literature review, most education courses are divided between the presentation of facts and the challenging of stereotyping about AIDS. If this tension is not resolved theoretically, then individual AIDS courses find their own resolution in practice. In the case of the Community AIDS Centre, it is feasible that the presenters err on the side of favouring attitudinal dimensions in the course. It is also a function of AIDS centres to play an advocacy role for the rights of PWA's. In playing this role they may find that the information aspect of AIDS education is neglected.

Another possible explanation for the lack of knowledge change is that the instrument is measuring information about AIDS that is now freely available. The scale was originally used in 1986.

Thus the sensitivity of this sub-scale may be in question, as a function of historical changes in the knowledge base concerning AIDS and the dissemination of knowledge. At this stage of the epidemic what might be necessary is a more subtle measure of information, a measure which takes cognisance of the generally higher levels of awareness and knowledge.

The findings can also be examined using Fishbein and Ajzen's (1975) information processing approach. Firstly, if we analyse the concept of persuasive communication, the credibility of the course presenters when presenting basic facts may be questionable. For example, of the course presenters, only two have a medical background. This may be disturbing to attenders, especially healthworkers, when facts about AIDS are presented.

In addition, it would appear that the knowledge aspects of the course are imparted through persuasive communication (ie. more didactically) and the attitudinal aspects are covered more through active participation techniques. Since this may be so, this points to the need for looking at the different contributions of these two teaching styles. It would appear that in terms of the results of the study, active participation may be a more successful teaching technique. However, further research would be necessary to establish whether the two styles of teaching do impact differently, as well as to establish whether any of the other explanations put forward to explain the lack of significant change in knowledge are borne out by focused research.

This discussion of the possible reasons for the insignificant change in knowledge about AIDS suggests that those who designed and run the course need to re-examine their goals and strategies to refine the way information is imparted, and the type of information that is imparted. It would also be advisable to pursue the idea of courses which are aimed at the specific informational needs of different groups. In addition, the measurement of information change may have to be more refined.

5.2 ATTITUDE CHANGE

As has been noted, there were significant attitude changes in the course attenders as compared to the control group. These changes were in the direction of holding more favourable attitudes to the groups identified in the questionnaire. Hence it can be assumed that the three-day course resulted in a liberalisation of attitudes, a phenomenon which was shown to have persisted for at least one month.

The most significant change occurred in attitudes to the sexuality of black people ($p = 0.0111$). The other significant change occurred in attitudes to homosexuality ($p = 0.0423$). There was an almost significant change in attitudes to AIDS ($p = 0.0529$), and by implication, attitudes to PWA's. Each of these will be discussed in turn.

5.2.1 Attitudes to the sexuality of black people

Ever though the course attenders were a racially mixed group, they were predominantly white. While the variable of race was not examined in the data analysis, it is interesting to note that attitudes to black sexuality showed the most change. This could be accounted for by the content of the course. The course focuses heavily on socio-political understandings of AIDS in South Africa. Hence it examines AIDS in apartheid and post-apartheid South Africa; it reviews the impact of migrant labour and urbanisation patterns on poverty, disease, prostitution and the breakdown of family life; and it addresses issues of racism and culture/background. Thus, even for the black course attenders, the issues raised around race may have been enlightening. It is also possible to speculate that course attenders who were of Indian and so-called coloured backgrounds may have held prejudicial attitudes towards black (African) people before the course, and have found these attitudes subjected to change during

the course.

This result also implies that there was a considerable amount of prejudice about black sexuality before the course, hence it is one variable that would most easily show change. Race is a powerful and overriding issue in South Africa and this study suggests that it is one that needs to be, and can be, vigorously addressed.

5.2.2 Attitudes to homosexuality

Significantly favourable attitudes to homosexuality were generated by the course and this bears some examination. Because gay men have been seen here (and abroad) as being a high risk group and as a group in which AIDS originated, the course specifically aims to challenge these notions. Through didactic and experiential learning, these assumptions and biases are questioned and analysed. For most South Africans of all races and backgrounds, homosexuality is seen as unacceptable and as being a causative factor in the inception and spread of AIDS. The research finding indicates that it is possible to challenge these assumptions in a mixed group. Given that homosexuality is still illegal in South Africa, this finding is all the more remarkable.

There still remains the issue, though, of why attitudes to black sexuality changed more than attitudes to homosexuality? One possible explanation is that because AIDS is now overwhelmingly a heterosexual disease in South Africa, the presenters of the course give more emphasis to heterosexual transmission than homosexual. In other, perhaps more subtle ways, when examples were chosen to illustrate points the course presenters may have chosen more heterosexually orientated scenarios. Nevertheless, the fact that attitudes to homosexuality did change shows that this bias in emphasis was not entirely to the exclusion of the issue of homosexuality. Addressing attitudes and prejudice in general obviously has value as there are spill-over effects. This will be discussed later when the correlation between variables are

examined.

