

LEARNING THROUGH TEACHING : AN

EXPERIMENTAL EDUCATIONAL

PROGRAMME FOR THE

PREVENTION OF AIDS.

BY

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I HEREBY DECLARE THAT THIS IS MY OWN WORK BOTH IN CONCEPTION
AND EXECUTION, AND THAT ALL THE SOURCES I HAVE REFERRED TO OR
QUOTED HAVE BEEN ACKNOWLEDGED AND INDICATED BY MEANS OF
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SIGNED :.....

(iii)

THIS WORK IS DEDICATED TO :-

My Mum Ruth and my family.

ABSTRACT.

AIDS is a major world wide problem with the incidence and prevalence of the disease increasing at an alarming rate, affecting people regardless of their economic status, educational level, ethnicity, age, occupation or gender. Although initially perceived as affecting deviant subgroups in communities such as prostitutes, the fastest growing population in the AIDS epidemic especially in Africa consist of heterosexual men and women. In Africa the incidence represents over half the reported number of AIDS cases in the world. Almost all African countries are developing countries, which will make it very difficult for these countries to afford any future vaccine developed against AIDS. Thus AIDS education will continue to play a major role in the prevention of HIV-infection and AIDS.

In South Africa the majority of people belong in poorer communities where violence, poverty, lack of education and unemployment are perceived as being relatively more problematic in etiology and prevention than AIDS.

Most AIDS prevention programmes in South Africa have been relatively ineffective and simplistic in approach and methodology. The programmes that are needed are those that go beyond provision of knowledge, motivate and empower people to change risk behaviour and are designed to be self-supportive/sustaining and effective.

An educational psychological experiment was conducted to investigate the effect of learning through teaching about AIDS prevention. A pre-and post-test group method was used within a nested experimental design. Subjects were randomly divided into three groups. Group 1 experienced both passive and active learning, group 2 experienced only active learning and group 3 experienced only passive learning. Scales which assessed subjects' knowledge of AIDS, sexual attitudes and AIDS prevention practices were administered. The data obtained on all variables were analyzed by means of simple one way and repeated measures analyses of variance (ANOVA) for nested experimental design followed by Tukey's HSD statistic for multiple comparisons.

Pre-treatment base-line data indicated that the sample was relatively knowledgeable about AIDS. The results indicated that passive and active learning combined was better than either active or passive learning alone.

This dissertation also revealed that it is practically feasible to implement this programme in any organization which includes educational systems. Ideally everyone should be equipped with enough information to educate others about HIV-infection and AIDS. It is neither possible nor desirable to leave all AIDS awareness and support initiatives to experts and professionals. Everyone needs to be actively involved in AIDS education.

ABSTRAK.

VIGS is 'n ernstige wereldwye probleem waarvan die voorkomssyfer en verspreiding steeds onrusbarend toeneem. Mense word ge-afekteer ongeag sosio-ekonomiese status, opvoedingspeil, etnisiteit, ouderdom of geslag. Alhoewel aanvanklik gesien as 'n bedreiging vir afwykende subgroepe, soos die prostituut gemeenskap, is die vinnigste groeiende populansie van VIGS-epidemie, onder heteroseksuale mans en vroue, veral in Afrika. Die aangemelde VIGS gevalle in Afrika verteenwoordig meer as die helfde van die voorkoms-syfer in die wereld. Aangesien die meeste lande in Afrika ontwikkelende lande is, sal dit in die toekoms moeilik wees om 'n moontlike vaksine vir die behandeling teen VIGS te kan bekostig. Dus sal VIGS onderrig steeds voortgaan om 'n vername rol in die voorkoming van HIV-infeksie en VIGS te speel.

In die Suid-Afrika behoort die meerderheid mense aan armer gemeenskappe waar geweld, armoede, agterstande in opvoeding en werkloosheid as van groter belang as VIGS met betrekking tot etiologie en voorkoms beskou word.

Die meeste VIGS voorkomende programme in Suid-Afrika het betreklik oneffektief en simplisties in benadering en

metodologie geskied. Programme word benodig wat verby die voorsiening van kennis kan strek, wat mense motiveer en bemagtig om risiko gedrag te verander en ontwikkel is om self-onderhoudend en effektief te wees.

'n Opvoedkundig-sielkundige eksperiment was uitgevoer om die leer effek van onderrig in VIGS voorkoming te ondersoek. 'n Eksperimentele ontwerp met voor-en na-toetsing metode was gebruik. Die proefpersone is in drie willekinige groepe verdeel. Groep een het beide passiewe en aktiewe onderrig ervaar, groep twee slegs aktiewe onderrig en groep drie slegs passiewe onderrig. Toets was toegepas om die proefpersone se kennis omtrent VIGS, seksuele houdings en VIGS voorkomende praktyke te ondersoek. Die data van al die veranderlikes was deur eenvoudige eenrigting en herhaalde meting analise van variansie (ANOVA) vir die gestruktureerde eksperimentele ontwerp ontleed, gevolg deur 'n analise van Tukey se HSD statistiek vir veelvoudige vergelykings.

Die basislyn data het aangetoon dat die proefgroep betreklik goed omtrent VIGS ingelig was. Die resultate het aangetoon dat passiewe en aktiewe onderrig gekombineerd better gelees was as beide passiewe of aktiewe onderrig alleen.

Die verhandeling het ook onthul dat hierdie program prakties uitvoerbaar en geïmplimenteer kan word in enige organisasie

waar opvoedkundige sisteme ingesluit is. Die ideaal sou wees dat elkeen met die nodige inligting toegerus is om ander in ver-band met HIV-infeksie en VIGS in te lig. Dit is nie wenslik, nog moontlik, om alle VIGS bewustheids-en ondersteunings initiatiewe aan deskundiges en professionele te laat nie. Iedereen het nodig om aktief betrokke in VIGS onderrig te wees.

NGOKUETINGQIWE

Ingculazi iyinkinga enkulu emhlabeni wonke futhi yanda ngesivini esikhulu nesisabisayo. Ihlasela noma ubani ngokungakhethi ukuthi ucebe kangakanani, ufunde kangakanani, ungowaluphi uhlanga, uneminyaka emingaki, usebenzani noma ungowabuphi ubulili. Ekuqaleni beyibukeka sengathi itholwa yilabo abathengisa ngemizimba. Kodwa kumanje-nje seyande kubantu besilisa nabesifazane abazithandanelayo nje, kakhulukazi lapha eNingizimu Africa.

E,Africa izibalo zabanalesisisifo zingaphezu kwenxenye yezomhlaba zihlanganisiwe. Njengoba cishe wonke amazwe aseAfrica ebhekene nalenkinga yokwanda kwengculazi futhi abe engamazwe asathuthuka, kubukeka kuyoba nzima nokuba athenge ikhambi lalesisisifo ngisho litholakala. Okusho ukuthi ukufundisana ngalesisisifo ikhona okusazoba semqoka ukusivikela singaqhubeki. E,Ningizimu Africa abantu abaningi bahlala emiphakathini ehlupheka kakhulu lapho udlame, ubumpofu, ukungafundiswa kanye nokungasebenzi kuyiyonanto ebonakala ixake imiphakathi kunengculazi.

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Izinhlelo zokufundisa ngengculazi eNingizimu Africa, zikhombise ukungabi nampumelelo engubweni yazo. Kubukeka sengathi kudingeka izinhlelo ezibamba iqhaza ngaphezu kokwazisa nje ngengculazi. Akungabazeki ukuthi izinhlelo ezingaphumelela yilezo ezigqugquzela umphakathi, zibuye ziwunike amasu angcono okuba uzivikele kuleligciwane.

Lendlela yokufundisa umphakathi ukuzivikela kuleligciwane iye yahlolwa, yacubungulwa ukuze kutholakale ukuthi ukufunda kabanzi ngalelingciwane okungenza abantu bazivikele kungebe nempumelelo na, uma abantu kungabayibo abafundisa abanye.

Lenqubo beyihlelwe ngendlela engakhethi bala. Kuye kwahlukaniswa abantu izigaba ezintathu. Esokuqala sifundisiwe sase siyafundisa, esesibili sifundisile kuphela kanti esesithathu sifundisiwe kuphela. Kube sekulandela imibuzo ehlola ulwazi abalutholile, nendlela abayithatha ngayo ingculaza kanye nezindlela zabo zokuzivikela. Kube sekusetshenziswa okokubala okuseqophelweni eliphezulu ukuthola ukuthi, ndlelani okuyiyona engcono kulezi ezintathu. Ekuqaleni kutholakale ukuthi laba abebahlolwa bebenalo ulwazi olukhudlwana ngengculazi. Okutholakele kusikhombisa ukuthi: ukufundiswa bese uyafundisa ngengculaza kumenza umuntu azi kabanzi ngengculazi kunalowo ofundisile nje noma ofundisiwe kuphela. Futhi lenqubo ikhomba izindlela ezimbili zokufunda okungaba impumelelo ekuvimbeleni ukwanda kwengciwane.

Lenqubo ibonisa ukuthi ingasetshenziswa kahle ezikhungweni zemisebenzi kanye nakwezemfundo. Futhi nje wonke umuntu kumele aphume umkhankaso wokufundisa abanye ngengozi yalesisifo, kungabi nje yilabo abaqeqeshiwe nabazi kabanzi abafundisa bodwa.

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CHAPTER 1: INTRODUCTION.

1.1 PREAMBLE.

In South Africa there is a growing concern about various aspects of Acquired Immune Deficiency Syndrome (AIDS) education. AIDS prevention programmes in South Africa have been relatively ineffective and simplistic in approach and methodology; even those which have been developed to meet the needs of specific communities. In support of this contention, Lachenicht (1993 : 17) succinctly maintains: "What we need now are programmes which go beyond the provision of knowledge and condoms".

Programmes that do go beyond provision of knowledge by teachers and / or health care workers, e.g nurses, should focus on making teachers models of AIDS prevention practices. This will help other community members to gain insight and understanding into the seriousness of this particular disease. To create a conducive climate for learning and change in lifestyle, we should help people within target populations to acquire skills and knowledge so that they can initiate, teach and model what others should do within their natural environment (Lachenicht 1993).

Helping people towards being independent and self sufficient within their communities will improve their health seeking behaviour. All human behaviour is context-bound, as is sexual behaviour. For example, our tendency to engage in safer sex depends on community context as well as sexual desires.

The programme that is designed for specific groups of people should enhance imitative behaviour. It should also have a potential to overcome lay beliefs people have about AIDS and Human Immunodeficiency Virus (HIV), since these originate from shared cultural experiences, political, religious and superstitious beliefs. Intrinsic motivation needs to be revived among some members of the society who will in turn enlighten others. This will help us understand discrepancies between what people know and what they do (Aggleton and Warwick 1989).

1.2 STATEMENT OF THE PROBLEM.

Acquired Immune Deficiency Syndrome popularly known as AIDS, is a major world wide problem, with the incidence and prevalence of the disease increasing at an alarming rate (WHO 1992). It threatens the human population, it affects both adults and children and it kills.

The main aim of community psychology is intervention through primary prevention. The unavailability of a cure for AIDS has encouraged social researchers to search for effective techniques to prevent the spread of the disease. This includes AIDS awareness educational intervention programmes.

Research conducted at various departments e.g the Department of Psychology of the University of Sydney (Australia), the Department of Psychology (North East London Polytechnic) and the Department of Preventive and Social Medicine, University of Ibadan (Nigeria) indicates the crucial need for more knowledge of beliefs about AIDS.

Most AIDS awareness programmes have been using sex education as a preventive strategy. The concept "education for prevention" takes on a special significance in research on AIDS. There is a wide spread ignorance and fear of the disease. The media has also helped to reinforce existing fear through sensationalist and sometimes inaccurate information. This is detrimental to society because it is a well-documented psychological fact that fear arousal is not conducive to learning or promoting behavioural change (Christie 1991). Fear arousal tends to elicit denial tendencies. People may ignore or adopt fatalistic attitudes in fear arousing information e.g a person denying his or her

vulnerability to AIDS may argue that circumstances will determine whether s/he catches AIDS or not.

Human Immunodeficiency Virus (HIV) infection is spread mostly through particular types of behaviours. At present the best hope for stopping the epidemic spread of the virus seems not to be the provision of knowledge about AIDS, nor making attempts at attitude change, but through changes in types of life style responsible for its continued transmission. It is ironic that the forces that shape human behaviour and the best approaches to influence behaviour to protect health, are among the most complex and poorly understood aspect of society's response to AIDS epidemic (Aggleton and Warwick 1989).

Groups with high risk life styles will naturally accelerate the spread of HIV infection throughout society. Changes in life style which make people prone to HIV infection, will not only protect the lives of individuals within these groups who are involved in high-risk behaviour but will also have the potential to significantly slow down the spread of the epidemic.

One way of influencing change in life styles among people who are at risk of catching AIDS, is influencing such people to be models of AIDS prevention. Through teaching either by active

participation or role playing one learns more and understands better the situation one is faced with, and the content of what one learns.

One becomes a model of what one teaches. From a sociological perspective, role play refers to an individual's assumptions of the role expected of him or her in a particular type of situation, and this helps the participant to develop more adaptive interpersonal behaviour or adaptive performance orientations to his problems of living (Sobel 1981).

This study thus focus on teaching about AIDS as a means of learning and understanding more about the AIDS epidemic.

1.3 DEFINITION OF CONCEPTS.

1.3.1 AIDS.

This acronym stands for Acquired Immune Deficiency Syndrome, an acquired disease which attacks the human being's immune system i.e. the physiological subsystem which protects and defends the body through fighting off diseases Roberts (1989), Wyatt (1988) and Bevan (1988).

AIDS is a disorder, or an aggregate or set of concurrent symptoms, which together indicate the failure of an immune system to fight off diseases. This is due to a gradual drop in Human T-4 cells (i.e cells in the immune system which enable it to kill disease causing bacteria).

1.3.2 Lifestyle.

Lifestyle consists of expressive behaviours which are recognizable modes of living. A lifestyle consists of expressive behaviours that are directly observable or deducible from observation. Lifestyle variations stem from differentiations within the social structure (Sobel 1981).

According to Tucker (1978), lifestyles refer to those modes of conduct, dress, speech, thought and attitudes that define various "honour groups" and that in turn serve as models of behaviour for those groups. The term further includes the range of distinctive behaviour patterns including value orientations to the world in general, as well as patterns of interpersonal and intergroup conduct.

1.3.3 Behaviour change.

This refers to relatively permanent change in nervous, muscular and emotional conduct / response of an individual to internal or external stimuli and / or arousal, due to learning which in turn affects attitude change (Collier 1973).

Behaviour change in the AIDS era refers to a change in individual behaviour caused by learning about AIDS. This results in attitude change and change in risk behaviour.

1.3.4 Perception.

Perception refers to the way the brain interprets sensations to make them meaningful (Papalia and Olds 1988).

From a psychological perspective, perception refers to an individual's ability to mentally apprehend sensational stimulation or information and make it meaningful in order to understand and safely adjust to the environment.

1.3.5 Learning.

Learning refers to a relatively permanent change in behaviour, which reflects knowledge, understanding, or skills achieved through experience (which may include study, instruction, observation or practice) . Learning is a process by which an activity originates, or risk behaviour is changed through reacting to an encountered situation such as a threat posed by AIDS, provided that such behaviour change is not due to habits, maturation or altered states of consciousness (Papalia and Olds 1988) .

1.3.6 Role-play.

Role-play is a social psychological concept which refers to an individual assuming a role expected of him or her in a particular type of situation, which can lead to the participant developing more adaptive interpersonal behaviour or adaptive performance orientations to his or her problems of living (Sobel 1981) .

1.4 MOTIVATION FOR UNDERTAKING THE PROJECT.

The challenge that social researchers have to contribute towards the solution of social problems has led to attention and focus being given on issues of ignorance, knowledge of and prevention practices associated with Acquired Immune Deficiency Syndrome.

Another source of inspiration for the conception of this study, is the fact that there is no cure for AIDS as yet. This study is thus relevant at present for both the professionals who are concerned with AIDS and the community at large.

1.5 AIMS OF THE STUDY.

1.5.1 General aim.

The goal of this study is not only to influence behaviour and increase knowledge about AIDS, but also to make people develop decision-making, communication and problem-solving skills as they deal with their own sexuality, relationships and lifestyles.

Although the "education programme" will deal specifically with AIDS prevention, it will also build young people's confidence as they face many developmental changes in their lives.

1.5.2 Specific aim.

The specific aim of the study is to find out whether a group which actively teaches about AIDS learns more than a group which is taught.

1.6 HYPOTHESIS.

The didactic principle of activity, implies that learning through teaching is superior to or more effective than learning through being taught. This principle constitutes the essential foundation for the dissertation from which the following hypothesis is derived. "A group which actively teaches about AIDS learns more than a group which is taught". This can be extrapolated as follows :-

- (i) Those who both learn through being taught as well as learn through teaching, learn best.

- (ii) Those who learn through teaching alone learn next best.
- (iii) Those who learn through being taught alone learn least.

1.7 DELIMITATION OF THE STUDY.

1.7.1 Geographical delimitation.

Due to financial, logistic and ethical reasons the study is designed to focus only on University of Zululand students.

1.7.2 Qualitative delimitation.

Materials for teaching were prepared before subject's previous knowledge about AIDS was tested. This knowledge was then used to revise the teaching materials.

1.7.3 Quantitative delimitation.

A small representation of the broader society and a certain class of society has been selected (i.e students).

1.8 Resume.

This chapter has been concerned with a general introduction to the description, the problem to be investigated, definition of concepts, aims and hypothesis. The next chapter will be concerned with literature review.

CHAPTER 2 : LITERATURE REVIEW.

2.1 PREAMBLE.

Throughout the world HIV infection and AIDS pose a public health problem. In every country the infection is rapidly increasing. HIV infection and AIDS, formerly known as a gay disease, was mainly prevalent among homosexuals. Now it is wide spread among heterosexuals, being most commonly transmitted through sexual intercourse. Persons at risk are those having unprotected sex with infected partners (Alexander, Gabenick and Spieler 1990).

Among all sexually transmitted diseases, AIDS appears to be the most severe human infectious disease documented to date. Infection during sexual intercourse may be due to one partner being HIV positive, as well as due to ignorance and fear of using a condom which in most cases is regarded as an indicator of lack of trust (Saunders and Farquharson 1989).

Using a condom is one way that can help prevent exchange of infected fluids. All health institutions have supplied and made condoms easily available to the public. This alone seems to be inadequate to control the spread of HIV

infection. To control HIV infection we need a well-planned strategy that will not only deal with prevention of exchange of fluids but also deal with problems in sexuality such as the idea of "fun sex".

In AIDS education, awareness and strategies are needed to ensure less dangerous sexual behaviour. To effectively change lifestyles, community prevention programmes should be designed for specific target groups. This should be delivered by individuals or organisations that have credibility and are trusted by the target group. Behaviour change is often difficult, especially when targeted behaviours are valued or reinforced. People can change their behaviour to improve their own health. The initiation and the maintenance of behavioural change can be most successfully achieved within the context of the target group's environment or community (Clark 1988).

According to Fan, Conner and Villarreal (1989), education of the general population about HIV and AIDS will help to demystify the disease and reduce some of the irrational fears that have built up. This may also help people change incorrect lay beliefs about the transmission of AIDS and symptoms of the disease.

AIDS educators previously thought that the mere giving of knowledge about AIDS could change peoples' attitudes towards AIDS as well as risk behaviours. This is not easy task. An in depth understanding and assessment of relevant determinants of behaviour is required in changing life styles.

Studies conducted by Becker and Joseph (1988), Kegeles, Adler and Irwin (1988), Strunin and Hengson (1987) have shown that the mere provision of information about AIDS has in fact been relatively ineffective as a means of attitude and behaviour change. These researchers concluded their studies by stating that the little evidence that has been found indicating changes in sexual behaviour of adolescents and young adults as a result of AIDS awareness campaigns is inconclusive.

In the South African context, commonsense and everyday experiences tell us that there are often. significant discrepancies between what people know and what they do particularly when it comes to health issues e.g. there are many poor people who have been well-informed about the advantages of family planning, but they still give birth to too many children. Such contradictions have a number of causes. They may arise because of the fact that human

behaviour is etiologically multifaceted, being influenced by a variety of variables which include culture, context, personality, value systems, etc.

Whether we continue to inform the public about AIDS through the media or we send out AIDS pamphlets to the public hoping that people will learn more about AIDS, the fact remains that HIV infection is continuing to spread in many countries and there is currently no cure for the disease. Our best hope is educating people about AIDS, but before we even plan any AIDS awareness educational programmes we have to consider how the public is responding to this disease and which are the optimal areas for the introduction of educational activity in order to be successful in influencing behaviour change (Fan et al. 1989).

The prevention of AIDS requires far reaching changes in sexual behaviour because sexual behaviour is a complex and integral part of people's lives, which cannot merely be eliminated as in the case of alcohol or drug abuse or cigarette smoking. Altering sexual behaviour patterns, can thus be expected to be more problematic than effecting changes in other essential areas of human behaviour. It therefore requires a very sophisticated educational approach such as active learning.

According to Paine (1988) the purpose of sex education and AIDS educational programmes in adults should be to change behaviour that currently exists, whereas among children and young people the purpose should be to influence a behaviour pattern that has not yet been formed, i.e being more preventive in nature.

2.1.1 AIDS and society.

Studies on human population dynamics have revealed that in any society around the world, natality or birth rate is higher than mortality. The micro-organisms that cause diseases are able to spread more rapidly in dense populations than in sparse ones. This means many people are going to be infected with AIDS in fast-growing communities. AIDS like any fast spreading disease is spread through contact. In this case sexual intercourse and overcrowding promotes contact or proximity.

According to Aggleton, Hart and Davies (1989), all diseases have social, ethical and political dimensions. Diseases affect individuals in different and variable ways. Studies on perception of AIDS by members of different communities show

that social and emotional problems associated with HIV infection are reflections of the social stigma attached to the syndrome.

This challenges AIDS educators to focus on specific dimensions in the prevention of AIDS. The risk of HIV transmission comes as a result of a complex new interplay of social, cultural, economic and interpersonal influences on human behaviour.

In South Africa the majority of people belong in poorer communities where violence, poverty, lack of education and unemployment are perceived as being relatively more problematic in etiology and prevention than AIDS (Swarts 1993). Any AIDS awareness and educational programme designed for poorer communities should consider all such conditions. The approach in planning educational programmes for such communities should actively involve members from these communities with the purpose of helping them acquire relevant knowledge and skills to teach others.

In South African communities, especially among indigenous African people we find that there is weakening of traditional value systems and social control due to urbanisation which results in diminished parental control within the family which in circular fashion then re-affects the community.

A study conducted by Morris and Farquharson (1993) revealed that multiple sexual partners are more acceptable to men than to women. Women holding such beliefs are typically stigmatized. This may influence many women to deny that they share the same belief as men about multiple sexual partners. Among black males the idea of multiple sexual partners is reinforced throughout socialization.

The influence of Western value systems on black South African cultural systems has resulted in adolescents and young adults engaging themselves in multiple sexual relations earlier than traditionally accepted i.e when one man legally takes more than one marriageable woman to be his wife.

For many black South Africans urbanisation comes with exposure to parental role models that are in conflict with their traditional norms and values. Furthermore, the struggle for survival and competition for scarce resources in urban areas influence and increase high-risk behaviour among young people. Promiscuity and prostitution may be viewed as a means of survival (WHO 1991).

Attitudes towards AIDS among heterosexuals are often influenced by prejudice especially towards those groups earlier targeted for AIDS prevention programmes e.g. gays who

were thought to engage in high risk behaviour (Schlebusch, Bedford, Bosch and du Preez 1991). Many people even today talk about AIDS as a gay disease. Heterosexuals with such attitudes may view AIDS as not being a threat except for gays and prostitutes. In South African society, gay and prostitute groups are not as prominent as in American societies.

Instead we find racial differences as a factor which influences attitudes of Blacks and Whites concerning AIDS transmission. For instance, regarding attitudes to the sexuality of blacks, some whites blame black people for the spread or transmission of HIV disease and have established beliefs about the sexual behaviour of black people as responsible for HIV transmission. In most White schools AIDS awareness educational programmes are generally better established than in black schools (Corless and Pittman-Lindeman 1989; Schlebusch et al. 1991).

According to van Leger (1993 : 1) " So many black donors are infected with the AIDS virus that South African Blood Transfusion Services may be forced to adopt a policy that would effectively exclude all black donors in order to keep South African blood products AIDS-free and amongst the safest in the world " .

The HSRC study (1993) revealed that poor people are mostly at risk of catching AIDS and in South Africa most of these poor people referred to are blacks (Morris and Farquharson 1993).

Statements such as the one above further enforce existing lay beliefs about AIDS transmission, racial group differences and the claim for responsibility in AIDS transmission.

Studying discrimination with regard to beliefs about AIDS can help us understand why certain groups of people deny vulnerability to HIV infection. Discrimination is simply the making of a choice. Everyone discriminates many times each day. It seems that discrimination is natural and part of life. Discrimination as shown in previous examples takes on a different character when it is exercised against people (Seligson 1992).

Interpersonal discrimination interferes and inhibits the success of AIDS awareness programmes and prevention programmes. In some cases AIDS provides a convenient excuse for people to exercise their deep-seated prejudices against others, e.g. homosexual groups or different racial groups (Seligson and Peterson 1992).

It would seem desirable to promote contraceptive barrier methods such as the use of condoms. Places like clinics, the workplace, schools and commercial markets can serve a vital role in promoting barrier methods. These are cost-effective and easily available. To achieve more desirable results, more direct face-to face strategies could also be pursued among high-risks groups.

This approach may be even more effective if members of the targeted high risk groups are also taught about AIDS in a way which will enable them in turn to teach the rest of the group. This "teacher" group may be more effective in teaching others about AIDS because they will both serve as models as well as being trusted by others. Every effort must be made to empower people to take greater control of their lives (Alexander et al. 1990).

AIDS now presents a bigger threat to young* people than alcoholism and death from smoking. According to Plant (1990 : 4) "AIDS threatens the whole community and not only small deviant subgroups".

A wide range of levels of risk behaviour exists across communities. Any proposal for an educational or public health information approach should address three distinct levels. The first level is that of the general public which expects to

be informed about the dangers they are exposed to and effective-preventative measures they can use. A second level is that of potentially high risk groups e.g. adolescents. With regard to adolescents, any AIDS education programme, whether through the mass media or schools will have to be directed specifically to children if it is to be effective.

Such a programme should try to influence children and young people with regard to appropriate behaviour that has not yet been formed. It will also help to build young peoples' confidence as they face many developmental changes in their lives. The final level which needs to be addressed are high risk groups e.g. homosexuals or prostitutes. The knowledge already gained and attitude and behaviour change strategies already developed can be used to help those already engaging in high-risk activities, to minimise the risk of acquiring AIDS (Sloane, Chamberlain, Berry and Treuren 1988, Strang and Stimson 1990, Morris and Farquharson 1993).

It is self-evident that individuals who have many sexual partners are both more likely to acquire HIV infection and to transmit it to others. The most sexually active persons who engage in casual sexual partnerships within their community and among themselves may give rise to a self-sustaining epidemic, but the spread will be slow. The groups with high-risk behaviour will greatly and naturally accelerate the

spread of HIV infection throughout society (WHO 1991, Alexander et al. 1990).

Changing and modifying behaviour among sexually active people is a difficult challenge. People seem less easily motivated to prevent AIDS than to prevent pregnancy. Thus we need to develop effective strategies that will deal with denial and perceptions of such people in order to change their behaviour.

The best strategy we can use for controlling the AIDS epidemic is through educating the public about the seriousness of the threat, the way the virus is transmitted and the practical steps each person can take to avoid acquiring AIDS or spreading AIDS.

To support this notion, Shelly (1991) states that community based interventions are clearly one of the best ways of changing AIDS-related behaviours, in as much as AIDS is so heavily concentrated within particular communities such as communities with a considerable number of prostitutes.

According to Alexander et al. (1990) a comprehensive AIDS prevention strategy should extend beyond high-risk groups to include a major educational and communication component directed toward the general population.

In societies there are lay beliefs about health, illnesses and diseases. According to Aggleton et al. (1989 : 222) "lay beliefs about health often have their origins in shared cultural experiences, in politics, religion and superstition". The fear caused by AIDS has been the subject of immense and often distorted, seriously misleading publicity and inaccurate coverage of AIDS information through the media. These factors lead people to ignore or adopt fatalistic attitudes towards fear-arousing information.

The acronym AIDS, which is used to describe this disease has now become a prominent and permanent fixture in our language. It evokes a range of human responses which include fear, hate and mistrust. For a person to learn that he or she is infected with HIV should evoke tremendous emotional stress (Fan et al. 1989). Fear of acquiring AIDS is mainly due to lack of adequate information about the transmission of HIV. If people are taught about AIDS and they teach others about it, they can become more knowledgeable and learn more about AIDS and prevent the disease more effectively.

2.1.2 The role of social sciences in AIDS prevention.

The unavailability of a cure for Acquired Immune Deficiency Syndrome has encouraged social researchers to find effective

means of preventing the spread of the disease. Social scientists have already collected AIDS data on African people. This data can be used successfully to help AIDS educators develop strategies to control the transmission of HIV. There is an urgent need for behavioural scientists to shed light on those poorly understood behaviours which are integral to the cycle of AIDS transmission. (Miller and Rockwell 1988).

According to Patrician (1987 : 4) "the cause, prevention and cure of AIDS have necessitated collaboration among clinicians, epidemiologists, virologists, molecular biologists, immunologists and sociologists". In the field of psychology and especially community psychology, psychologists have investigated and implemented various preventive interventions. Most AIDS awareness programmes conducted in social sciences so far have been shown to be successful in informing the public about AIDS, HIV and the use of condoms.

Social sciences are perceived as having the potential for understanding the present threats posed by AIDS as well as the further spread of HIV. According to WHO (1991) the major role of social scientists is to identify population sectors at risk for the spread of HIV and to design educational programmes which are culturally sensitive and locally informed.

Educational programmes for the prevention of AIDS will have to deal with ethical problems related to AIDS and these should be a concern for every social scientist dealing with AIDS prevention. Other studies should be designed to focus on those who are yet uninfected. This will help to protect public health. Social scientists are also expected to help those communities where poverty and lack of education reign, to acquire scarce resources which are necessary for learning about AIDS (Lachman 1989).

According to Seligson and Peterson (1992 : 122-124) the problem in AIDS awareness programmes is the fact that changing one's level of knowledge about AIDS does not necessarily result in a change in risk behaviour. Thus for any AIDS educator it is imperative when evaluating his \ her programme to consider the elements in a successful programme which may contribute to behaviour change and this, of course, is the ultimate goal in AIDS prevention.

Behavioural scientists can play a vital role in developing and implementing programmes to contain the spread of AIDS. The first major step is to establish an information base regarding beliefs and behaviours relevant to the cycle of AIDS transmission. Any AIDS education programme to be taught in schools, for example, must be planned and developed in

consultation with teachers. This will help the AIDS co-ordinator to develop a programme acceptable to the moral standards of teachers in a particular area.

According to Morris and Farquharson (1993) a study conducted on teachers' views on AIDS and lifestyle education in schools revealed that AIDS education programmes raised moral dilemmas among teachers. Teachers in schools seem to differ greatly on how to teach pupils about safer sex and use of condoms. Most teachers consider it to be their responsibility to ensure that pupils are taught and HIV infection is prevented. Some felt however that anything which possibly encourages students to engage in full sexual practices should not be taught.

If education is the only means at present of combating the spread of HIV infection, it is a challenge to social scientists as professionals and as citizens to determine what the major social issues are and to bring to the public the knowledge required in order to increase the understanding of AIDS and HIV issues and health policy resolutions pertaining to the disease.

2.1.3 Psychological studies on prevention of AIDS.

As we move now to an era in which health education on AIDS can be systematically planned, implemented and evaluated, it is important to reflect on the strengths and limitations of the early initiatives (Aggleton et al. 1989).

According to Lachenicht (1993), we must clearly distinguish between behavioural and structural programmes when we deal with AIDS prevention. Behavioural AIDS programmes are those primarily concerned with providing information about AIDS and protective devices such as condoms. Structural programmes are those which arise from a specific understanding of the reasons for sexual behaviour in a particular social context. Structural programmes may require attempts to alter the way in which a group of people regard or organise some aspect of their activity.

In South Africa, behavioural programmes have increased the awareness of the general public and have effectively conveyed the message about the dangers of promiscuity and the protective quality of condom use. This awareness extends to adolescents. However, there is no evidence to indicate whether the knowledge base of adolescents extends beyond these very

simple facts. Having absorbed these messages, adolescents may well believe, erroneously, that they are knowledgeable, and so not seek further information.

The content of many existing AIDS educational programmes which have been developed for young people, especially school programmes, have mainly provided information about sex practices. These programmes have in many instances met with criticism from parents and some teachers. In order to include AIDS education programmes in a school curriculum, Paine (1988) suggests that it is expedient that these programmes make young people aware of the risk to them as individuals.

To develop such programmes, a great deal of imagination and thought is required to direct the content to the individual needs of young people. This process will require highly skilled and experienced teachers, who are able to take the point of view of the young generation and are able to use the language understood by young people.

Information about AIDS has been sent out to many people through brochures. These have often failed to inform successfully or to motivate for behaviour change. Corless and Pittman-Lindeman (1989) suggests that in order to effect change in behaviour, AIDS information brochures should be able to raise anxiety levels high enough to promote change but

not so high that they trigger denial. AIDS behavioural programmes will be more effective as the presence of the disease becomes more evident (Lachenicht 1993).

On a smaller scale, studies conducted on the psychology of AIDS education can be categorized into three different kinds. These different models of health education differ from one another in terms of the goals they set for health education as well as the means by which these can be achieved. In the first category are information-giving models with the goal of reducing the incidence of the disease by bringing about change in individual behaviour. In the second category there are self-empowerment models where goals are to reduce the incidence of AIDS by enhancing people's ability to act rationally through participatory learning rather than on the basis of emotions and feelings. In the third category there are those which are called community oriented models. They enhance health by bringing about community change through group participatory learning and sharing experiences (Lachenicht 1993, Aggleton et al. 1989).

In reality most AIDS intervention programmes in South Africa are in the pilot project stage category. AIDS intervention in all so called third world countries develops slowly. However the initiatives undertaken in the past few years are important

since they provide experience and challenge to modify and develop interventions into bigger projects. The experience already gained on high risk behavioural interventions must be used to review and modify, these interventions into large scale programmes and replicate them as quickly as resources permit. Planning for programme expansion and replication must be an integral part of intervention activities.

All three models mentioned above are relevant and effective in teaching and learning about AIDS, but for any one to effectively change attitudes, life-styles and / or behaviour, the choice and approach should be determined by the groups they seek to target and delivered by individuals and / or organisations that have credibility and are trusted by the target group.

According to Strang and Stimson (1990), there must be reassessment of the targets for change. There are often powerful cultural, social and economic reasons why people engage in risk-laden behaviours. The models should also incorporate social support such as psychological help, emotional care and provision of information within the community to reinforce behavioural change.

Seligson and Peterson (1992) stated that provision of social support within AIDS education programmes may help to increase

motivation to deal with problems. Studies in psychology have revealed that AIDS educators who provide social support must maintain flexibility, must be supportive and must keep a non-judgemental approach.

The spread of HIV infection and AIDS is still continuing at a fast rate. Studies in the field of psychology have made significant progress in prevention of AIDS. To deny the achievements of these early initiative prevention studies in the field of psychology would be uncharitable and less than courteous to those who have made and are still making valuable contributions.

Though these programmes have contributed to minimizing the risk of HIV infection, others are needed that will focus on the effects of social and psychological problems after learning about AIDS. Professionals in the field of psychology are facing a challenge in utilizing their professional skills in response to AIDS (Corless and Pittman-Lindeman 1989).

According to Lachman (1989) what has been achieved by these studies in psychology is a "break through" in some aspects of human behaviour and sexual patterns which require some modification in the new lifestyles of young people.

Psychologists are in a better position to determine the psychological implications of HIV infection for many people. Strang and Stimson (1990) point out that despite better understanding of the clinical dimensions of AIDS, it is still too early to determine what the long-term social or public impact of this disease will be. It is clear that HIV infection and the growing number of people affected by it present a significant challenge.