5.2.3 Attitudes to AIDS

This finding was approaching significance. Given that this study evaluated an AIDS course it might have been expected that attitudes to AIDS would improve significantly. This finding may be indicative of several features :

1) the course did not strongly enough address the issue of attitudes to AIDS and PWA's;
2) healthworkers are beginning to be more comfortable in working with PWA's and therefore had higher scores on this scale at the outset of the course, thus showing less of a shift than on other dimensions;
3) attitudes to AIDS are more intractable to change.

Since AIDS is a fatal disease it is possible that much fear, denial and even anger persists about the disease, making it more difficult for educators to address these concerns. Despite the experiential techniques used, it is clear that healthworkers are still very fearful of the disease and they may have special educational needs.

In sum, these attitudinal findings show that participative learning, with its emphasis on role plays and awareness exercises, may be a very powerful teaching strategy. Since this study has not evaluated the separate effects of the two techniques of active participation and persuasive communication, it is also feasible that persuasive communication played a role in changing these attitudes. These findings also show that healthworkers may have attitudinal difficulties and that these can be addressed in an AIDS educational programme.

Having shown that attitudes can be changed in a more favourable direction, it might be useful to attempt to understand how this could have happened, using the information processing approach as an explanatory model.

5.2.4 The information processing approach

In terms of this approach, attitudes are represented by an inter-relationship between attitude, belief, intention and behaviour, as described previously. Attitudes towards an object are based on a person's salient beliefs about an object and its attributes. Implied in this is an evaluation of these attributes. Fundamentally, an information processing approach believes that people can act upon information and process it in such a way that it affects the way their attitudes are formed and changed. Broadly speaking, attitudes can be changed by :

1. changing one or more salient beliefs;
2. introducing new salient beliefs; and
3. changing the person's evaluations of the attributes.

1. Changing salient beliefs. If the course examines the phenomenon of blame and stigmatisation in relation to homosexuals and black people, it is possible that course attenders are encouraged to examine how they too have brought with them a set of beliefs about these people and how they have used these beliefs to construct their attitudes. For example, in the course an exercise might challenge the idea that all homosexuals are promiscuous, immoral and perverted. It does so by questioning the creation of norms, by looking at the relativity of moral judgements and by examining the range of sexual behaviours that any two adults (whether heterosexual, homosexual or bisexual) could conceivably partake in. Course attenders are therefore lead to question their beliefs about homosexuals. If they do so they may be forced to question their attitudes to homosexuals and perhaps change these attitudes.

Similarly, if healthworkers who attend the course bring with them sets of beliefs about the sexuality of black people, they may be forced to challenge these beliefs. One of the persistent beliefs about black people (among the majority of whites) is that they are indiscriminate in their sexuality and are not amenable to change - their "otherness" is confirmed by a belief that their sexuality is different. The course, by examining the social conditions

which lead to poverty, and therefore prostitution, and to a breakdown in family life (eg. through migrant labour and rapid urbanisation), helps to challenge the belief that black sexuality has an innate quality which sets it apart from the sexuality of other South Africans.

2. New salient beliefs. It would appear that the course was also able to introduce new beliefs about homosexuals and black people, and to some extent about AIDS in general. For example, some course attenders believe that gay men "choose" to be homosexual. Given that this "choice" is seen as antisocial and arbitrary, healthworkers would be inclined to perceive gay men as deliberately flouting convention for its own sake and thus see them in a negative light. By challenging the notion that homosexuality is a choice, the course encourages attenders to admit a new possible belief, that sexual orientation is biological or developmental. If they can begin to believe this, they may more readily accept that homosexuality is inevitable in some people and therefore that they are not blameworthy.

Similarly, by allowing course attenders to perceive of gay men (or black people or PWA's) as being burdened by multiple losses, a new belief is introduced - this belief perhaps being that such people are like all people : they experience loss and pain, they have relationships which they do not want to end and they are connected to all of society through their humanness. It seems that courses like the one at the Community AIDS Centre often succeed in addressing attitude change because they introduce new s s of beliefs that set off a process of change in the course participant. However, further systematic investigation would be required to assess whether this aspect of the course is indeed salient in the attitude change observed over the course.