Many studies are conducted among university students. Most students at universities are between the ages of 18-24 years. At these ages many people feel relatively immortal and immune from the ravages of diseases. To a young student, being away from the usual parental control may be the test for their maturity and sexual responsibility. Though university students represent a certain class in society, with caution and care the findings from student studies can be inferred to the general population (Arnstein 1989, Keeling 1989, Kinnick, Smart, Bell, Blank, Gray and Schober 1989).

2.1.4 The importance of learning through role-playing (active teaching) for health issues.

AIDS education programmes are mainly concerned with informing the public about HIV infection, the use of condoms and

changing attitudes towards AIDS. There are a few educational programmes or strategies that have been developed to deal with behavioural change. It is clear that there is a need for comprehensive AIDS education programmes that are geared toward changing the risk-behaviour of adolescents and young adults. So far pilot studies on behaviour change have pointed out problems that are encountered in trying to change the high-risk behaviour of young people.

According to Alexander et al. (1990) these problems include making young people understand the advantages and disadvantages of using a condom and identifying problems associated with the distribution and acceptance of condoms.

Strategies for change in behaviour should actively involve members of target groups. Active participation (which occurs in role-playing) helps the individual to gain insight into what behaviour is expected of him or her in a particular situation and also helps the individual to develop more adaptive interpersonal behaviour or adaptive performance orientations to his or her problems of living, including problems relating to sexuality and AIDS (Sobel 1981).

According to Bem's theory of self-perception (1967), we often do not know what we think until we act, thus to role-play helps one to be aware of an appropriate behaviour in

tempting situations. Role-playing is a kind of cognitive learning which is very important in health issues, since it allows us to be aware of experiences as they occur, to anticipate future experiences as well as to form expectations about outcomes and adjust our behaviour to bring about desired goals.

Role-playing techniques in teaching about AIDS have corrective and educational messages and promote facilitation of cognitive and emotional equilibrium. Role-playing also offers the participant a chance to realise or perceive the benefits or costs of engaging in preventive behaviour and an opportunity to think and discuss peer and social norms, which may be perceived as supporting or discouraging preventive behaviour. Through role-play or active teaching one acquires a sense of self-efficacy or seeing oneself as capable of engaging in preventive behaviour (Gydish and Ekstrand 1989).

According to Paine (1988) the present educational materials in AIDS campaigns seem to be too formal to inspire serious attention in young people. The message should be about minimizing the risk of HIV infection. It must be borne in mind that many people do not see themselves as being at risk. The most effective approach in tackling this problem could be by means of active participation in teaching about AIDS.

According to Papalia and Olds (1988) we have certain standards about a kind of person we want to be and the attitudes we express often conform to those standards. It seems we can control our behaviour when we talk about sexuality and AIDS, and it may be that the impressions we make are due to fear of AIDS and AIDS related issues. The origins of fears about diseases, especially AIDS may be well hidden in our unconscious mind.

To allay fears about AIDS we need to adopt a participatory approach in teaching and learning about AIDS, which emphasizes self-empowerment and which recognises the importance of feelings as well as facts. This approach is important not only in allaying fears about AIDS but also in giving people insight into behaviours expected of them in a particular situation.

When people experience control over their own health, behaviour and environment, they have a sense of self-efficacy. When they feel helpless their internal locus of control is undermined. This may make them prone to risky sexual behaviour. The elimination of a threat from HIV infection demands coping skills for peer pressures, ability to change perceptions and values and willingness to eliminate stereotypes and stigmatization (Swarts 1993). Role-playing can help individuals with external locus of control to gain

confidence in themselves and be prepared to face challenging situations by expressing appropriate behaviour.

The use of condoms may help those whose sexual behaviour puts them at risk of catching sexually transmitted AIDS. Condoms offer the best but not perfect protection due to leaks, breakage and being improperly used. According to Saunders and Farquharson (1989) people often feel quite bewildered by something that they do not know much about. They often feel better when they find out more.

Active teaching and role-playing about AIDS can thus offer the best opportunity to learn more about AIDS and the protective function of a condom. To demonstrate how to use a condom during role-playing may give insight into the participants about proper handling of barrier methods such as a condom.

Certain programmes have been implemented which emphasize self-empowerment. A study by Parke (1974) showed that school children who teach moral codes to other children or reinforce such codes, end up following it better themselves. Hetherington and Parke (1979) supported this by saying that people induced to testify to something they are not really sure of, end up believing it.

The media such as television (TV) and magazines portray new life-styles and sexual habits of popular people who serve as role model for new norms in young people. Role-play can help young people to develop self confidence and understand the risk of such life-styles and sexual behaviours. Motivation to change sexual behaviour may be enhanced by or through support from other members or diminished by lack of support.

Active teaching groups which can provide support for a large number of people can help enhance motivation for change. Smaller groups can take turns in teaching about AIDS so that all members in a particular organization, community or institution have the chance to learn and teach about HIV infection and AIDS. This can follow a circular method which helps to ease fear and increase knowledge about HIV infection and AIDS. AIDS teachers can initiate and train the first group and then let the process continue on its own. Change of risk behaviour can be maintained in this way.

2.2 Resume.

Reviewing literature has shown us that AIDS affects the whole society and all kinds of people and that the threat is becoming a major problem to the human population.

Social scientists can play a major role in developing effective programmes for the prevention of AIDS which can be successfully achieved if the success and limitations of previous initiatives in teaching about AIDS are thoroughly evaluated and improved.

Previous studies have also shown that people who are committed in active participation while teaching become more knowledgeable than those passively involved. Most AIDS educators agree that changing attitudes plays a bigger role in behavioural change than merely acquiring knowledge. In order to achieve good results we must first identify target groups. AIDS education and prevention programmes offered to these groups should then include the three essential elements : basic information about AIDS, safer sex and reduction of denial.

A review of current literature also reveals that at this stage the development of a vaccine against AIDS might initially be beyond the reach of third world countries. Paradoxically, it is people in poorer countries who seem to be mostly affected by AIDS. Factors such as poverty, lack of education and overcrowding promote the fast spread of HIV infection. AIDS education can play an important role among such people,

especially when members of their own community teach about the disease. Good role models then become available for the rest of the members to join and teach about AIDS.

CHAPTER 3 : RESEARCH DESIGN .

3.1 PREAMBLE.

It is the concern of every psychologist to contribute new knowledge to psychological science and human welfare. When incurable diseases threaten society, community psychologists and other social scientists have the responsibility of developing preventive strategies to protect the society. These strategies come after research studies which determine the impact of the threat, the best methods which can be used to protect the society and the process of implementing such programmes. A well planned design can determine an effective preventive strategy.

In this study a preconceived plan determined the collection of data. According to McCall (1990) valid conclusions in any research study depend upon how it is designed, before statistical computations are carried out. Valid scientific conclusions come from well-designed and well-analyzed research. The design of this study suggested appropriate inferential statistics to be used.

In the formulation of this design, a great deal of attention was given to the development of an appropriate, practical methodology and framework for action, which was based on ways of learning which are participatory rather than passive. The emphasis here was on self-empowerment as a means of behaviour change.

The design formulated for this study was as follows. Firstly consideration was given to professional standards governing the conduct of research with human participants. Secondly precautions were employed to prevent bias in collection of data by employing six research assistants. A random sampling procedure was then employed to ensure equal chances for all students to be selected. Biographical data was presented in tabular form before data analysis procedures and statistical techniques were used to systematically quantify data for analysis.

3.1.1 Ethical codes in scientific research.

The idea of this type of experimental design came after the researcher's involvement in other AIDS prevention programmes. When those programmes were evaluated the researcher found that

after teaching people about AIDS, lay educators were usually more knowledgeable than the people they taught.

This raised a concern and inspired the researcher to develop a method that would benefit target-people more than AIDS co-ordinators. Any intervention programme should empower target-people more than help the educator to improve himself or herself. An ethical code for psychological research by the Psychological Association of South Africa (1993) states that psychologists should carry out investigations with respect and concern for the dignity and welfare of the people who participate and recognise professional standards governing the conduct of research with human participants.

There are other conflicts which occur in the research process besides human abuses, which pose similar ethical dilemmas. They include, among others, the falsification of data by a researcher to obtain status, plagiarism and fraud. The latter can have long lasting effects such as the implementation of an ineffective programme. These malpractices have undesirable consequences.

A detailed body of principles and procedures have been produced to protect human subjects. The Psychological Association of South Africa (PASA) expends a great deal of

effort enforcing these principles that protect human subjects. The following discussion focuses on these principles (PASA 1993).

After extensive consultation with established AIDS research units, namely, the Social Science Research Unit (UNINATAL, DURBAN), Research Institute of Diseases in Tropical Environment (Durban) and the Centre for Science Development (HSRC), this study was carefully evaluated as ethically and methodologically acceptable.

All chosen subjects were interviewed to find out whether they were willing to participate and instructions were given to every participant. These instructions clearly stated the procedures, duration of the study and roles. After written confirmation was obtained from all participants about their willingness to participate, the researcher made it clear that financial incentives should not influence the willingness to participate, but be taken as rewards for completing questionnaires.

3.1.2 Some precautionary measures.

To try and attain as much objectivity as possible, the project leader or researcher employed research assistants who were

unaware of the research hypothesis, to collect all data. The researcher kept minimal contact with the subjects. Research assistants communicated frequently with subjects or participants.

After all questionnaires were collected the research team met with the subjects and provided all information they requested concerning the results of the study.

3.2 Selection of subjects.

According to Behr (1983) before the researcher compiles a sample, s/he should know the characteristics of the population. Such knowledge enables researchers to draw up a representative sample. The subject population for the present study consisted of all registered students at the University of Zululand in 1993. A list of all registered students was obtained. A table with random numbers was used to select approximately 33 students who were then randomly assigned to one of the following three treatment conditions, which served as controls for each other.

- (i) learning via passive learning and active teaching (B1).

- (ii) learning via active teaching (B2).
- (iii) leaning via passive learning (B3).

3.2.1 Characteristics of subjects.

Table 3.1 Sex differences among respondents.

	MEN	WOMEN	TOTALS
NUMBER	14	19	33
PERCENTAGE	42%	58%	100%

Out of the total sample of 33 respondents, 14 (42%) were men and 19 (58%) were women. This large number of women

represented in Table 3.1 may not only be due to random sampling but may also reflect the ratio of men to women in historically black universities (Table 3.1) (van Rooyen 1992).

Table 3.2 Age differences among respondents.

AGE GROUPS	16-18 YRS	19-24 YRS	25 YRS AND ABOVE	TOTALS
NUMBER	2	28	3	33
PERCENTAGE	6%	85%	9%	100%

Internationally, the age of university students ranges from 16-22 years. Student population in historically black

universities in South Africa are typically older however (van Rooyen 1992; Brits and Vos 1987). This may be due to low socio-economic conditions and the high failure rate at high school. Two (6%) respondents were between the ages of 16-18 years, 28 (85%) respondents were between the ages of 19-24 years and 2 (9%) respondents were above the age of 25 years (Table 3.2).

All 33 (100%) respondents had never married and were enroled for full-time studies. As expected from university students, it was found that they could read, write and understand the English language used in questionnaires and during teaching and learning. According to Behr (1983) the language used in the study and in questioning should suit the general conceptual level of the respondents and the nature of the information they are supposed to know and to give for the purposes of research.

Table 3.3 Respondents post-matric experience.

	WORKING 3 - 10 YRS	COMPLETED DIPLOMA STUDIES	COMPLETED DEGREE STUDIES	COMING FROM HIGH SCHOOL	TOTAL
NUMBER	3	3	1	26	33
PERCENTAGE	9%	9%	3%	79%	100%

The respondent's post matriculation experience was that 3 (9%) had worked for 3-10 years after completing standard ten, 3 (9%) had completed diploma studies 5 years after standard ten, 1 (3%) had completed degree studies 5 years after standard ten and 26 (79%) had joined the university after completing standard ten (Table 3.3).

These characteristics of the sample remind us that the sample represented a biased sample of society in that as university students their level of education would be higher than any particular randomly selected target group in a community.

Whether results are statistically significant or not, critics may argue that any variability may be due to the high level of education in particular. Studies by Heaven (1987), however, showed that sex, age or educational level had no effect upon the beliefs about the spread of AIDS through heterosexual activity.

3.3 Research instruments.

Research instruments in this study included three types of questionnaires as well as videotapes.

3.3.1 Educational materials.

To control the independent variable within the educational material the "maxmincon" principle (Kerlinger 1978) was employed. According to this principle independent variables

should differ as far as possible. In developing this AIDS educational material, it was noted that there had been earlier educational efforts that focused on encouraging the adoption of safer sex including abstinence and the use of condoms.

It became clear that there was a need to develop an AIDS educational programme and materials that were geared toward making adolescents and young adults models of AIDS prevention practices. A comprehensive AIDS educational programme and materials at an appropriate difficulty level was developed (Appendix A). The material content was structured in such a way that every participant in the study had a chance to teach or learn about AIDS.

3.3.2 Questionnaires.

Before questionnaires were constructed appropriate criteria for questionnaire construction were considered. Research calls for consideration of certain criteria which qualify a questionnaire as scientifically worthwhile. These criteria ensure the validity and reliability of a questionnaire as a research instrument. According to Mouilly (1970) a good questionnaire reflects the following :-

- (i) a thorough understanding of the field of study and the aim of the study. Material for teaching in this study formed the basis for the questionnaire used.
- (ii) conciseness and preciseness : a questionnaire such as a Likert-type scale should take a minimum time to complete by having brief statements that are to the point and unambiguous.
- (iii) a definite pattern of items. According to Behr (1983) a questionnaire should start with simple factual questions which can be answered with ease, then complex or more difficult ones should be put at the end.

Three types of questionnaires were then constructed : two structured Likert-type scales and an unstructured qualitative scale. The following discussion focuses on the construction of these scales.

3.3.2.1 Structured questionnaires.

Two structured equivalent alternate form questionnaires were constructed in order to obtain quantitative data. They were in the form of Likert (knowledge) scales (Appendix B(D) and

B(E). This is a very useful scale in obtaining information on sensitive issues such as those related to sexual practices.

These Likert-type scales each had a range of five options. Respondents had to state whether they strongly agreed, agreed, were uncertain, disagreed or strongly disagreed with the statements. Conforming to requirements of Likert-type scales, some statements were positively phrased and some negatively phrased. This served as a control for typical respondent tendencies to give expected answers or answers casting them in a positive light. All statements were randomly allocated to either one of the two equivalent scales. The Hawthorne effect was controlled by administering alternative questionnaire forms (symbolised as D or E in this study) interchangeably and immediately after each treatment session.

3.3.2.2 Unstructured questionnaire.

To obtain qualitative data, a qualitative unstructured questionnaire with open-ended questions was administered immediately after the study (Appendix C). This scale allowed respondents to critically evaluate the study.

3.3.2.3 Validation of the questionnaire / scale.

A pilot study may be important if it helps the researcher to know whether the questions in a questionnaire are valid or the items give the required information. Mncwabe (1985) says that a pilot study yields information concerning instrument deficiencies as well as how methods and techniques can be improved or modified.

To validate the scale in this study, the researcher did not conduct a pilot study but, following Mncwabe (1985), built up the questionnaire by interviewing members of the target population who would not be selected for the study.

The interview responses were used to review the teaching material, from which a statement pool was drawn. A scale was then developed. To finally check the scale a group of six people who were part of a similar study conducted previously were used to judge the appropriateness or preciseness of the language used and to identify any ambiguity in questioning.

Behr (1983) emphasizes that care must be taken to ensure that questions are unambiguous and clearly worded. Unambiguity in fostering the acquisition of required data is essential for the content validity of items. Since the scale was developed

to measure whether a group which teaches about AIDS (material) learns more than one which is taught, the statements were drawn from the teaching material, in order to ensure that the scale measured what was intended to be measured.

The statements used in the Likert (knowledge) scales were all clearly related to AIDS teaching material. Ambiguity within the statements was avoided by careful construction of statements and the use of the same terminology as in the AIDS teaching material.

3.3.3 Video tapes.

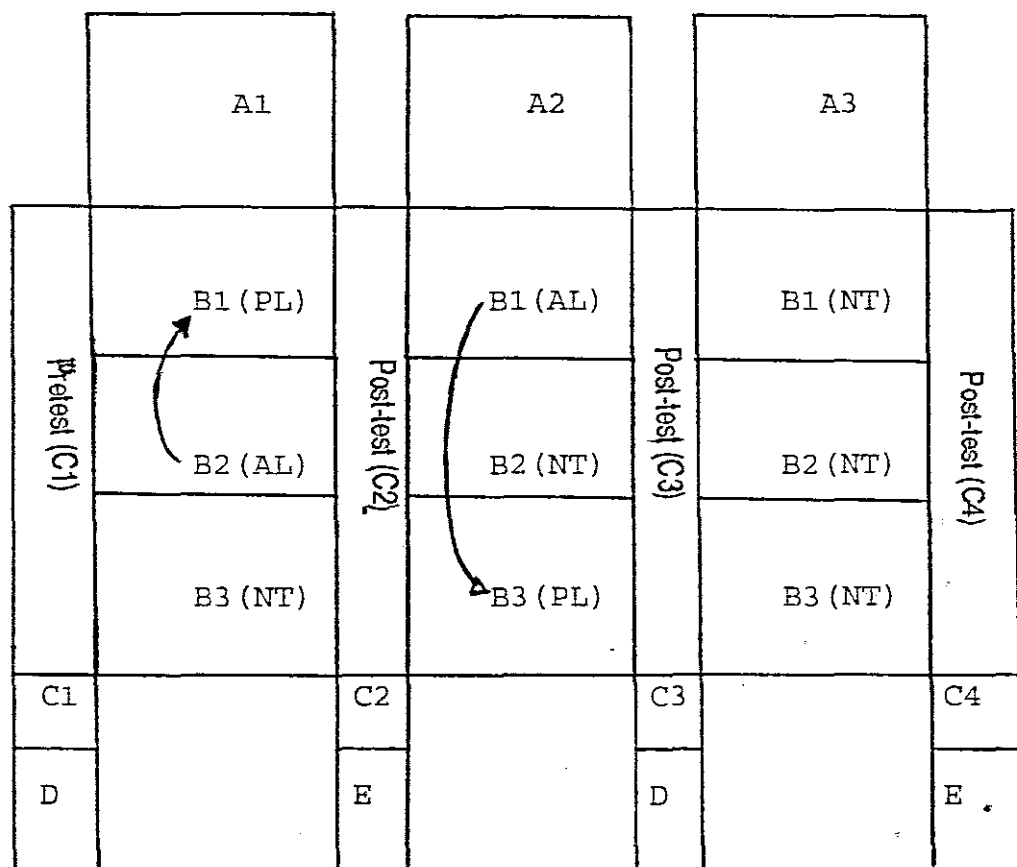
Video tapes of actual learning processes were made in order to keep a visual and recorded picture of all proceedings for other future possible data analysis and to help in implementation of the programme in other settings such as schools.

3.4 Data collection.

3.4.1 Procedure.

The programme was conducted over a period of two weeks, with each treatment phase (A) running for seven days. To control nuisance variables a pre-and-post-test controlled group design was used within a nested experimental design. This design can be schematically represented as follows :-

Table 3.4 Summary of the nested experimental design.



Symbols: A = Treatment phases
A1 = Treatment phase 1
A2 = Treatment phase 2
A3 = Follow-up phase

Symbols B = Learning groups

 B1 = Passive and active learning group

 B2 = Active learning group

 B3 = Passive learning group

 C = Testing times

 C1 = Pre-test

 C2 = Post-test after treatment phase 1

 C3 = Post-test after treatment phase 2

 C4 = Post-test after follow-up phase

 D = Likert(knowledge) scale 1

 E = Likert(knowledge) scale 2

 AL = Active learning (teaching).

 NT = No Treatment.

 PL = Passive learning (being taught).

3.4.1.1 Pre-testing.

Pre-testing allowed the researcher to check on adequacy of the randomization process and also helped to identify differences at the onset which could be statistically corrected. All subjects were pre-tested (C1) with a scale assessing their knowledge of AIDS, sexual attitudes and AIDS prevention practices (Appendix B(D)).

3.4.1.2 Baseline data analysis.

Pre-testing has an advantage which allows an examination of within-subject changes that would not otherwise be possible. Pre-testing helps to identify initial base-line differences before any experimental manipulation of the independent variable.

Table 3.5 Analysis of variance summary table.

SOURCE OF VARIANCE	df	SUM OF SQUARES	MEAN SQUARE	F-RATIO
BETWEEN GROUPS	2	2.27	1.135	0.27
WITHIN GROUPS	30	124.7	4.16	
TOTAL	32	126.97		

Figure 3.1 students knowledge of HIV infection and AIDS
before treatment.

(The height of the three bars represents the average knowledge that each group initially had before treatment).

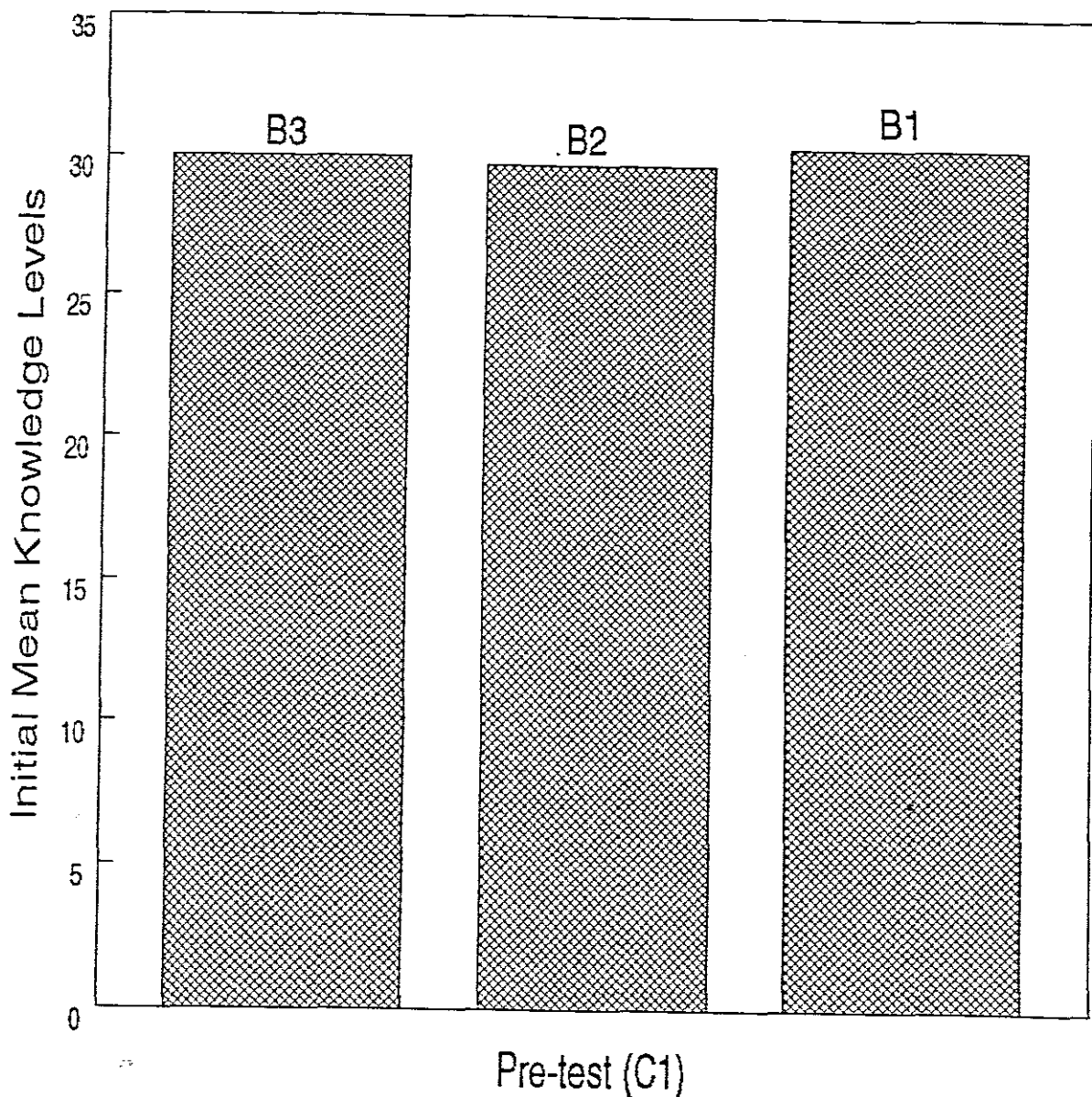


Table 3.4 refers to the analysis of variance conducted on pre-treatment base line data. No significant differences between the three groups were found [F-ratio = 0.27 (2.30) $p < 0.05$]. Figure 3.1 illustrates graphically the reason for

non-significant findings in terms of any differences between means in that the means were in fact very similar.

From the above results one can deduce that all groups had more or less the same level of knowledge about HIV infection and AIDS before treatments were administered. The results showed a probability of less than 0.05 level of significance.

These pre-test results provided a baseline against which later differences could be evaluated. With pre-test results of no significant differences between groups it could be reasonably argued that any later or after treatment differences or changes were thus due to treatment.

3.4.2 Active teaching (role-play) technique.

All groups were given instructions from the beginning (Appendix D). Those who were role-playing as teachers were instructed to read and teach the material on AIDS to a group of learners. Playing an active role as a teacher helps the participant to develop more adaptive interpersonal behaviour or adaptive performance orientations to his or her problems of living (Sobel 1981). A study by Parke (1974) and another by Klaas (1978) showed that school children who teach a

moral code to other children or reinforce such a code, end up following it better themselves. The active-teaching technique in this study was used in role-playing, which enables one to perceive oneself as a role model and thus behave accordingly.

AIDS information on its own seems to make people feel quite bewildered since they do not understand much about HIV infection and AIDS. People in general may feel better when they find out more about AIDS (Saunders and Farquharson 1989). Learning through teaching will help the active participant to learn more and find meaning in what s/he teaches.

According to Saunders and Farquharson (1989) information about HIV infection and AIDS will affect a person's behaviour only to the degree to which s/he has discovered its personal meaning. Effective learning about AIDS requires active involvement with the process of learning about it (e.g. reading more about AIDS) or attribution of meaning (e.g. teaching about it) and this is something that is possible only when one assumes an active teaching role.

Any active teacher of information on HIV infection and AIDS learns and orientates himself or herself through assignment of meaning to what s/he teaches. Through teaching one shows willingness or motivation to learn, those s/he teaches gain

insight through discussions and questioning. Reinforcement occurs when people who have been taught teach others about AIDS in that passing on of information also involves repetition.

3.4.3 Post-testing times.

Subjects were post-tested (C1, C2, C3 and C4) with scales (D or E) which assessed their knowledge of AIDS, sexual attitudes and AIDS prevention practices [Appendix B(D) & B(E)]. Post-testing allowed examination of within-subjects changes that would not otherwise be possible. To control the Hawthorne effect, post-testing times followed immediately after each treatment phase. The researcher maintained minimal contact with participants and each group taught or learnt at least once.

Quantitative information was analyzed using parametric test statistics. Two types of statistical techniques were used to reveal differences between groups before and after the study was conducted. One of these, the simple one-way analysis of variance test, showed differences between the independent groups. Another, the repeated measures analysis of variance statistical technique, showed differences within correlated

group means i.e comparisons of the same groups of individuals under different treatment phases. The results of these techniques were systematically analyzed and compared so that the results could be reported and discussed in a meaningful way.

3.4.4 Qualitative evaluation.

After the last treatment phase, participants were requested to complete an evaluation questionnaire in order to obtain qualitative information and feedback on the programme. A random sample of responses was extracted and analyzed by taking out common themes and these were grouped for interpretation and discussion.

3.5 Models of data analysis : analysis of variance and multiple comparisons.

The design used in this study met all assumptions required for both the simple one way- and repeated measures analyses of variance. The statistical technics selected appropriately addressed the research hypothesis. The analysis of variance also minimized the role of possible extraneous variables through determining interaction effects. Interaction effects were further investigated with Tukey's HSD statistic for multiple comparisons.

Specifically, a simple one way analysis of variance was used to determine whether there were any significant differences between the methods used. As required by planned a priori comparisons the experiment was conducted and subjects were repeatedly compared within each of the three treatment conditions. Thus a repeated-measures analysis of variance was also used. The level of significant used was 0.05, thus the level of significant 0.01 would mean highly significant.

3.6 Resume.

This study was carefully designed. Randomization was used and maintained throughout the data collection process. To determine and control interaction effects, the design included within-and between-subjects comparisons. Groups in each treatment condition served as controls for each other. To control nuisance variables a pre-test-post-test group design was used. This design did not only test the hypothesis. It is also practically feasible to implement this programme in any organization or institution including educational systems. The design suggested the type of statistical technique to be used for analysis of data. The parametric tests used to analyze data are powerful tests since certain assumptions have to be met before selecting the test. Powerful statistical techniques are very useful in indicating any significant difference that results between the groups because of a treatment effect.

The use of randomization procedures and precautions adopted in execution of the study justify all inferences made to the general population. The procedure used in this design can be easily replicated in order to verify the findings in similar situations.

Motion pictures taken during the experiment could serve to give insight to AIDS educators who may implement this programme in future since pictures can instructively portray the learning situation before its implementation in the particular setting e.g school or industry.

Educational materials were prepared with the target group in mind. Such educational materials encourage teachers and learners since they are provided with specific knowledge about HIV and AIDS that they may not otherwise have gained through the media.

CHAPTER 4: RESULTS AND INTERPRETATION.

4.1 Preamble.

The findings of this research are deduced both from the study of literature in chapter 2 and results of an experiment conducted as indicated in chapter 3. The latter was carefully and systematically executed according to a preconceived plan in order to derive valid conclusions about the findings.

The results in this study are presented in the following format a brief summary of results is presented first, followed by sections on between group comparisons and then within group comparisons. The results in each of these sections are consistently presented as follows : statistical tables; figures; interpretation.

4.2 A brief summary of results.

Table 4.1 Means summary table.

Groups	B1	B2	B3
Pretest (C1)means	30.36	29.73	30
Post-test (C2)means	35.46	36.18	32.46
Post-test (C3)means	35.73	32.1	32.1
Post-test (C4)means	42.7	38.6	37.2
Means of means (Ux)	36.1	34.2	32.9

Figure 4.1 Students' level of learning about AIDS.

(The height of each bar indicates the different level of AIDS information learned by each group over time. The higher the mean or bar level, the more knowledge gained by the learners. This graphic presentation of data helps in observation and interpretation of the differences between the means of the three groups).

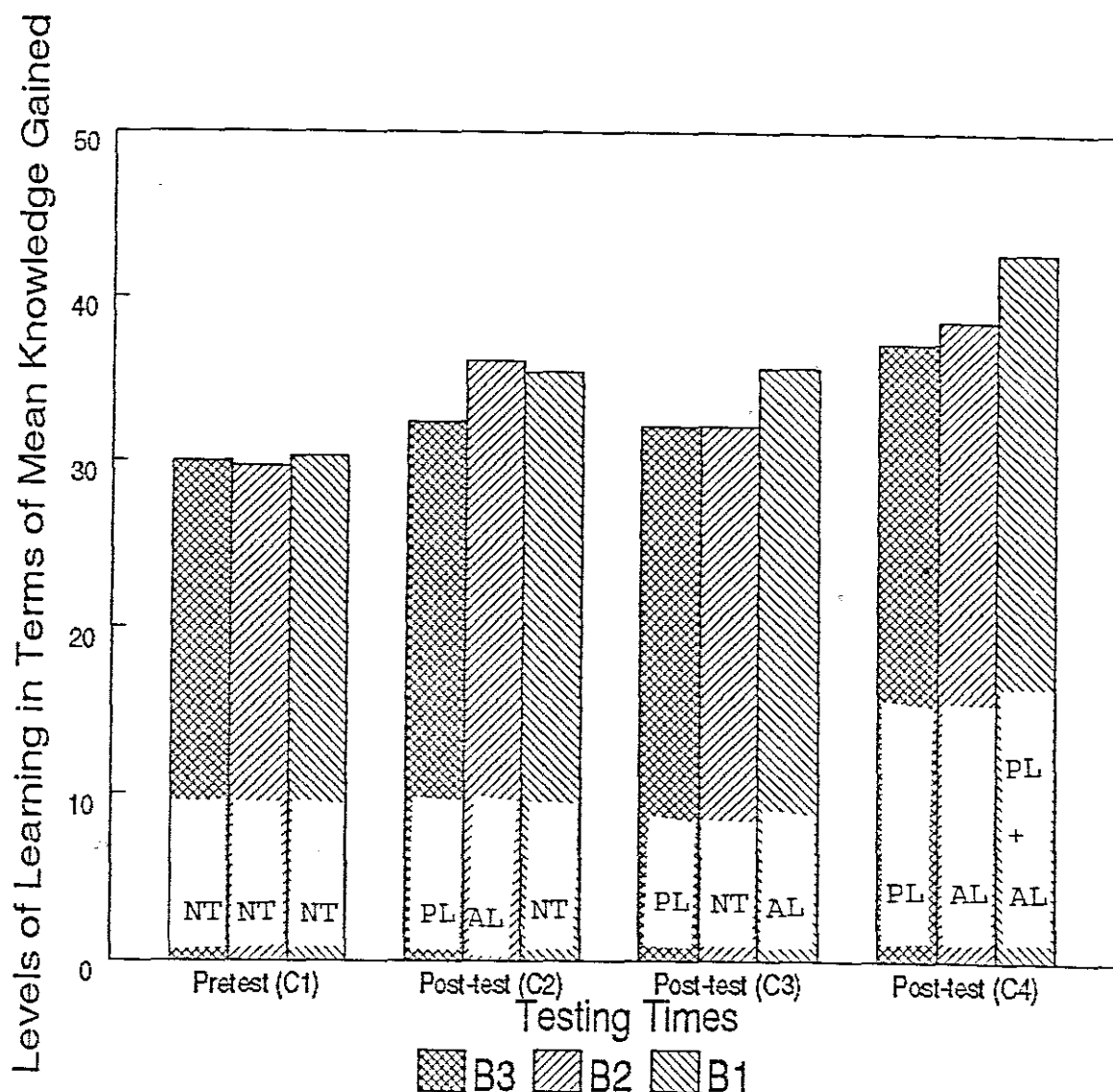
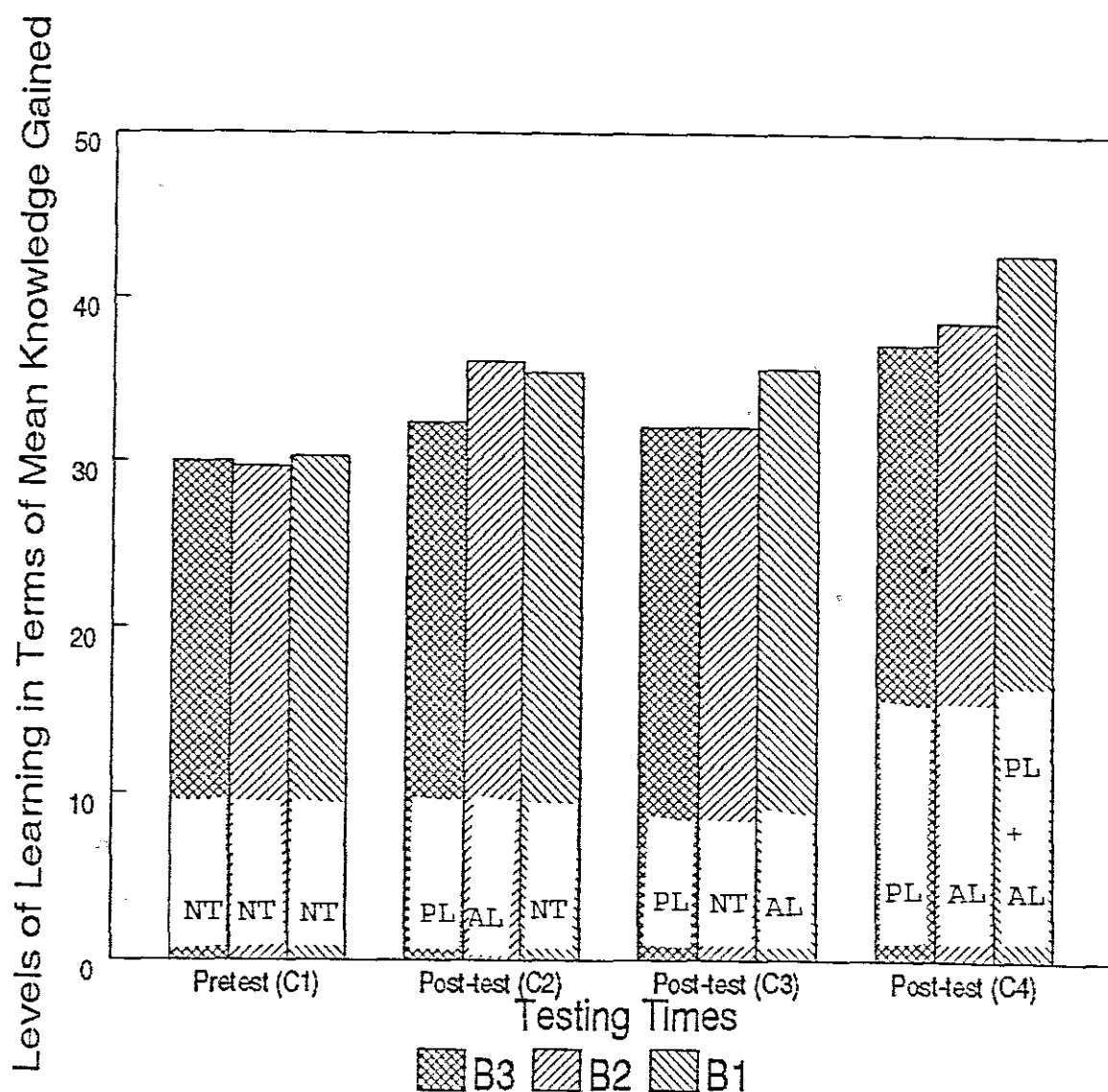


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Symbols : NT = No Treatment.