3. Changing evaluation of attributes. The course may also have been able to challenge the way course attenders evaluated the attributes of attitude objects. For example, if the attenders believe that what homosexuals, black people and PWA's have in common is that they contract HIV through sex (as opposed to the perception that healthworkers only contract HIV through blood)

this might be a problem for the person because he or she has difficulties with sexuality in general, and possibly their own sexuality too. The course, by reframing sexual behaviour as a normal human function, and by encouraging participants to examine their own discomfort with aspects of their sexuality, can lead to a re-evaluation of this attribute.

This then is a way of understanding attitude change in its broadest conceptualisation by information processing theorists. Fishbein and Ajzen (1975), as was discussed in the literature review, outline two possible approaches to bringing about such attitude change, active participation and persuasive communication.

5.2.5 Active participation

By interacting with people, objects and events, a set of "informational items" is built up by participants. These informational items constitute object-attribute links and are called proximal beliefs. By forming new object-attribute links through personal observation and experience, the participant forms new proximal beliefs. It is precisely this interactive formation of beliefs that is so powerful, since

"a person rarely questions his or her own observations" (Fishbein and Ajzen, 1975, p412).

By changing proximal beliefs, external beliefs may also change, and thus primary beliefs are changed. Using this formulation, some active participation techniques will be examined in relation to the AIDS programme which was the subject of the study.

1. Interpersonal contact can often produce attitude change because it provides individuals with an opportunity to get to know each other and to appreciate and perhaps to accept the other's point of view. Interpersonal contact, for example with black people, might induce white people to change their beliefs and

attitudes about black people. However, interracial contact, which does occur at the Community AIDS Centre programme, does not always improve relations. As Fishbein and Ajzen (1975, p416) note

"The direction of the change depends largely on the conditions under which contact has taken place; 'favourable' conditions tend to reduce prejudice, 'unfavourable' ones may increase prejudice and intergroup tension".

Because it is not always possible to control the conditions in which this experience takes place, it is not always possible to identify the proximal beliefs that are influenced by the contact experience or to establish that interracial contact will produce changes in primary beliefs. For example, for many white participants who attend a course with black people, the proximal beliefs addressed by the interpersonal contact experience may have been unrelated to the primary beliefs underlying their attitudes towards black people in general. Since the course at the Community AIDS Centre did in fact result in change in attitude to black people, it appears that it might have addressed proximal and primary beliefs. Perhaps it was able to do this by encouraging course participants to discuss personal information relating to AIDS, sexuality, relationships and morality. Thus, course participants were able to hear about the sexuality and morality of black people they were having interpersonal contact with (and vice versa) - by doing so they were able to challenge their own beliefs about the sexuality and morality of <u>all black people</u>. As Fishbein and Ajzen (1975, p416) note

"perhaps the most serious problem concerns the relevance of the contact experience for the dependent variable under investigation".

2. <u>Role playing</u> is another technique which could produce attitude change, for example, if a person is encouraged to play the role of someone holding opinions which do not correspond to his or her own. Proximal beliefs, the items of information to which subjects are exposed while performing their respective roles, may change as

a result of a role play. Consequently, primary beliefs, beliefs about the kind of person one is role playing, may also change.

There is a good example of this in the course under study. Course attenders are required to argue with a homophobic person to prove that homosexuality is acceptable, irrespective of their own beliefs about homosexuality. In another role play exercise, course attenders are required to adopt various personas (varying in terms of race, class, occupation, gender and sexual orientation) and argue as to why they should be given treatment at an HIV clinic with limited resources. In both examples it could be suggested that the experience of role playing situations where one is forced to adopt an incongruous position had a significant effect in the experimental group.

3. Counterattitudinal behaviour constitutes another active participation technique. It is effectively a component of role playing in keeping with the examples cited above, involving role plays in which a subject is persuaded to adopt an attitude and position contrary to his/her own. Since not all role plays are necessarily counterattitudinal (for example a role player might be playing a role which is similar to his or her own life circumstances and the value of the role becomes not so much that it changes beliefs but that it results in extending the range of beliefs about that role), when they do fit this model they may be very powerful.

To some extent, change in attitude through counterattitudinal behaviour is more fully explained by cognitive dissonance theory. Fishbein and Ajzen (1975) note that while role plays are successful because they generate informational items which can influence proximal beliefs and related dependent variables, dissonance theory suggests that factors other than the information generated by the counterattitudinal behaviour may be of primary importance in bringing about change. According to dissonance theory, the actual performance of the behaviour is not considered to be a necessary condition for change; the subject's commitment

to perform the behaviour is assumed to be sufficient to produce dissonance and consequent change in the dependent variable.

It would appear that the course being studied does use counterattitudinal behavioural tasks to good effect, since much of the course time is devoted to challenging participants to adopt new positions.

4. Choice behaviour is another course component which appears to have effect in terms of dissonance theory. Whenever a person is forced to choose between two or more alternatives, dissonance is assumed to be aroused. The theory predicts that

"the person can reduce his dissonance by increasing his evaluation of the chosen alternative, decreasing his evaluation of of the unchosen alternatives, or both" (Fishbein and Ajzen, 1975, p445).

Thus the person may change an attitude by at times more favourably evaluating an object. For example, in the course under discussion, participants may be asked the following question, "is it more important to promote a return to monogamy or is it more important to promote condom use if people are already having sex which is not momogamous?" Although many course attenders are anxious to promote morality, when confronted by this kind of choice, they are sometimes forced to decrease their evaluation of the unchosen alternative, the condoms alternative. The information processing approach suggests that dissonance theory may not be completely adequate in its explanation of choice behaviour because it does not explain whether there is a change in primary beliefs. From an information processing point of view, in order to study changes due to a choice between alternatives, one must assess the person's beliefs about each alternative. In a broad sense, this is precisely what this study has done, it has measured attitudes before and after the course and it has shown that change did take place. Thus attenders were, in effect, required to choose between their previous cognitions and more liberal attitudes. It seems that " choice behaviour", while it is flawed as a concept in the way it has been explained and assessed,

can help us to understand how attitudes may be changed. Thus the success of the course in shifting attitudes may in part be attributable to a range of active participation techniques including interpersonal contact, role playing, counterattitudinal behaviour and choice behaviour.

Fishbein and Ajzen (1975, p450) conclude that active participation can only be successful when two conditions are met :

"first, the processes intervening between active participation and change in the dependent variable must be well understood; and second, the investigator must be able to exercise sufficient control over the items of information to which subjects are exposed, so that the active participation experience will consistently facilitate desired change in the dependent variable under investigation".

It would appear that these conditions were met in the programme being evaluated and that active participation is a useful way of understanding attitude change. It is also possible to speculate that active participation has an effect on the issue of locus of control. As the WHO (1990) has noted, an individual with an internal locus of control is more able to adopt a preventive measure (eg. safer sex) than someone with an external locus of control because the latter person feels events are beyond his or her influence. By encouraging course attenders to experience personal change in belief structures through activities like role plays, perhaps there is a sense of empowerment that takes place in the individual, allowing the person to believe that he or she is able to take on preventive measures. Since the course is also aimed at people who are to educate others about AIDS, this empowerment may generalise to a belief that one can influence the attitudes of others.

The second approach to attitude change discussed by Fishbein and Ajzen is the persuasive communication approach.

5.2.6 Persuasive communication

In contrast to active participation, where the individual may gain information by observing objects, people and events in a given situation, when the person receives a persuasive communication, they are are provided with items of information from some outside source. The information processing approach emphasises a detailed analysis of the processes intervening between the manipulation and change in the dependent variable; and requires the distinction between beliefs, attitudes, intentions and behaviours.

As discussed in the literature review, when presented with information from an outside source, a person performs an informational analysis.

For example, if the AIDS programme presenter makes a statement that black people often live in poor circumstances, this could challenge a course attender to examine his/her own belief that all people in South Africa are equally privileged. Thus the proximal belief could change, leading the person to believe that not all South Africans have equal access to health information (an external belief). This in turn could result in change in a primary belief that black people are to blame for spreading HIV, leading to a change in attitude to the sexuality of black people.

There are some important facilitating factors in inducing change in the belief process underlying attitudes.

1. Communicator credibility rests on whether receivers of the communication feel that the communicator is honest and trustworthy. While Fishbein and Ajzen (1975) feel that there are difficulties with exactly assessing this credibility, it would appear that to some degree the course presenters have such credibility. The presenters, an educationist, a doctor, a nurse and a social worker constitute a professional team who have become experts in their field and who have all worked full time in

AIDS work for more than two years. It is also possible to speculate that as they have become better known (through their profiles being raised in the media) they have improved their credibility. By being viewed as credible, the course presenters may be seen as reliable providers of source beliefs.

2. The type of appeal made by the communicator is also of extreme importance. Research has compared emotional (eg. fear appeals) and rational appeals, appeals which present one or both sides of an issue and appeals which vary in the order of the information that is presented (the conclusion may be presented before or after the supportive belief statements, information may be presented in ascending or descending orders of evaluation, or a pro message may precede or follow a con message).

The information processing approach extends this understanding of appeals by emphasising the importance of considering the acceptance of source beliefs, changes in proximal beliefs and impact effects on external beliefs.