PL = Passive Learning (through being taught).

Al = Active Learning (through teaching).

As indicated in table 4.1, the means of means (36.1, 34.2 and 32.9) for the group that experienced both passive and active learning (B1), for the active learning group (B2) and for the passive learning group (B3) are strikingly different.

When presented graphically in figure 4.1, the differences between the three groups become even clearer. When these differences were compared in statistical analyses over the four testing times, they showed that at C1 there were no significant differences between the groups. The effects of treatment were observed in significant differences at C2, C3 and C4. These statistically significant differences are presented and analyzed step by step in the following sections.

4.3 Between groups comparison.

Between groups' comparison using simple one way analysis of variance were performed in order to investigate any difference between the groups : passive and active learning (B1), active learning (B2) and passive learning (B3) at testing

times; before treatment (C1), after treatment (C2) and at follow up post-treatment phases (C3 and C4). The base-line pre-test data analysis has already been presented in chapter 3 section 3.4.1.2.

4.3.1 Results after the first treatment phase.

Table 4.2 Analysis of variance summary table.

SOURCE OF VARIANCE	df	SUM OF SQUARES	MEAN SQUARE	F-RATIO
BETWEEN GROUPS	2	85.97	42.99	4.8*
WITHIN GROUPS	30	267	8.9	
TOTAL	32	352.97		

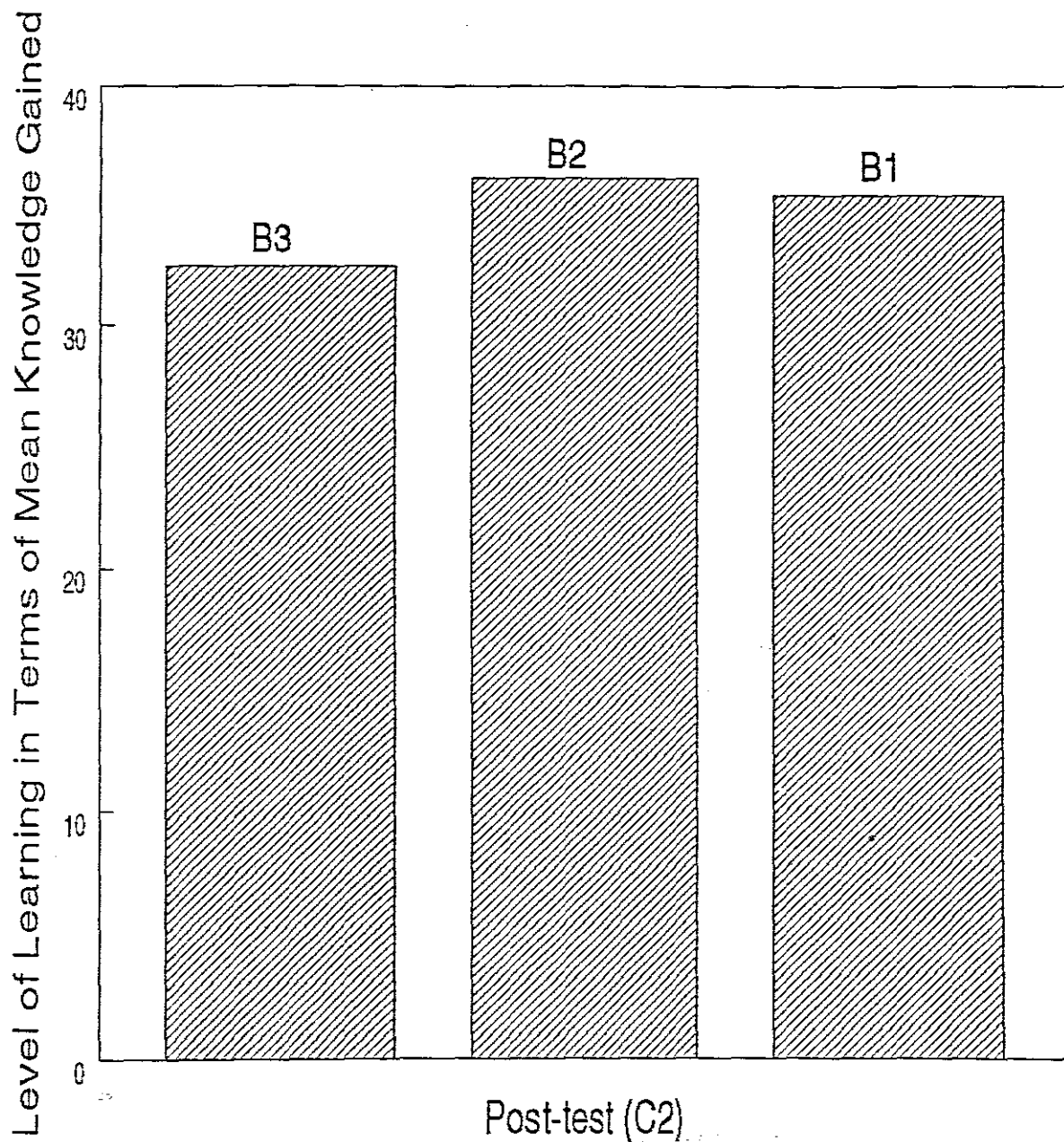
* = significant.

Table 4.3 Tukey's HSD table for comparison between the
learning of the three groups.

	B1	B2	B3
B1	----	0.79	
B2		----	4.16*
B3	3.36		----

* = significant

Figure 4.2 Students' level of learning about
HIV-infection and AIDS after the first
treatment phase.



As indicated in table 4.2, analysis of variance yielded an [F-ratio of 4.8 (2,30 df), $p < 0.05$]. This indicated that the means of the three groups were significantly different.

In order to further investigate the differences between each group separately, computations with Tukey's HSD statistic were performed. Differences are revealed in table 4.3. From this table, it is apparent that the only significantly different comparison between the groups was that between groups B2 and B3 (i.e active learning versus no treatment). There were no significant differences between passive learning and active learning (B1 vs B3) or between passive learning and no treatment at this stage (B1 vs B3).

These differences are clearly observed in figure 4.2. The differences between the three groups (viewed inclusively) indicate that differences are the result of experimental manipulation of the independent variables and consequent treatment effect rather than owing to any possible sampling error.

4.3.2 Results after the second treatment phase.

Table 4.4 Analysis of variance summary table.

SOURCE OF VARIANCE	df	SUM OF SQUARES	MEAN SQUARE	F-RATIO
BETWEEN GROUPS	2	96.97	48.49	4.4*
WITHIN GROUPS	30	332	11.07	.
TOTAL	32	428.97		

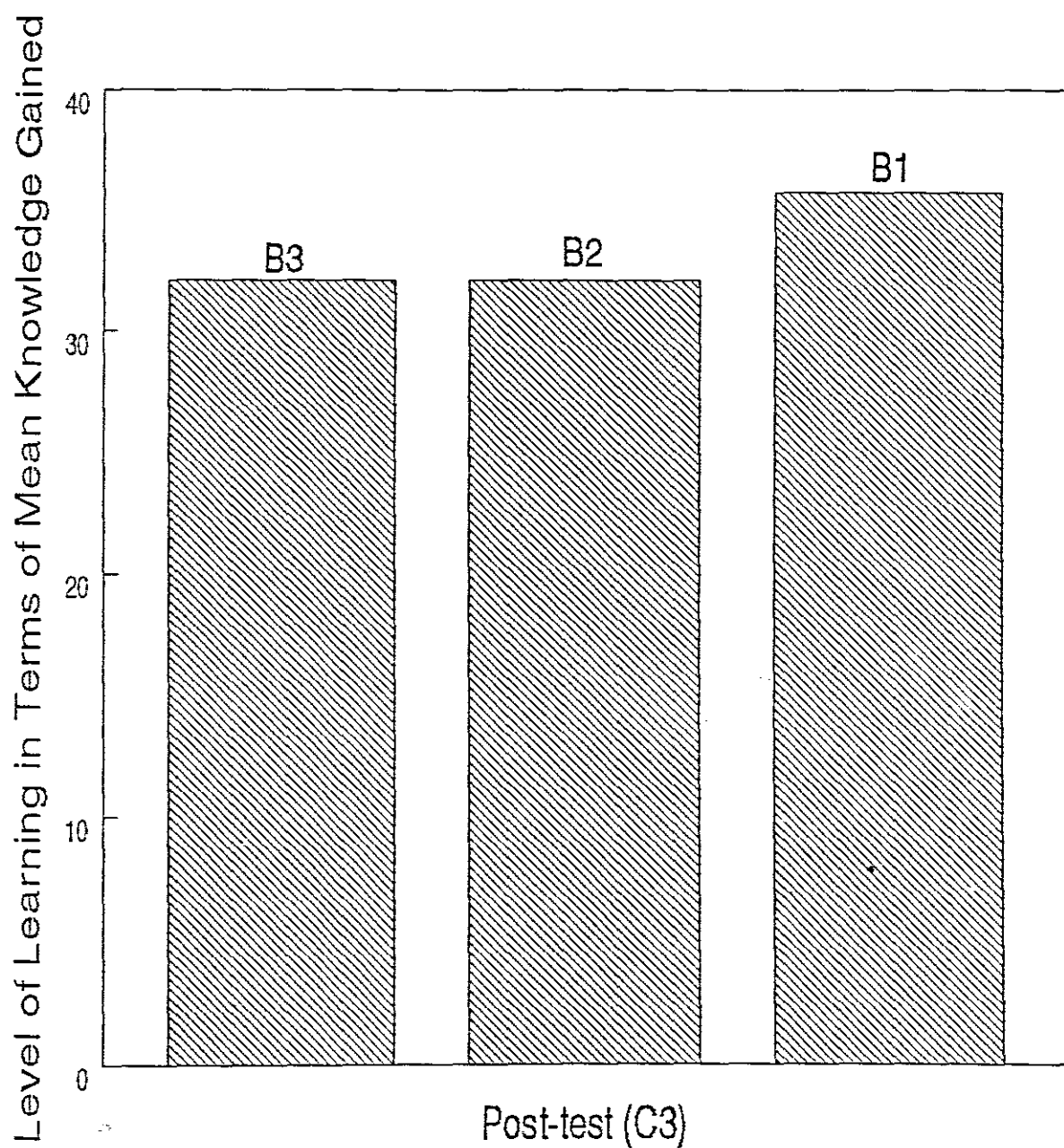
* = significant.

Table 4.5 Tukey's HSD table for comparisons among the
three groups.

	B1	B2	B3
B1	----	4.06*	
B2		----	0
B3	4.06*		----

* = significant

Figure 4.3 Students level of learning after the second treatment phase.



As indicated in table 4.4, analysis of variance yielded an [F-ratio of 4.4 (2,30 df), $p < 0.05$]. This indicated that the means of the groups were significantly different.

In order to further investigate the differences between each group separately, computations with Tukey's HSD test statistic were performed. It is clear in table 4.5 that significant differences were revealed in two of the three comparisons. These were between groups B1 and B3 (i.e active learning versus passive learning) and between groups B1 and B2 (i.e active learning versus no treatment). These differences clearly indicate the cumulative different treatment effects when the two independent variables (passive and active learning) are sequentially paired (i.e B1) and compared to either condition individually (B2 at C2 ; B3 at C3). Significant differences revealed between the groups in the statistical analysis are graphically portrayed in figure 4.3.

4.3.3 Results after the follow-up phase.

Table 4.6 Analysis of variance summary table.

SOURCE OF VARIANCE	df	SUM OF SQUARES	MEAN SQUARE	F-RATIO
BETWEEN GROUPS	2	183.7	91.85	10.44*
WITHIN GROUPS	30	262.5	8.8	.
TOTAL	32	446.2		

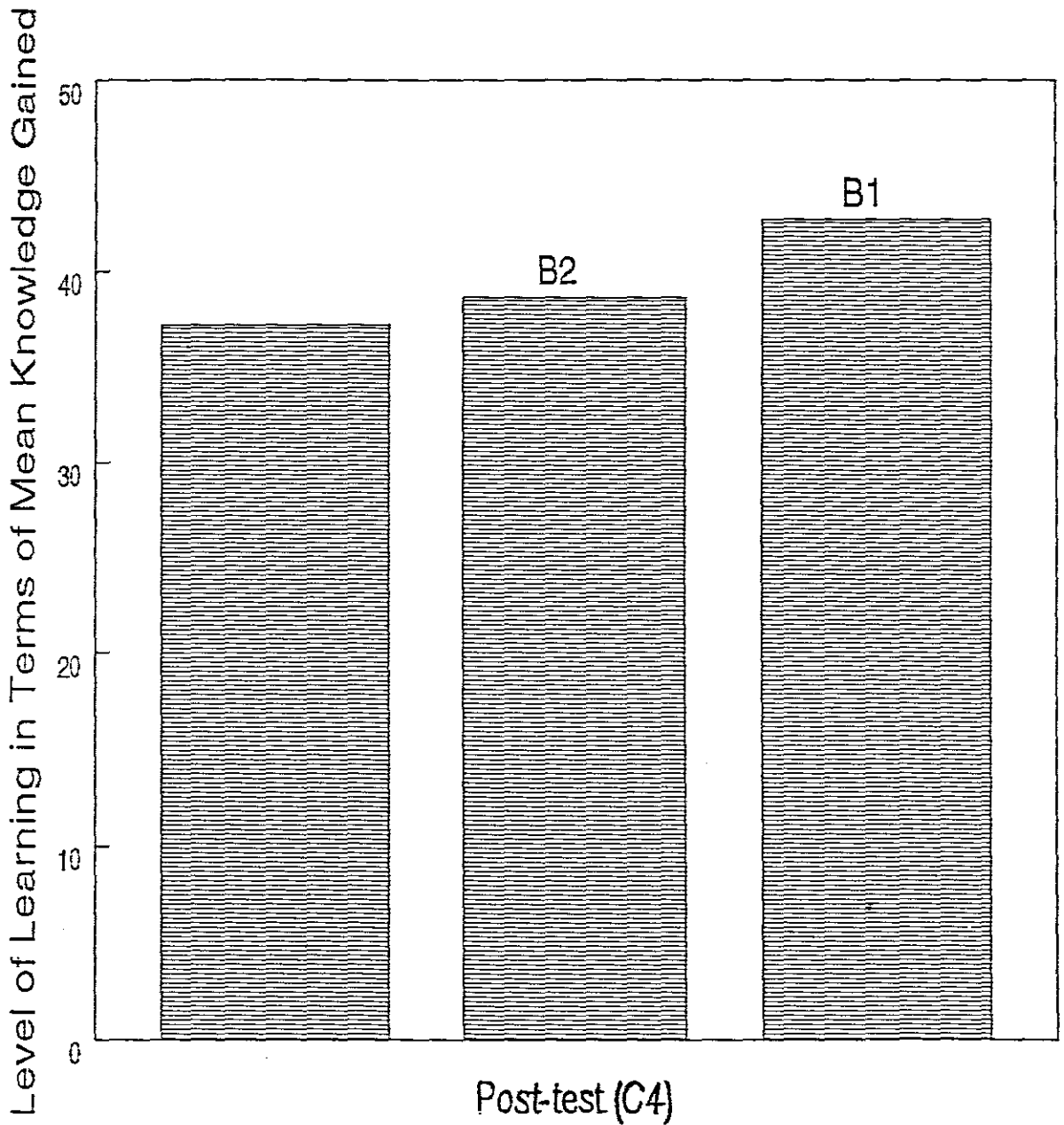
* = significant.

Table 4.7 Tukey's HSD table for comparisons among the three groups.

	B1	B2	B3
B1	----		6.2*
B2	4.16*	----	
B3		1.6	----

* = significant

Figure 4.4 Students level of knowledge after the follow-up study.