If the AIDS programme under consideration is viewed in this light, how was it able to change attitudes to homosexuality, to black sexuality and influence attitudes to AIDS? Clearly, there was persuasive communication of some kind involved. The course designers specifically did not include obvious fear messages in the course content because research has shown how easily people distance themselves from such a message in relation to disease (Sherr, 1990 and WHO, 1991). It could be assumed, however, that there is some fear component in any AIDS education because the information is by its nature frightening - AIDS is after all a terminal illness. However, by emphasising strategies to reduce the incidence (eg. safer sex) and ways of dealing with the epidemic in various occupational settings, the course provides an environment conducive to hearing this information. In working with attitudinal issues so strongly, it also helps the course attenders not to feel that they too may be judged in their own personal lives. The course also has a balance between rational

and emotional appeals, between presenting one or both sides of all issues and in the order of presentation of information.

The course, then, would appear to address attitude change as a complex phenomenon, as the consequence of interaction between different kinds of beliefs. In this sense it suggests that the information processing approach is a useful one in explaining the findings of the study. The course challenges various sets of beliefs that underpin the more obvious attitudinal problems experienced by course attenders. It does not simply say all PWA's must be accepted and freed of stigma, it challenges a variety of perceptions of so-called "high risk" groups on all levels, leading it would appear, to attitude change which persists, at least for the duration of a month after the course.

The information processing approach seems to provide some insight into attitude change but may not be the only framework for understanding change, for example cognitive dissonance theory might offer an alternative explanatory model.

5.3 THE CORRELATIONS BETWEEN SUB-SCALES

At this point it may be helpful to examine some of the correlations between the different sub-scales of the instrument. A discussion of significant correlations between variables may have implications for how AIDS education programmes are structured and conducted.

(a) Knowledge of AIDS and attitudes to AIDS. There was a significant positive correlation ($p < 0.05$) between these two variables for the experimental group. This was hypothesised by the KAP research design already discussed (WHO, 1989). It has also been found in studies of stigma and AIDS (Henry et al 1990) but refuted by other studies which showed poor correlation between knowledge and attitudes (Galt et al, 1989), indicating that this

correlation between the two dimensions is not a given. It is interesting to note that this correlation was not found in the control group and this difference in correlations would be useful to examine in further research on this topic.

However, what appears evident is the fact that for the experimental group, attitudes to AIDS may well be stimulated and based in an accurate knowledge base.

(b) Knowledge of AIDS and attitudes to homosexuality. These were significantly correlated in the experimental group, suggesting that homosexuality is linked in the minds of healthworkers when the subject of AIDS is raised. However, this correlation requires further research in order to achieve a fuller understanding and perhaps also an examination of why this correlation was not found in the control group.

(c) Attitudes to AIDS and attitudes to homosexuality. There was a correlation between these variables in both the control and experimental group. Herek and Glunt (1988) and others (Haettich et al, 1992) suggest that attitudes to AIDS are linked to attitudes to homosexuality because they evoke similar cognitive categories. Thus addressing attitudes to homosexuality (and minorities in general) is important in AIDS programmes. Furthermore, the finding on homosexuality coincides with the conclusion offered by the developers of the scale, McManus and Morton (1986), that these two factors (attitudes to homosexuality and attitudes to AIDS) are intrinsically linked within the perceptions of medical professionals. This supports the Herek and Glunt (1988) proposition that there may be crossover effects in dealing with one particular attitude and that change in one area may impact indirectly by addressing a related area more directly. The results of this study are discrepant with other studies which have suggested that attitudes to homosexuality are separate from attitudes to AIDS (Bouton et al, 1987).

(d) Attitudes to AIDS and attitudes to black sexuality. These were correlated in both control and experimental groups. Again, the implication is that there are common processes in prejudice (or lack of prejudice) and that like homosexuals, black people have become stereotyped in being associated with AIDS.

While these findings should be regarded with some caution due to the small sample size, they do indicate, with some exceptions, that prejudice, stigma and blame in relation to different sub-groups in society are linked. The study results in this regard give added weight to the proposition that attitudes to AIDS cannot be adequately addressed by the provision of knowledge alone, but that education programmes also need to address prevailing attitudes to "high-risk" groups if they aim to shift attitudes to PWA's.

5.4 STIGMA

The study reveals important findings on stigma, "a mark of shame or discredit" (Herek and Glunt, 1988, p886). AIDS has become a symbol of this shame and reactions to AIDS are often synonymous with reactions to gay men, drug users, racial minorities (or racial majorities as is the case in South Africa) - outsiders who in general are defined by their otherness (Joffe, 1992). It appears that education which addresses attitude change in a concerted way as well as giving information which can be believed, is able to challenge this notion of otherness. These findings showed that there were correlations between some of the attitudinal components of the questionnaire used for the study. These highly significant correlations suggest that levels of prejudice and intolerance towards the "at risk" groups identified covary (in both the control and experimental group) and that shifts in such stimatisation may also be inter-related.

5.5 HEALTHWORKERS

In apparently changing attitudes to homosexuality and to the sexuality of black people; in affecting attitudes to AIDS and by implication PWA's; and in demonstrating correlations between some of the dependent variables the AIDS programme under study was seemingly able to address some important issues in relation to healthworkers. In addition, these shifts were possible amongst a group of healthworkers, a group who have been generally shown not to be impartial in their response to AIDS (Berger, 1991).

The results indicate that while conceptualisations of at riskness are based to a degree on stereotypic social constructions, these effects at the macro level can be mediated, when working with healthworkers, through experiential education conducted by credible and informed educators. It appears that attitudes which have been socially learned can be altered through a new learning experience (Walton et al, 1992; Spicer 1992).

The results also imply that while many studies have shown the value of working with PWA's to decrease stigma (Balis, Santana and Monzon, 1992; Giami et al, 1992), participative learning experiences in an AIDS programme may produce a similar effect. However, there may be added value in having a PWA address the course attenders to challenge attitudes through a more immediate exposure.

In addition, the course may go some way in prompting healthworkers to view themselves as both "private" and "professional" selves, and in this sense perceiving the areas of risk that they share in common with the rest of the population.

Finally, the findings suggest that behaviour and attitude change may also be modified and reinforced by one's reference group. The course, by using a doctor and a nurse as part of the presentation team, provides this reference point and encourages the healthworker participants to challenge their attitudes as they are expressed in health settings.

5.6 HEALTH/AIDS EDUCATION

Health education which addresses more than just information giving (French, 1990), avoids fear messages (WHO 1991) and which addresses the social conditions which underpin the spread of HIV (Brown et al, 1991) appears to be most effective. Furthermore, when this health education concerns AIDS, an awareness of ideological biases is particularly important (Carter and Watney, 1986), as is sensitivity to context-specific and cultural issues (Crewe, 1992). A range of studies have indicated that one dimensional educative interventions may not be sufficient to change both knowledge and attitudes. Thus cognitive programmes can lead to greater knowledge of AIDS but may only impact on attitudes if they are carried out over time (and here there might be other confounding variables which come into play); participative and PWA-based programmes impact on attitudes and drama-based programmes influence affective components of attitudes.

In terms of this range of available interventions, it appears that the programme run by the Community AIDS Information and Support Centre has successfully drawn on these various elements to present a three-day course which challenges and stimulates its attenders. As has been seen, the course offers didactic input, discussions, participative learning, credible communicators and social theory and it expressly sets out to challenge attitudes. It does not assume that attitude change will come about with an increase in knowledge. The programme also targets which beliefs need to be addressed to have an impact on primary beliefs which underpin attitudes.

By locating many of the discussions firmly within the context of the AIDS epidemic in South Africa, the programme is able to address racism and the concept of otherness as it is expressed in a racially divided society.

It is important to bear in mind that the second stage measure of knowledge and attitudes was carried out after a one month interval. The fact that change in attitudes was significant with this lapse of time after the course suggests that there was a persistent quality to the changes that resulted from the intervention. Since the education course is carried out over three days, this suggests that an intensive and reasonably long education process may feasibly produce enduring changes in attitudes.

5.7 METHODOLOGICAL ISSUES

At this point it would be useful to examine some methodological issues which could have impacted on the results of the study.

The study is strictly speaking a quasi-experiment because the subjects were not randomly assigned to the control and experimental groups. This could have confounded the results because the two groups may possibly have been different before they were exposed (or not) to the independent variable. For example, if course attenders in any way volunteered for the AIDS programme, they may have been particularly predisposed to change. In all cases, however, healthworkers who attended the course were sent on the course, rather than volunteering. Furthermore, the design is strengthened by the fact that before and after scores were linked to each subject, thereby specifying how much change occurred in each specific subject.

The fact that the control group were drawn from one institution may affect their usefulness as a control - since they may have reflected a common ethos or culture with a common set of beliefs and attitudes. However, what appears to mitigate against this is the fact that the group was racially mixed and that it is also unlikely that working in the same hospital results in a homogeneous attitudinal set in terms of the variables under study, in any way differently from the experimental group.