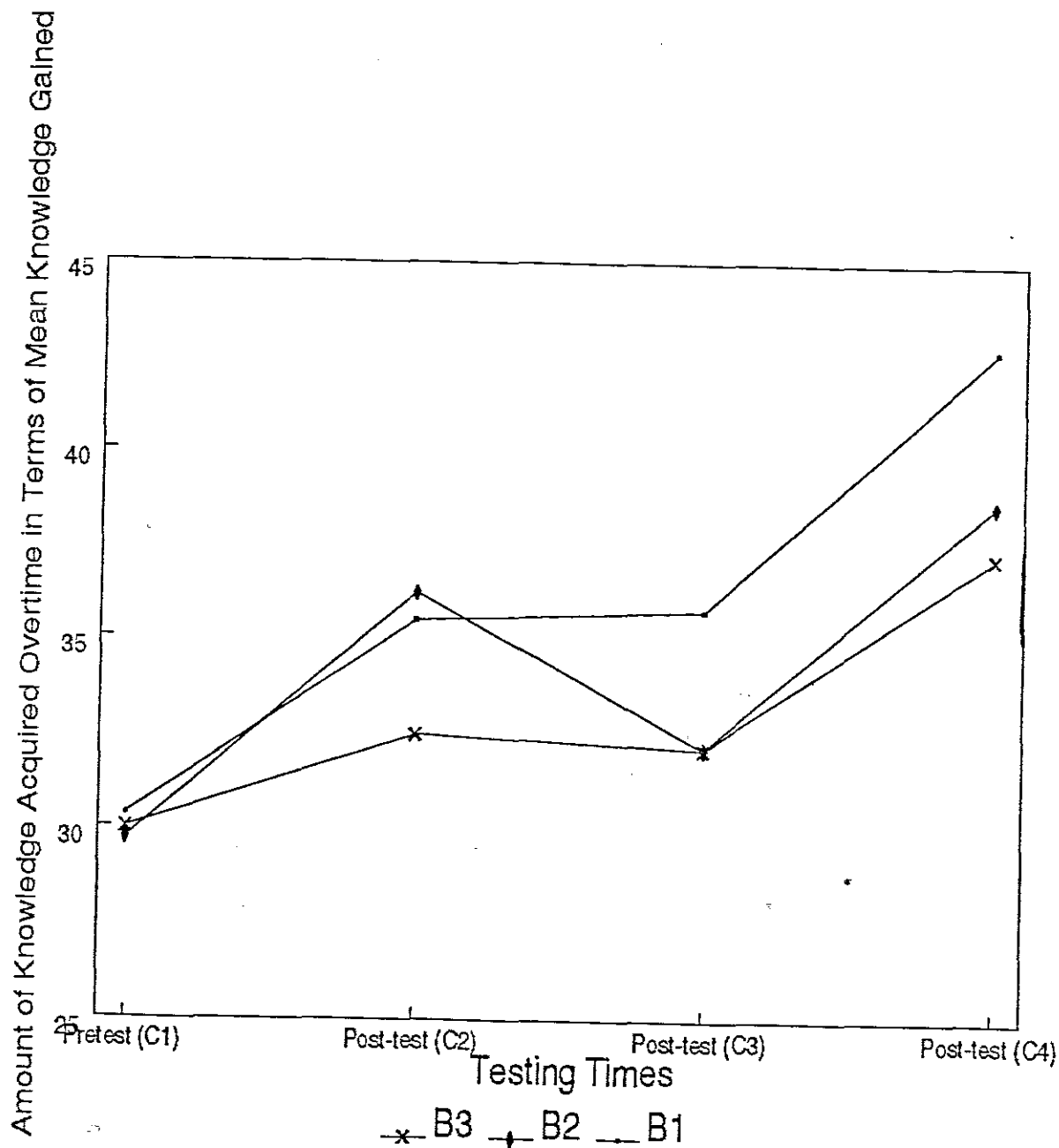
During the follow-up period all groups did not receive further treatment. The results after the follow-up indicated that means for groups B1, B2 and B3 were significantly different. From inspection of results in table 4.6, it can be observed that the analysis of variance yielded an [F-ratio = 10.44 (2,30 df), $p < 0.01$].

In order to further investigate the differences between each group separately, comparisons with Tukey's HSD statistic were performed. The differences are revealed in table 4.7. This indicated that there were significant differences between the groups for two of the three comparisons (B1 vs B2 and B1 vs B3); while the third comparison (B2 vs B3, active versus passive learning) did not reach the accepted significance level. It is clear from the graph (Figure 4.4) that the final follow up testing trend was in the hypothesized direction of active learning through teaching (B2) being superior to passive learning (B3) in terms of pure acquisition of knowledge. Also the clear continued cumulative superiority of B1 (i.e combined active and passive learning) over either active learning alone (B2) or passive learning alone (B3) was again demonstrated.

4.4 Within groups comparisons.

Within groups' comparisons using repeated measures analysis of variance were performed in order to investigate differences within each group, passive and active learning (B1), active learning (B2) and passive learning (B3) over time from the pretreatment (C1) through post-treatment phases (C2, C3 and C4) as shown in Figure 4.1.

Figure 4.5 A summarised graphical presentation of learning effects within each group, in linear fashion.



The area of the graph (Figure 4.5) between C1 and C2 (phase one) shows the learning effect in group B1 (passive learning) and group B2 (active teaching), while for group B3 (no treatment) minimal learning is indicated. The slight difference in terms of improved learning in group B3 may be due to the Hawthorne effect (i.e an improvement in the performance of subjects due to an awareness that they are being studied).

In phase two (C2 vs C3) the learning effect observed in phase one is maintained or remains fairly constant which would be expected with further active learning (B1) or passive learning (B3). Also, as would be expected with no treatment, there is a decrease in learning in B2.

The last area of the graph between C3 and C4 (follow-up phase) shows the resultant effect of the manipulation of the independent variable over time in terms of a learning effect in all three groups.

Looking at the levels of learning, one would postulate that subjects were already fairly knowledgeable about AIDS since their initial scores (B1 = 30.36; B2 = 29.73; B3 = 30) were on average. This postulation is based upon the ten items included in the scale that assessed the level of learning about AIDS. According to this scale the group's maximum

learning ability or knowledge acquisition should be a score of 50. An indication of no knowledge at all would be a minimum score of 10. Furthermore all learning levels were significantly improved through the experiment.

4.4.1 The learning process of the passive and active learning group B1 (results).

Repeated-measures analysis of variance yielded the following results from the passive and active learning group (B1).

Table 4.8 Repeated-measures analysis of variance summary
table for group (B1).

SOURCE OF VARIANCE	df	SUM OF SQUARES	VARIANCE ESTIMATE	F-RATIO
ROWS	10	77.05	7.705	1.07
COLUMNS	3	851.16	283.72	39.3**
INTERACTION	30	216.59	7.22	
TOTAL	43			

* = significant

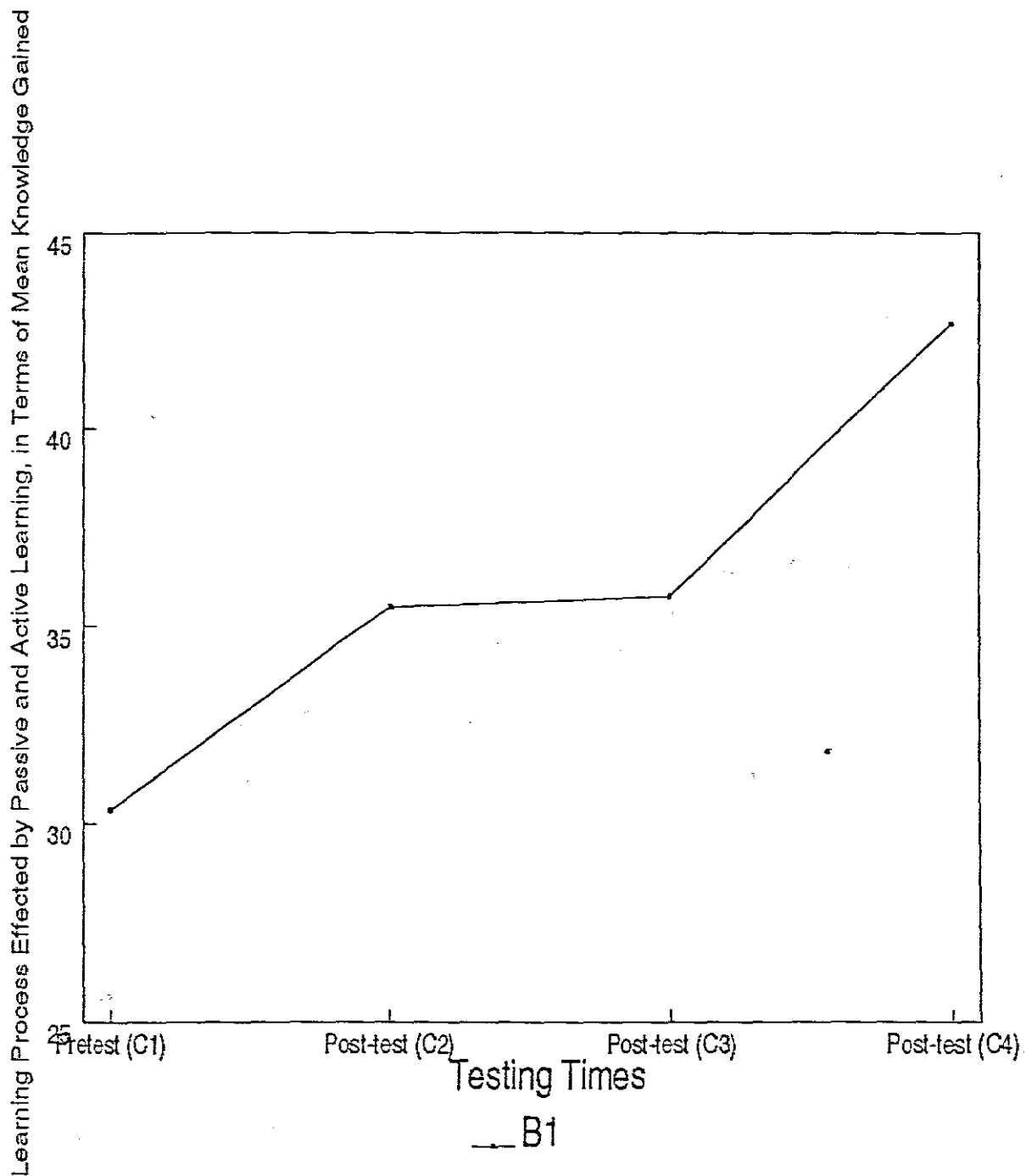
** = highly significant

Table 4.9 Tukey's HSD table for comparison of group B1
learning over four testing times.

	C1	C2	C3	C4
C1	—	6.33*		
C2		-----	0.35	
C3			-----	8.65*
C4				-----

* = significant

Figure 4.6 Linear graphical presentation of group B1
(active and passive learning) level of
knowledge over time.



As indicated in table 4.8, repeated measures analysis of variance revealed significant differences between the groups of scores in group B1 when compared over the four phases. Because this is a mixed model with $n = 1$ and [Fr-ratio = 1.07 (10,30 df), $p < 0.01$], no meaningful test of row effect was possible. The [Fc-ratio is 39.3 (3,30 df), $p < 0.01$]. This means the column effect (i.e within group effect over time) was highly significant at 1% level of significance.

In order to further investigate the differences in learning of this group that experienced both passive learning and learning through active teaching (B1), computations with Tukey's HSD statistics were performed. From table 4.9 it is apparent that significant differences were found between pretest and post-tests scores (i.e C1 vs C2 and C3 vs C4 but not C2 vs C3).

The graphical presentation of results in figure 4.6 clearly shows learning over the three phases. In phase one, learning is accelerated to a level higher than the knowledge level initially shown. In phase two a slight increase can be observed which is not statistically significant. During the final phase, there is an indication of a sustained level of knowledge due to the combination of both passive and active learning.

4.4.2 The learning process of active learning group B2
(results).

Repeated-measures analysis of variance yielded the following results for active learning group B2.

Table 4.10 Repeated-measures analysis of variance summary
table.

SOURCE OF VARIANCE	df	SUM OF SQUARES	VARIANCE ESTIMATE	F-RATIO
ROWS	10	430.98	43.098	3.46*
COLUMNS	3	500.98	166.993	13.39**
INTERACTION	30	374.02	12.467	
TOTAL	43	1305.98		

* = significant

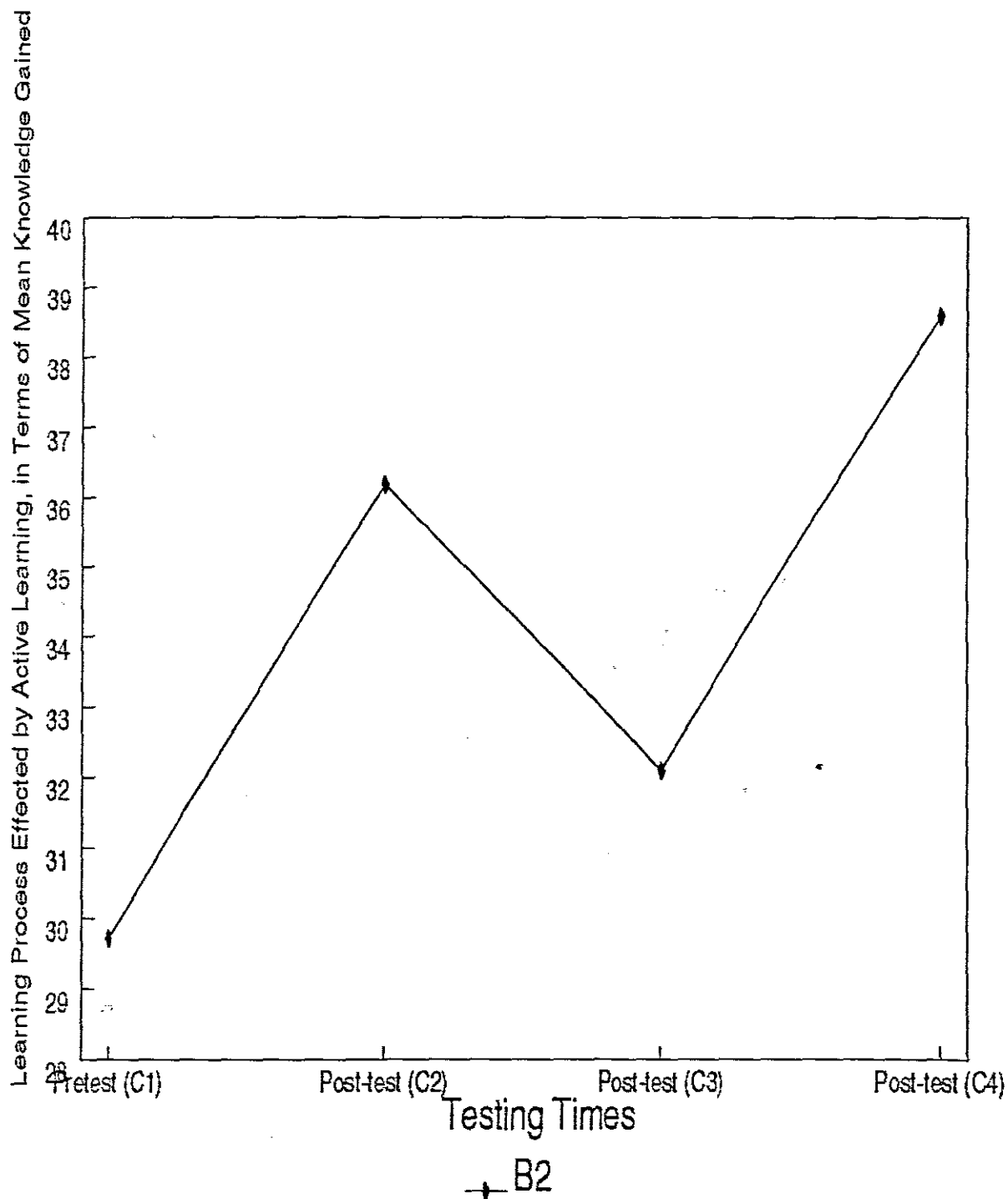
** = highly significant

Table 4.11 Tukey's HSD table for comparison of group B2
learning during the four testing times.

	C1	C2	C3	C4
C1	—	6.05*		
C2		-----	3.84*	
C3			-----	6.06*
C4				-----

* = significant

Figure 4.7 The learning process of group B2 which experienced active learning.



The results of correlated groups of scores from the group that learned only through active teaching (B2) showed significant differences. As indicated in table 4.10 repeated-measures analysis of variance revealed the following results with an [Fr-ratio of 3.46 (10,30 df), $p < 0.05$] and an [Fc-ratio = 13.39 (3,30 df), $p < 0.05$]. Both rows and columns effects are significant at the 5% level of significance.

In order to further investigate the differences in learning of the group that experienced only learning through active teaching, computations with Tukey's HSD statistics were performed. From table 4.11 it is clear that significant differences are between pretest scores (C1) versus post-test scores (C2, C3 and C4) for this active learning group (B2). Graphical presentation of results in figure 4.7 for this active learning group B2 show that an accelerated increase in learning during the first phase is due to active learning of the subjects. During the second phase, there is a remarkable decrease in the level of knowledge which is to be expected without sustained learning.

4.4.3 The learning process of the passive learning group B3
(results).

Repeated-measures analysis of variance yielded the following results for passive learning group B3.

Table 4.12 Repeated-measures analysis of variance summary.

SOURCE OF VARIANCE	df	SUM OF SQUARES	VARIANCE ESTIMATE	F-RATIO
ROWS	10	236.05	23.605	5.1*
COLUMNS	3	303.523	101.174	21.8**
INTERACTION	30	139.224	4.641	
TOTAL	43	678.796		

* = significant

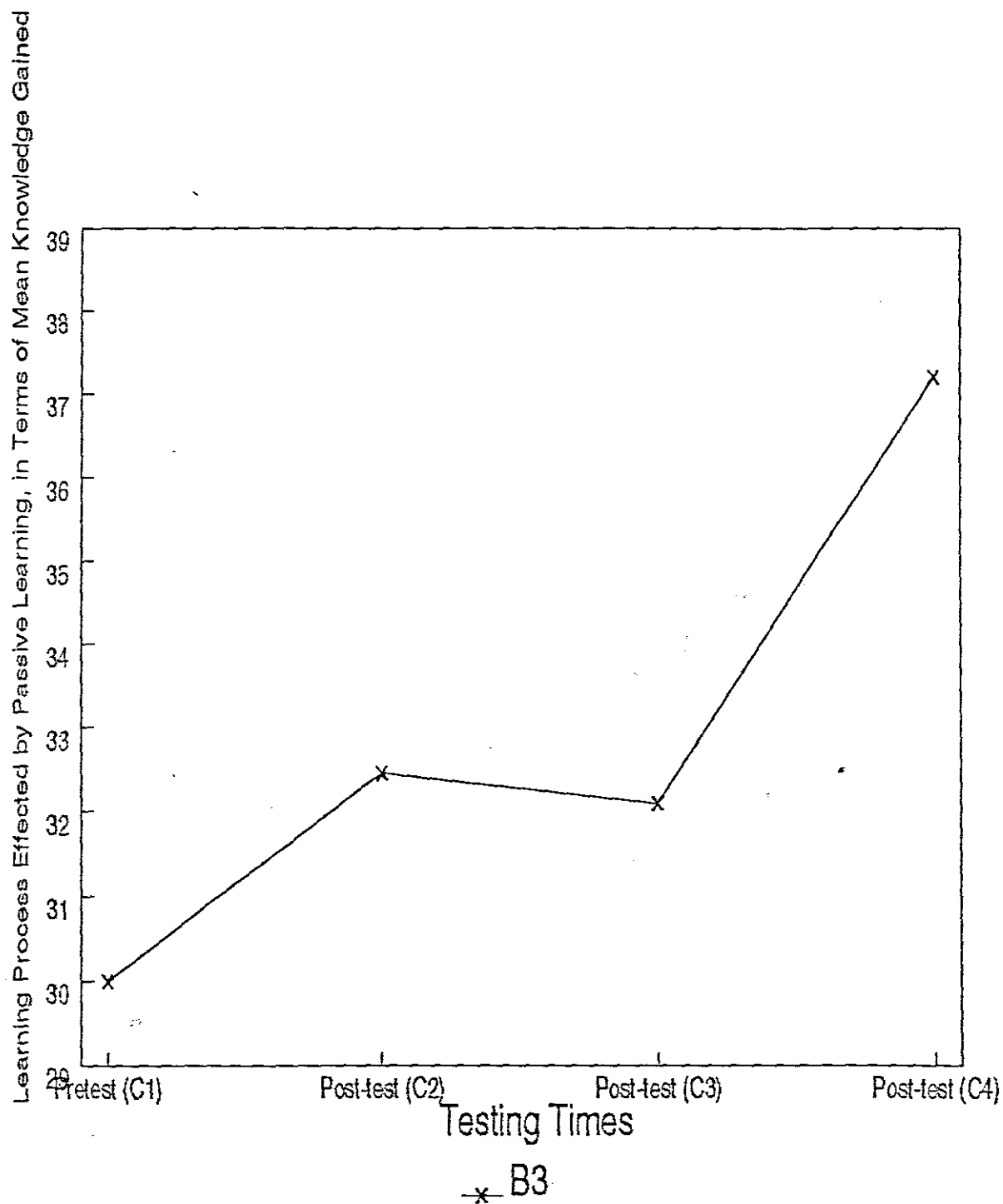
** = significant

Table 4.13 Tukey's HSD for comparison of group B3
learning during the four testing times.