The subjects in both groups were virtually all women and virtually all nurses, suggesting that there should be slight caution in generalising the findings to men, to other healthworkers and to the general population. Having said this, it does appear that attitude formation and change is a fairly universal process which has more commonalities than differences. Healthworkers are usually representative of their communities and would thus exhibit fairly typical attitudes. The one exception might be the issue of the professional/private divide.

The time interval of one month may not be sufficient to infer that the results would persist over a much longer time interval.

5.8 SUGGESTIONS FOR FURTHER RESEARCH

The outcome of this study points to a number of interesting directions for future research and methodological improvements :

(a) A study which uses a larger sample, random assignment, a single course presenter, and does not rely on mailed return of questionnaires might be more rigorous and generalisable.
(b) It would be interesting to assess the impact of different kinds of course presenters on attitude change - here the variables might be age, sex, occupation, race and class.
(c) The presenters of the course were consistent over the four month period but it is possible that the combination of four presenters is less rigorous than one presenter, where it would be possible to limit extraneous variables as much as possible. Since presenter credibility is so important to the analysis of the results, it could be suggested that different presenters may influence attitude change differently on different courses.
(d) It would also be of value to assess the influence of working with a racially and occupationally mixed group versus an exclusively healthworker or exclusively white group.
(e) A study which had a more representative cross section of healthworkers might have produced different results and a

comparison of nurses and doctors could possibly have indicated if there were differences in attitude change between such groups.

(f) A more longitudinal (and perhaps qualitative) study of attitude change and persistence of change could reveal if courses such as the one used in this study have longer term enduring effects and which aspects of change are most enduring.
(g) It may be useful in future research to examine the difference in impact between active participation and persuasive communication.
(h) Finally, a different theoretical approach to attitudes could perhaps provide a different understanding of the processes involved in attitude change. This might lead to different tools for assessment of these difficult to quantify variables.

5.9 CONCLUSION

AIDS is a worldwide phenomenon and until a cure or vaccine is found, the most effective strategy to limit the epidemic is education. This education will only be successful if information is imparted which allays fears and empowers individuals. Further, this education must address stigma and attitude formation if the education is to have any effect.

"Public policy not only must respond to the technical issues of treatment and prevention but also must help to establish clear social norms of respect and compassion for HIV-infected persons" (Herek and Glunt, 1988, p889).

What this study reveals is that education can address attitudes in a way which significantly impacts on attenders of an AIDS programme. Healthworkers occupy an elevated place in society and are seen as impartial and scientific. This study has shown that they are not impartial - if their attitudes can be addressed then their efforts at AIDS education will be that much more powerful.

This questionnaire is part of a research project being carried out by a Master's student in Clinical Psychology at the University of the Witwatersrand. It is completely confidential and anonymous, and will only be seen by the researcher and his supervisors.

The results will be utilised in the development and refinement of AIDS education programmes. Your assistance will therefore be greatly appreciated.

Please complete the following questions as accurately and honestly as possible, and without consultation. For questions with a 1 - 2 - 3 - 4 - 5 scale , 1 means STRONGLY DISAGREE and 5 means STRONGLY AGREE. Please circle the number that is closest to your opinion of the statement. For the other questions, please tick the alternatives that you think may be correct.

Thank you for your co-operation.

1. Age .....

2. Sex .....

3. Race .....

4. Job description .....

Questions to be answered with a tick ( )

1. HIV infection is another name for AIDS. True/False
2. AIDS was first diagnosed in the last 12 years. True/False
3. There is a cure for AIDS. True/False
4. AIDS is associated with a short incubation period. True/False
5. To date there has been a low infectivity rate of HIV in the health care setting. True/False
6. By mid-1991, how many cases of AIDS had been diagnosed in South Africa?

0-500	500-1000	1000-1500	1500-2000	2000-3000

7. Name one specific blood test used for the detection of antibodies to the HIV virus .....
8. All persons having antibodies to HIV must be assumed to be infected. True/False
9. People with AIDS are found generally to suffer from which of the following conditions?

	YES	NO
Deficiency of T-cells	.....	
Deficiency of B-cells	.....	
Wasting	.....	
Obesity	.....	
Dementia	.....	
Reduced lymph nodes	.....	
Enlarged lymph nodes	.....	

10. Which of the following complications may be seen in a person with AIDS?

	YES	NO
Kaposi's sarcoma	.....	
Candida (oral thrush)	.....	
Osteosarcoma	.....	
Hepatitis B	.....	
Pneumocystis pneumonia	.....	
Flavivirus (yellow fever)	.....	

11. Persons with HIV are infected for life. True/False
12. HIV may be transmitted through :

	YES	NO
Sexual intercourse	.....	
Shaking hands	.....	
Insect bites	.....	
Sharing needles for drugs	.....	
Sneezing or coughing	.....	