	C1	C2	C3	C4
C1	—	3.79		
C2		-----	0.57	
C3			-----	7.84*
C4				-----

* = significant

Figure 4.8 The learning process of group B3 which experience passive learning.



The results of correlated groups of scores from the group that learned only through passive learning showed significant differences. As indicated in table 4.12, repeated-measures analysis of variance revealed an [F -ratio = 5.09 (10,30 df), $p < 0.05$] and an [F -ratio = 21.8 (3,30 df), $p < 0.05$]. Both the rows and columns effects are significant at 5% level of significance.

In order to further investigate the differences in learning of the group that experienced only passive learning, computations with Tukey's HSD statistics were performed. From table 4.4.4.2 it is clear that significant differences are only between post-test score comparisons (C3 versus C4), which indicate some follow up after effect of passive learning. It is interesting to note that immediately after passive learning no significant differences are observed (C3 testing). This pattern of no immediate significant effect of passive learning (i.e in terms of acquired knowledge) was not observed in another analysis with group B1 (Table 4.13, C1 .vs C2).

Examination of results displayed graphically in figure 4.8, shows that learning patterns in group B3 show no significant differences. The slight difference which may be observed may be attributed to Hawthorne effect. A sudden increase in the level of learning during the follow up may be an indication of a role played by rehearsal which influences sustained

knowledge sometime after the treatment has been administered (Papalia and Olds 1988). The above assumption is based upon participants observation during discussions.

In the case of active learning either alone (B2 at C2) or combined with passive learning (B1 at C4) there is a consistently significant improvement in terms of knowledge gained. While there is not an immediate superiority of active learning over passive learning (B2 at C3), in general there is a clear cumulative effect of learning in all three groups, as predicted in the hypotheses.

4.4 Resume.

In summary active learning through teaching either alone or when paired with passive learning was found to be more effective than either passive learning, or no treatment alone.

While learning was observed in all three groups the simple one-way analysis of variance and the repeated-measures analysis of variance brought us to the conclusion that the learning of group B1 in particular (i.e the group which experienced both passive and active learning) appeared to be a gradual and continuous process.

CHAPTER 5 : DISCUSSION.

5.1 Preamble.

The results of this study reveal differences in levels of learning achieved by the three groups as well as in the learning process of each group. Comparison of levels of learning of each group were made during testing times. The learning process was treated as a trend which occurs over time and comparisons were made by looking at this process as a whole.

Since all groups were learning about AIDS, the findings in the following discussion are interpreted and discussed in terms of learning. The didactic principle which is researched in this dissertation is that learning through teaching is superior to or more effective than learning through being taught. The results of this research now form the basis of the following discussion.

It was important to make comparisons among the three groups in order to see the effects of any one kind of independent variable or method of learning compared with another. This comparison procedure was also important in controlling

In other words, a systematic analysis of learning of the three groups in this study showed that those who both learned through being taught as well as through teaching learned best; those who learned through teaching alone learned next best and those who learned through being taught alone learned least. This was empirically supported and confirmed the main hypothesis of this study.

Comparison of all phases of the learning process of the groups showed that active learning influenced rehearsal and consequently memory which is associated with some form of enduring knowledge in the individual's brain (Papalia and Olds 1988).

While most studies have de-emphasized the link between knowledge and behaviour change (Aggleton and Warwick 1989; Turtle, Ford, Habgood, Grant, Bekiaris, Constantinou, Macek, and Polyzoids 1989 ; Kegeles et al. 1988), the results of this study suggest that during the process of rehearsal the brain forms some sequence of visual images or events which help an individual to understand and learn (Chambers and Reisberg 1992; Sekuler and Blake 1994). Perceptual, visual imagination of risk behaviour and events could influence future behaviour when the person is faced with a similar event. Increased knowledge may also influence attitude change. This is possible because attitudes are

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Perceptual, visual imagination of risk behaviour and events could influence future behaviour when the person is faced with a similar event. Increased knowledge may also influence attitude change. This is possible because attitudes are

residuals of past experiences. It is likely that perception is affected by already known past experiences whether these experiences were imaginary thinking or actual experiences of events.

To evaluate the treatment effects step by step, the researcher computed Tukey's HSD test statistic, which indicated precisely the level of knowledge gained, and found that after the first phase, the passive learning group (B1) had learnt better than the no treatment group (B3) but not as well as the active learning group (B2) about HIV infection and AIDS. Similar findings were recorded by Kutzko (1988), with regard to teaching safe sex to women in this age of AIDS. He concluded out that teaching is at present the best method of learning and influencing others to learn more about AIDS.

In the following discussion the learning process of each group viewed exclusively is examined in phases.

5.2 Passive and active learning combined (group B1).

From the first phase through to the follow-up phase, passive learning combined with active learning consistently revealed the following linear process.

During the first phase the learning process seemed to have increased knowledge and the optimal level was observed to be moderately high. This indicates that passive learning also accelerated knowledge acquisition. When this method was combined with active learning in the second phase, the acceleration in knowledge acquisition was considerably increased. When this group is followed over time, it is clear that acquired knowledge remains higher than before both methods were combined. The level of knowledge as shown in the results, seems very high because it is quantified at a very high level. This is similar to experiential learning, where the individual is actively involved in the learning process and cognitive thinking processes are considerably influenced to store new knowledge.

This implies that for people to learn about AIDS, passive learning followed by active learning should be used instead of simply learning through discovery. This would benefit people who intend to pass on information to others since learning when part of a group produces an observable group motivation factor which helps group members become interested in the subject, communicate freely and learn more. This may be in line with social learning theory. According to this theory, membership of a group seems to motivate the individual to learn even more seriously, and group cohesiveness causes individual group members to perceive themselves as members

with a common aim. This learning strategy can be very effective in society in that while some learn through teaching (active learning) those being taught also gain knowledge (passive learning).

Such a learning process occurs as a two way process with every participant in either group gaining or learning in one way or another. This learning process is also cost-effective because it is self perpetuating and could continue for longer periods in poorer communities for example, where health as well AIDS educational programmes have been unsuccessful because they are regarded as relatively unimportant compared to other issues.

When the same subjects for group B1 (who experienced passive and active learning) were measured over time, there was a noticeable gradual increase in the level of learning from being passive learners to active learners. This indicates that passive learning should be followed by active learning.

5.3 Active learning alone (group B2).

The active learning group viewed exclusively showed a learning process which was different from that of the group that combined passive and active learning. Active learning in the

former group during the first phase produced a remarkable acceleration in the acquisition of information. Similar findings were recorded by Rosenthal and Zimmerman (1978). Their study showed that teacher modelling or demonstration of conceptual behaviour can benefit students learning .

This is clearly seen in the graphical representation (section 4.4.3). The pre-tested level of knowledge of this particular group was initially very similar and non-significantly lower than that of the other two groups. After active learning in the first phase however, the level of knowledge was found to be higher than that of the other groups.

Active learning seems to be superior to passive learning as well as to no learning at all. Immediately after group B2 stopped learning, a decrease in the level of knowledge was observed. When this group was followed up in later assessment however, a higher level of knowledge was found. The slight decrease in the level of knowledge during the second phase may be due to cognitive processes of storing information in memory, generally known as rehearsal (Papalia and Olds 1988).

The learning experience of this group clearly shows that, though active learning is superior to passive learning the effects of active learning alone on memory are inferior to the combined effects of passive learning and active learning.

Rehearsal seems to be influenced or accelerated to a greater extent if passive learning and active learning are combined than if active learning is applied alone.

As indicated previously, it is thought that when people learn, visual images are formed in the brain (Chambers and Reisberg 1992; Sekuler and Blake 1994). This occurs during rehearsal, if the stimuli are presented as words or reading materials. For people to fully comprehend what they learn, visual images have to be formed in their brains in order to store such information and keep it intact so that it can be retrieved easily. Then, when a similar event or phenomenon occurs, the brain will probably classify such an occurrence and appropriate action or behaviour can be taken or consequences can be predicted even before they actually occur.

One can hypothesize from the above information that the formation of iconic or visual images which occurs during perception is processed through to memory via the rehearsal process (Papaila and Olds 1988; Chambers and Reisberg 1992; Sekuler and Blake 1994). Further physiological studies may be able to confirm this hypothesis.

What should be of significant importance in intervention programmes such as those that are planned and designed for teaching and promoting AIDS prevention, is that the targeted

community or group of people should use effective methods of learning about AIDS and risk-behaviour in as short a time as possible. In that short period, these methods should also be able to influence behaviour to an extent that, even if an individual is no longer involved in teaching or learning about AIDS, s/he models safe behaviours.

5.4 Passive learning alone (group B3).

The passive learning group viewed exclusively showed a learning process that was remarkably different from either the active learning group or the passive-combined with active learning group. The learning process of the passive learning group resulted in some learning. In comparison with active learning alone or passive-combined with active learning, passive learning was shown to be least effective.

Graphic presentation of these three groups (section 4.2.2) shows that AIDS educational programmes that used co-ordinators or AIDS teachers as disseminators of information about AIDS and targeted groups as assimilators of information are less likely to change risk behaviour.

Since changing-risk behaviours involves affecting attitudes, beliefs and lifestyles, it is necessary for people to be actively involved in the process of learning which is aimed at changing risk-behaviours. Active participation forms the common denominator in changing attitudes, beliefs and lifestyles which presumably result in behaviour change.

Traditionally, health risk factors such as AIDS were taught to communities by experts. This was done in order to inform and make people more knowledgeable about AIDS as an epidemic in the belief that this would help prevent the spread of AIDS. Recent research studies such as those by Aggleton and Warwick (1989) and Lachenicht (1993) point out, however, that there is no link between mere knowledge acquisition and behaviour change. What has been shown to be true in the present study is that there is a link between active participation and behaviour change in the form of learning.

The study of learning is shared by many disciplines e.g education, biochemistry, psychology, etc. All these disciplines have their own specific perspectives when they study the learning process. The scientific study of learning itself is the special task of psychologists. This includes learning about AIDS since AIDS is sometimes called a behavioural disease (because the virus is passed on through specific actions, usually sex with an infected partner). It

then follows that motivating and empowering people to change risk-behaviour is essential. This would be successful if learning is clearly defined in terms of its link to behaviour change.

From a psychological perspective, learning means the modification of behaviour following upon and induced by interaction with the environment as a result of experiences leading to the establishment of new patterns of response to external stimuli (Collier 1972). It can be deduced, therefore, that learning is the result of instruction, training and personal association.

It is common knowledge and belief that the learning of the general public in South Africa is highly dependent on media coverage of HIV infection and AIDS issues. This is due to the fact that many people are illiterate and live in conditions of poverty. People living in such conditions have so many other problems that AIDS is rarely perceived as an issue of great concern.

In a study by Ouedraogo, Lorenz and Zina (1989) it was found that television and radio, followed by magazines and school are the main sources of information providing knowledge about HIV infection, the risk of AIDS and the ways in which the virus is transmitted.

Such information provides a good basis from which researchers and AIDS educators can judge the preventative success of media coverage of HIV infection and AIDS information. It seems that continuous effort and evaluation is essential in order to correct and readjust programmes which maximize effective learning about HIV transmission, HIV infection and AIDS, because inappropriate coverage of HIV and AIDS information through the media would certainly affect the population at large.

Educating people about AIDS, both in schools and in communities has become the chief approach to prevention of HIV infection. In teaching about HIV infection and AIDS, whether through the media or by other means, the focus should be on a particular group of people such as adults, young adults or children. Any educational programme through the media that covers a wide-range of topics is likely to be ineffective. The efficacy of any educational programme lies in its design. The message should be such that it raises motivational levels to the extent that the need to learn more about AIDS is realized.

The findings of this study supported the hypothesis that a group which learns through active teaching about AIDS learns more than a group which learns passively. These findings are

consistent with those of Parke (1974) who found that school children who teach moral codes end up following them better themselves.

A successful educational programme which succeeds in increasing knowledge, awareness and a need to learn more about HIV infection and AIDS amongst university students, will surely have an impact on the spread of AIDS (i.e it will have a major role in preventing further HIV infection).

AIDS has generated widespread concern among many professionals and even those who do not work with AIDS related cases have been challenged by the threat AIDS is posing. This has been made possible by the amount of financial and other kinds of support made available to AIDS prevention and intervention programmes.

Since the planning of and payment for medical care for AIDS victims is a measurable health economic issue, preventive strategies that have been shown to be effective, such as learning through teaching, should be expanded and implemented as large-scale strategies for AIDS prevention.

Studies on the prevention of AIDS are significant for protection of society. In a study of changes in the incidence of sexual intercourse of unmarried teenagers following a

community-based education programme, Marvin and Zellman (1987) suggested that school and community-based sex education programmes, which present relevant topics and instil important skills are well worth pursuing.

It seems important that AIDS educators note that no single approach is applicable in all countries or with all groups within one country or even culture. This seems significant in order to prevent blanket applications of strategies which have proved successful elsewhere. A balanced, imaginative combination of approaches is likely to be most effective, particularly when cultural values, educational levels and other relevant factors in targeted groups are taken into account.

When such educational programmes use strategies such as learning through active teaching they may help people to make resolutions to combat AIDS formed on the basis of their active learning experiences. This could also help members of the community to deal with and correct problems of labelling and stigma associated with AIDS. This could be done through active teaching of such relevant topics to others.

This study focused on learning about AIDS. The researcher's hypothesis, that a group which actively teaches about AIDS would learn more than a group which is taught, was based on

the objectives of the study that teaching about AIDS helps to influence one's behaviour and increase one's knowledge about AIDS. This also helps people in developing decision-making, communication and problem solving skills as they deal with their own sexuality, relationships and lifestyles.

5.5 Subjects knowledge of HIV infection and AIDS.

In a sample consisting of students, one would expect knowledge of HIV infection and AIDS transmission to be higher than that of the general public. After some sessions it was observed that some students recognised their lack of knowledge and asked for more information. Almost all wanted to know more about the disease and the effects it has on the sufferer.

A random sample of five evaluation questionnaires was drawn and it was found that some respondents initially expressed pretreatment confusion about the difference between HIV infection and AIDS disease. After this particular study they were clear about the distinction. Students commented that they had become confident to teach about HIV infection, AIDS transmission and AIDS prevention practices. The test statistics computed on the Likert (knowledge) scale revealed an increase in knowledge due to learning about AIDS.

This indicates that subjects' knowledge after the study had significantly increased to a level that made them confident and able to impart relevant information about HIV infection and AIDS to others.

5.6 Subjects sexual attitudes and AIDS prevention practices.

Since attitudes towards AIDS and AIDS prevention practices are comparable to core and periphery aspects of risk-behaviour, it is of crucial importance in this study to discuss sexual attitudes and AIDS prevention practices together.

Attitudes are residuals of previous experiences in that they are a form of stored information about previous successes and unsuccessful behaviours in an environment similar to the present. Since they contribute to current overt-behaviour (risk-behaviour), they explain why a person is likely to behave in a way that is consistent with previous ways of behaving.

In evaluation questionnaires, students expressed the influence some peers can exert on their attitudes to change. This means that dominant peers in learning situations may play a particularly influential role in shaping the behaviour of

others. Abranovitch and Grusec's study (1978), showed that children are more likely to conform to the opinions and behaviours of high-status peers. In discussing preventive measures against AIDS, the respondents commented that they were less clear on what constituted unsafe sex and which activities were to be avoided. Most of them suggested self control as a means of prevention.

On the evaluation questionnaire, most students indicated a boost in self confidence pertaining to how to behave properly in order to avoid catching AIDS. Such behaviours included talking and teaching about AIDS as well as sticking to one safe sexual-partner. A noticeable change of attitude was expressed, that of accepting that AIDS can be prevented through education.

5.7 Resume.

This chapter has been concerned with wider qualitative discussion on the results and interpretation of results in this dissertation, which lead to the recommendations and conclusion in the next chapter.

CHAPTER 6 : RECOMMENDATION AND CONCLUSION.

Throughout this study recommendations have been made on programmes for HIV and AIDS awareness, prevention and support systems. These recommendations are drawn together in this section.

This study of learning through teaching about AIDS has been conducted against a background of knowledge and awareness of the South African situation, with respect to implementation of AIDS preventive intervention-programmes.

Though it has already been argued that no single approach is applicable in all countries or with all groups within a country, it cannot be denied that programmes that are essential in South Africa are those that are designed to be self-supportive or sustaining, effective and to promote a continuous learning process. Although this programme appears to have the potential of being self-perpetuating, it should be monitored and evaluated in order to ensure that it is effective in ongoing field programmes.

The design or programme has been shown to be effective among university students. It is also recommended for the following groups which occur in different social conditions in South Africa:

6.1 Children in schools.

A school may be a particularly convenient and effective forum for AIDS education for a number of reasons. One of these is that a number of the age groups most at risk, including those who are often difficult to reach in community initiatives, are brought together everyday in schools.

Using this programme with children in schools could be useful as the schools are divided into standards and sections within standards. Each section could learn through teaching another in a circular method until all children in a school have a chance to teach about HIV-infection and AIDS.

6.2 Tertiary educational institutions.

This programme seems also applicable to tertiary institutions in general. Tertiary educational students could be helpful in constructing and compiling HIV and AIDS materials appropriate to be taught and learned by different age groups in our communities. They could also be helpful in teaching about AIDS among themselves.

New students from time to time will need access to HIV and AIDS education while senior students previously involved in AIDS education will continuously need to update information and also receive learning opportunities to reflect upon their feelings, attitudes and sexual practices. This could help students avoid overt-behaviours.

6.3 Work place.

Companies should anticipate employee concerns about working with an individual with AIDS before any incident occurs. If nothing is done until a situation arises, the suspicion and alarm among co-workers may create walkouts and fear that can not be easily resolved. It is believed that with early employee education, companies can help prevent the spread of AIDS, ensure a productive work environment and a knowledgeable group of employees.

AIDS co-ordinators in the workplace are not always there to teach about HIV infection and AIDS. If people in the workplace can be assisted to learn and teach about HIV and AIDS, it could be an advantage because they are always there. They meet and interact most of the time. They can also arrange these programmes at a convenient time.

The leaders of such programmes in a workplace should be people who have most knowledge about AIDS and who possess organising and communication skills in order to function and complete their projects efficiently and thoroughly.

6.4 Community organisations.

One of the roles of community organizations especially non-governmental organizations (NGO's) is to promote community development and to help implement preventive programmes when epidemic diseases such as AIDS threaten the community.

Information giving is insufficient at this stage of the epidemic. It appears we need to go on from the didactic approaches and involve people far more actively in their own education.

A programme of active learning through teaching such as this one could help give guidelines and directions on how to implement and facilitate effective AIDS prevention programmes that could successfully increase the level of understanding of any particular group of people. It is very important that what is taught to any group does address their expectations and

provide information about recently discovered ways and means of preventing the spread of HIV infection and AIDS.

6.5 Health organizations.

In South Africa, health organisations are actively involved in promoting AIDS awareness particularly amongst people who live in rural areas and poorer communities. AIDS education programmes that are used within these groups need to be continuously evaluated in order to determine their effectiveness. A self-supporting and continuous AIDS education and prevention programme, such as learning about AIDS through teaching, could not only help to save financial resources for AIDS victims' counselling programmes, but also reach far remote places where there are no health organisations immediately on the ground.

In conclusion, the following advantages are claimed for this programme :

- * it is self-sustaining
- * it is a continuous programme that can be monitored at intervals.
- * it is applicable to any size group

- * it may encourage interdependency among non-governmental organizations and government health departments.
- * it may challenge any citizen to take responsibility in teaching about HIV infection, HIV transmission and prevention.

When such a programme involves all members in an institution or community it can be successful in changing risk behaviour.

Ideally everyone should be equipped with enough information to educate others about HIV and AIDS. It is neither possible nor desirable to leave all awareness and support initiatives to experts and professionals. Everyone needs to be actively involved in AIDS education.

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APPENDIX A.

MATERIAL FOR TEACHING .

1. Introduction.

Teaching others about Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome, should not be optional extra, but an important part of education; formal, informal or non-formal. Experts say the health risks of HIV require a low key, sustained educational intervention. All over the world children as well as adolescents and young adults constitute the most promising group for AIDS education, as they are concerned with taking important decisions about their lifestyles, including their sexual behaviour. They should be educated to adopt and maintain healthy behaviour patterns that eliminate the risk of becoming HIV infected.

2. Individual in a society / community.

The individual although unique, is inherently social i.e. the mind is not disjointed from the external world. Attitudes,

perceptions and behaviour stem from a dynamic interplay of id and ego, subject and object, I and me. According to Mead (1934 :175), the "I" is the response of the organism to the attitudes of others; the "me" is the organised set of attitudes of others which one assumes i.e the uniqueness of lifestyle comes from the "I", the socially patterned part from the "me".

Both the "I" and "me" are intimately shaped by the totality of an individual's experience, the set of ordered sequences of social experiences to which the individual is subjected. The individual, then, operates in a unique way, but the manner in which she / he does so depends upon significant others and the community at large. (Self-reflectiveness can occur because the perceptions of the other are organised in a fashion that the individual is capable of perceiving and internalizing).

3. Sexuality.

This refers to a physical, a psychological, and a social phenomenon. It is a major motivating factor for our behaviour and often has far-reaching effects on our lives. Our sexuality encompasses both our beliefs and our behaviours related to

erotic stimulation. It is influenced by our biology our emotions, and our culture (Papalia and Olds 1988).

4. Arousal of sexual desire: What makes people want sex?

Researchers argue that an increase in levels of certain hormones in our bodies such as testosterone and oestrogen may influence our participation in and enjoyment of sexual intercourse. These hormones are secreted in large amounts by the endocrine system from puberty throughout adolescence till young adulthood stage.

5. Stimulation: How do we get sexually attracted to others?

Those parts of the body which separate sexes such as males from females attract our attention, and we become sexually aroused. These parts include buttocks, breasts, genitals, thighs and they are called "gender signals". Through living in a society some are cultural imposed e.g clothing and hairstyles.

6. Temptation.

When we find that we are sexually attracted to someone, the first thing we normally do is to maintain visual contact, next we try to get closer physically then we try to establish a relationship.

7. Situational factors:

(i) Permissive environment

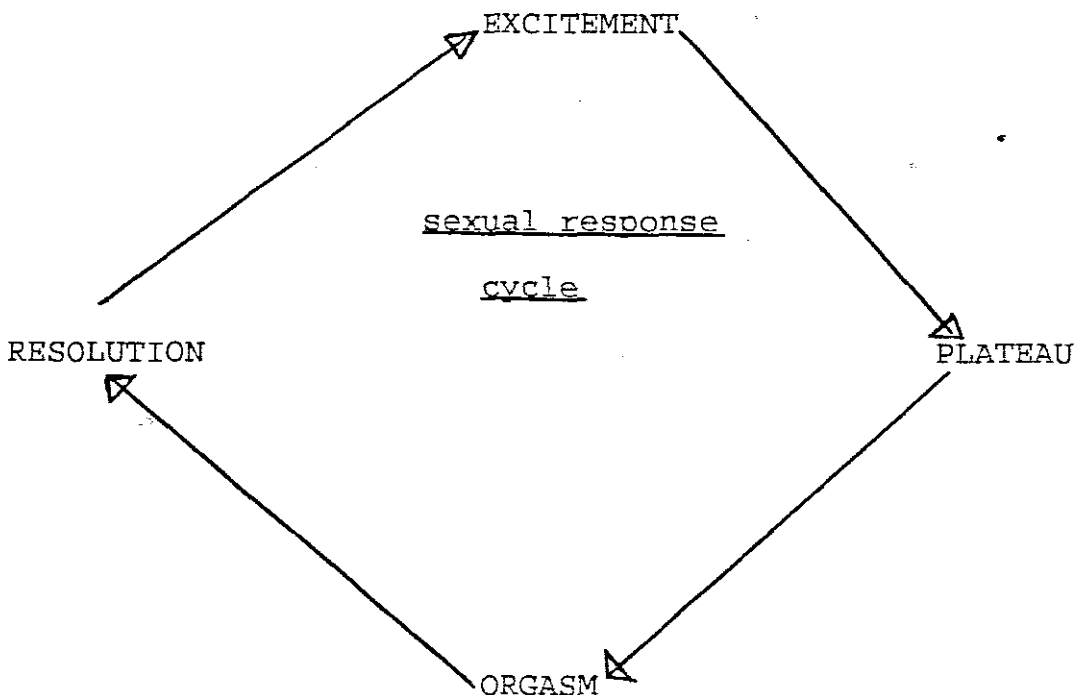
Commonsense and everyday experience tells us that in situations such as in a party, in the absence of bystanders, in a room we are more likely to follow our feelings (Clarke 1988).

(ii) Unsuitable environment

Our sexual desires may be inhibited in situations perceived as not appropriate or not conducive to sexual activity such as in presence of others, not being in an exciting situation.

8. Feelings.

Humans have sensitive areas in their bodies called erogenous zones, and people experience sexual arousal from being touched on these spots. These include genitals, breasts, thighs, buttocks, lips, anus, ears and armpits, dependent upon the individual. Bodily responses experienced include vasocongestion (flowing of blood into the genital area) and myotonia (muscles in the genitals contract). Then a sexual response cycle follows:



9. Sexuality and AIDS.

AIDS stands for Acquired Immune Deficiency Syndrome. It is an illness that affects the immune system i.e the system which protects the body from infection by bacteria, viruses and other germs, by fighting and destroying such disease-causing germs.

10. AIDS viruses.

The two types found are LAV and HTLV-III (Human T-cell Leukaemia Virus).

11. Infection.

The lining of the rectum is easier for germs to penetrate than that of the vagina and may be damaged during anal sex. Vaginal sex is as unsafe as anal sex because the exchange of body fluids containing viruses leads to infection. The use of a condom or any other barrier method of contraception gives some protection from the virus. Viruses can pass through a tiny hole in a condom.

12. HIV carrier.

A human immunodeficiency virus carrier, is someone who has an HIV in his / her body and who can spread it to others.

13. Incubation period.

When people are first infected with HIV, they may not realize it. There is an incubation period of approximately three months to five years or more (i.e the time between a disease causing germ such as the virus getting into the body and the period when symptoms begin to appear). During this time the person looks and feels healthy, but can spread the virus to others. The presence of HIV can be detected by an "AIDS test". This is not a test for the disease or the virus. It is a test for antibodies (i.e microscopic particles made by the immune system to fight and destroy the invading bacteria or viruses).

People with a positive test result have HIV antibodies in their blood and are HIV positive. A test which is HIV negative proves little because the time lag between catching the virus and the test becoming positive is not known, due to the slow rate of infection in human beings. It may take years before a

test becomes positive and may take time before the infected carrier state enters into an active disease state.

14. Time schedule.

It takes three months or more after catching the virus for AIDS antibodies to develop.

15. Full-blown AIDS.

Approximately 95% of HIV-positive people eventually develop "full-blown AIDS". This is when the virus damages their immune system.

16. Safer sex.

Generally people practice safer sex by using condoms and sticking to one sexual partner. Safer sex goes beyond these simple preventive measures, and includes abstaining from sexual intercourse and intercourse without penetration.

(i) Use of condoms.

Besides abstinence and / or a safe sex partner a new type of condom reduces the risk considerably, but not absolutely, owing to a very small chance of breakage or perforation. Safety is dependent however, depends not only on the willingness of the partners involved, but also on the "how" of using it. Thus using a condom is 95% safe. Safety increases when you are taught how to fit and use a condom properly.

(ii) One sexual partner.

People who stick to one sexual partner have less chance or being infected, but this depends upon the reliability of both the partners.

(iii) Suggested levels of preventive action.

(a) Abstinence.

It is advisable that adolescents and young adults refrain from full sexual intercourse until more mature adulthood and / or marriage.

(b) Sex without penetration.

This refers to sexual behaviour that does not include full sex penetration or sexual intercourse.

(c) One safe partner.

Having one reliable partner over a considerably period of time helps a person to have control of his / her sexual behaviour.

APPENDIX B(D).

Questionnaire

The Department of Psychology is conducting a study on AIDS education. You are asked to honestly fill in this questionnaire. All information will be kept confidential and only used for research purposes. Please do not write your name.

A. Demographic data.

Kindly make a cross in the appropriate space below:-e.g

1. Sex	<u>Male</u> _____	<u>Female</u> _____	
2. Age group	<u>16-18</u> _____	<u>19-24</u> _____	<u>25-up</u> _____
3. Marital status	Never married _____	Married _____	Divorced _____
	Widowed _____		

4. Post matric experience Degree Diploma work nothing

NB: Specify number of years after matric:.....

Give your opinion in relation to the following statements. Make a cross in the appropriate spaces below:-

S=strongly agree. A=agree. U=uncertain. D=disagree.

S=strongly disagree.

1. Our sexuality is influenced at least by three factors our biology, our emotions and our culture.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

2. I enjoy being touched in any sensitive part of my body.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

3. One of the viruses causing AIDS is Human T-cell leukaemia virus.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

4. Exchange of body fluids with viruses lead to infection.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

5. A condom gives perfect protection against HIV.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

6. An HIV carrier is someone who does not suffer from AIDS.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

7. The incubation period for HIV in human body is only three months to 5 years.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

8. An AIDS test detects the HIV in the blood.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

9. Being negative in AIDS test means you have no HIV viruses at all.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

10. AIDS is incurable.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

APPENDIX B(E).

Questionnaire

The Department of Psychology is conducting a study on AIDS education. You are asked to honestly fill in this questionnaire. All information will be kept confidential and only used for research purposes. Please do not write your name.

A. Demographic data.

Kindly make a cross in the appropriate space below:-e.g

1. Sex	<u>Male</u>	<u>Female</u>	
	<u> </u>	<u> </u>	
2. Age group	<u>16-18</u>	<u>19-24</u>	<u>25-up</u>
	<u> </u>	<u> </u>	<u> </u>
3. Marital status	Never married	Married	Divorced
	<u> </u>	<u> </u>	<u> </u>
	<u> </u>	<u> </u>	<u> </u>

4.Post matric experience Degree Diploma work nothing

NB: Specify number of years after matric:.....

Give your opinion in relation to the following statements.Make
a cross in the appropriate spaces below:-

S=strongly agree. A=agree. U=uncertain. D=disagree.
S=strongly disagree.

1.Using a condom is 100% safe from HIV infection.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

2.Sexuality refers to a physical,a psychological and a social
phenomenon.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

3.AIDS is associated with a short incubation period.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

4.All persons having antibodies to HIV must be assumed to be infected.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

5.Persons with HIV are infected for life.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

6.Germs penetrate in the lining of the anus more easily than that of the vagina.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

7.HIV stands for human immune virus.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

8.People with a positive test result have HIV antibodies in their bodies.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

9.A proportion of HIV-positive people eventually develop "full-blown AIDS".

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

10.Safer sex is possible with multiple partners.

SA	A	U	D	SD
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

APPENDIX C.

Critical evaluation of the program.

1. Subjective evaluation.

How did you experience the program-what did it mean to you personally ?.

2. Objective evaluation.

Critically evaluate the programme in terms of strengths and weaknesses. Suggest improvements.

INSTRUCTIONS.

Subjects in the experimental and control conditions will be presented with the following instructions.

A) Experimental group will get the following instructions.

Please read the material given to you in the same manner that you would read any material which you were about to teach. Organise your group teaching methods so that the contents to be taught are divided fairly among yourselves with each member of the group having an equal chance of teaching a section. The learners to whom you will teach the contents will then be given a test based on what you taught them. Use whatever group presentation methods seem appropriate.

B) Control subjects in phase one will then be given the following instructions.

Please attend the lesson presentations on AIDS education. You are requested not to disturb teachers as they present their lesson(s)

NB. Should you wish to ask questions, wait until they finish. The purpose of attending the lesson presentation is that you should score as highly as possible on a test based on what you learn.

C) Control subjects in phase one(group three)will be given the following instructions.

Please return in a week's time for further instructions.

APPENDIX E.

SN	GN	AG	ST	PME	MS	C1	C2	C3	C4
1	B2	19-24	F	FSC	NM	26	39	27	39
2	B2	19-24	M	WK	NM	28	38	30	42
3	B1	19-24	M	FSC	NM	34	35	35	42
4	B3	19-24	M	FSC	NM	32	34	33	35
5	B2	19-24	M	FSC	NM	30	32	36	36
6	B2	19-24	M	FSC	NM	30	34	34	38
7	B1	19-24	F	DI	NM	27	38	37	49
8	B3	16-18	M	FSC	NM	33	35	39	35
9	B1	19-24	F	FSC	NM	30	30	40	40
10	B3	19-24	F	FSC	NM	31	32	31	35
11	B2	19-24	F	FSC	NM	29	34	30	35
12	B2	19-24	M	FSC	NM	25	35	35	35
13	B1	19-24	F	FSC	NM	33	37	36	41

14	B3	19-24	F	FSC	NM	29	29	30	32
15	B3	19-24	F	FSC	NM	27	33	32	40
16	B2	19-24	F	FSC	NM	33	37	38	38
17	B2	16-18	F	FSC	NM	37	35	37	36
18	B3	19-24	F	FSC	NM	30	28	30	36
19	B1	25-UP	M	WK	NM	26	31	37	42
20	B1	19-24	M	FSC	NM	32	32	35	40
21	B1	19-24	M	DE	NM	28	36	35	43
22	B3	19-24	F	FSC	NM	32	31	33	40
23	B2	19-24	F	FSC	NM	28	39	30	46
24	B1	19-24	F	DI	NM	33	39	34	41
25	B3	19-24	F	FSC	NM	24	39	26	39
26	B3	19-24	F	FSC	NM	32	35	36	37
27	B3	19-24	F	FSC	NM	32	29	33	40
28	B1	19-24	F	FSC	NM	31	40	38	46
29	B1	19-24	F	DI	NM	31	36	32	43

30	B2	14-24	M	FSC	NM	31	36	30	38
31	B3	25-UP	M	WK	NM	28	32	30	40
32	B1	25-UP	M	FSC	NM	29	36	34	43
33	B2	19-24	M	FSC	NM	30	39	26	41

Symbols :- AG = age group 16-18; 19-24; 25-up.

C1 = pre-test scores

C2 = post-test scores after treatment phase 1

C3 = post-test scores after treatment phase 2

C4 = post-test scores after follow-up phase

GN = group number

B1 = passive and active learning group

B2 = active learning group

B3 = passive learning group

NM = never married

PME= post matric qualification or experience

DE = completed degree studies

DI = completed diploma studies

FSC= coming from high school

WK = working

SN = subject number

ST = sex type