13. HIV can be killed after being exposed to heat of 56 C for half an hour. True/False
14. The incidence of AIDS is highest in the Black population in South Africa. True/False
15. AIDS was introduced to South Africa directly from African countries north of the border. True/False
16. AZT is a drug that has recently been developed to prevent AIDS? True/False
17. The ratio between diagnosed AIDS cases and HIV infected persons is approximately 1:3. True/False
18. The number of diagnosed AIDS cases in South Africa is on the decline. True/False

For the following questions, please circle the number that is closest to your opinion of the statement : 1 = STRONGLY DISAGREE and 5 = STRONGLY AGREE.

19. AIDS is a punishment for immoral activities.
    1 - 2 - 3 - 4 - 5
20. Homosexuality caused AIDS.
    1 - 2 - 3 - 4 - 5
21. Homosexuals with AIDS should be treated differently to other more innocent victims of the disease.
    1 - 2 - 3 - 4 - 5
22. AIDS will spread faster amongst Black people because they care less about hygiene.
    1 - 2 - 3 - 4 - 5
23. More medical funds should be given to AIDS research in South Africa.
    1 - 2 - 3 - 4 - 5
24. Homosexuality is a psychological disorder.
    1 - 2 - 3 - 4 - 5
25. Black people are responsible for bringing AIDS to South Africa
    1 - 2 - 3 - 4 - 5
26. More health professionals should become involved in the fight against AIDS.
    1 - 2 - 3 - 4 - 5

1 = STRONGLY DISAGREE 5 = STRONGLY AGREE

27. Homosexuality is immoral.
1 - 2 - 3 - 4 - 5
28. Names of people with AIDS should be kept on a register, and made available to anyone.
1 - 2 - 3 - 4 - 5
29. Black people are more promiscuous than other races.
1 - 2 - 3 - 4 - 5
30. Homosexuals should be allowed complete social equality.
1 - 2 - 3 - 4 - 5
31. There is no reason why patients with AIDS and HIV-related conditions cannot be nursed in an open ward.
1 - 2 - 3 - 4 - 5
32. Black people are no more highly sexed than other race groups.
1 - 2 - 3 - 4 - 5
33. People with AIDS should be avoided wherever possible.
1 - 2 - 3 - 4 - 5
34. Homosexuality is pathological rather than a variation of normal sexuality.
1 - 2 - 3 - 4 - 5
35. People who contract HIV have only themselves to blame.
1 - 2 - 3 - 4 - 5
36. Sex education will have no effect on the Black community.
1 - 2 - 3 - 4 - 5
37. Homosexuals should have equal opportunities for employment.
1 - 2 - 3 - 4 - 5
38. Black men have sex with prostitutes no more often than other men.
1 - 2 - 3 - 4 - 5
39. Homosexuals are involved in perverted sexual acts.
1 - 2 - 3 - 4 - 5
40. People who are HIV infected should stop having sex altogether.
1 - 2 - 3 - 4 - 5
41. Black migrant workers should be deported if they are found to be HIV positive.
1 - 2 - 3 - 4 - 5
42. Black people engage in more perverted sex than other races.
1 - 2 - 3 - 4 - 5
43. People with AIDS should all be confined together permanently.
1 - 2 - 3 - 4 - 5
44. Because of their "nature", Black people will be less willing to change their sex lives due to AIDS.
1 - 2 - 3 - 4 - 5
45. Homosexuals are mistreated in our society.
1 - 2 - 3 - 4 - 5
46. AIDS is likely to become a fairly common heterosexual disease in South Africa.
1 - 2 - 3 - 4 - 5
47 Black people are just as careful in choosing their sexual partners.
1 - 2 - 3 - 4 - 5
48. Informed consent should not be essential before HIV testing.
1 - 2 - 3 - 4 - 5

1 = STRONGLY DISAGREE 5 = STRONGLY AGREE

49. Homosexuals should not expect to be accepted in our society.
1 - 2 - 3 - 4 - 5
50. It should be compulsory for all people who are suspected HIV carriers to be tested for the disease.
1 - 2 - 3 - 4 - 5
51. It would be beneficial to society to recognise homosexuality as normal.
1 - 2 - 3 - 4 -5
52. Black people will not change their sex lives because of AIDS.
1 - 2 - 3 - 4 - 5
53. Homosexuals should be avoided wherever possible.
1 - 2 - 3 - 4 - 5
54. There are social and political reasons why Black people in South Africa are more at risk for contracting HIV.
1 - 2 - 3 - 4 - 5

Thank you once again for your co-operation.

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