

**Creating Awareness
Among Adolescents (17-19 Years)
on HIV/AIDS**

By

PRIYA SHEKHAR

**A THESIS SUBMITTED TO THE AVINASHILINGAM INSTITUTE FOR HOME SCIENCE
AND HIGHER EDUCATION FOR WOMEN (DEEMED UNIVERSITY) COIMBATORE - 43,
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE**

IN HOME SCIENCE HUMAN DEVELOPMENT

APRIL 1994

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COIMBATORE - 641 043

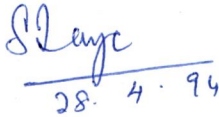
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IN HOME SCIENCE, HUMAN DEVELOPMENT

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CERTIFIED AS BONAFIDE RESEARCH WORK


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Head of the
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Contents

TABLE OF CONTENTS

Chapter		Page No.
	LIST OF TABLES	
	LIST OF FIGURES	
	LIST OF PLATES	
	LIST OF APPENDICES	
I	INTRODUCTION	1
II	REVIEW OF LITERATURE	
	A. Demographic trends of HIV/AIDS	7
	B. Epidemiology and aetiology of HIV/AIDS	17
	C. Diagnosis and prevention of HIV/AIDS	31
III	METHODOLOGY	
	A. Selection of area	39
	B. Selection of sample	40
	C. Selection of tool and formulation of questionnaire	40
	D. Pre-testing the tool	41
	E. Collection of data	41
	F. Planning and conducting the study	42
	G. Analysis and interpretation of data	54

Chapter		Page No.
IV	RESULTS AND DISCUSSION	
	A. A profile of the selected respondents	55
	B. Awareness on concept of HIV/AIDS	57
	C. Awareness on knowledge of HIV/AIDS	59
	D. Awareness on treatment for HIV/AIDS	62
	E. Awareness on demography of HIV/AIDS	66
	F. Awareness about programmes on HIV/AIDS	69
	G. Personal views on issues related to HIV/AIDS	71
	H. Respondents views on the outcome of the Educational Programme	82
V	SUMMARY AND CONCLUSION	88
	BIBLIOGRAPHY	
	APPENDICES	

LIST OF TABLES

	Page No.
I HIV INFECTION OF INDIA	11
II CUMULATIVE NUMBER OF HIV INFECTION AND AIDS CASES REPORTED IN INDIA (STATE-WISE BREAK UP) AS ON JANUARY, 1994	13
III DETAILS OF SERO-POSITIVE INDIVIDUALS IN INDIA (AS ON JULY, 1993)	27
IV PROFILE OF THE SELECTED RESPONDENTS	56
V AWARENESS ON CONCEPT	58
VI AWARENESS ON DETAILS OF HIV INFECTION	59
VII MODES OF TRANSMISSION OF HIV INFECTION	61
VIII AWARENESS ON TESTING PROCEDURES AND TREATMENT OPTIONS	64
IX SAFEGUARDS AGAINST ACQUIRING HIV INFECTION	65

	Page No.
X AWARENESS ON DEMOGRAPHY OF HIV/AIDS	67
XI PREFERENCE OF MEDIA FOR EDUCATING YOUTH	74
XII INDIVIDUALS MOST LIKELY TO GET INFECTED	76
XIII SUGGESTIONS TO CONTROL THE SPREAD OF HIV/AIDS	84

LIST OF FIGURES

	Page No.
1. ESTIMATED DISTRIBUTION OF CUMULATIVE HIV INFECTION IN ADULTS, IN THE WORLD BY CONTINENT OR REGION (LATE, 1992)	9
2. AIDS CASES BY GEOGRAPHICAL REGION	10
3. AIDS CASES IN INDIA (AGE-WISE DISTRIBUTION, 1991)	15
4. HUMAN IMMUNO DEFICIENCY VIRUS (HIV)	21
5. MODES OF TRANSMISSION OF HIV INFECTION	63
6. REASONS FOR SERIOUSNESS OF AIDS EPIDEMIC	73
7. TOPICS DISCUSSED BY RESPONDENTS	79
8. CRUSADE AGAINST AIDS	85
9. EDUCATION FOR THE PREVENTION OF AIDS	87

LIST OF PLATES

	Page No.
I ADMINISTRATION OF QUESTIONNAIRE TO RESPONDENTS	44
II RESPONDENTS OBSERVING THE CHARTS EXHIBITED	45
III RESPONDENTS OBSERVING LITERATURE ON DISPLAY	45
IV WILD FIRE - A GAME	46
V INTRODUCTORY LECTURE	47
VI AUDIO-VISUAL AIDS USED	47
VII THE AGREE-DISAGREE GAME	49
VIII QUIZ	51
IX ROLE PLAY	53

LIST OF APPENDICES

- I QUESTIONNAIRE TO ELICIT INFORMATION ON THE AWARENESS OF ADOLESCENTS (17-19 YEARS) ON HIV/AIDS
- II WILD FIRE
- III INTRODUCTORY LECTURE
- IV VIDEO SHOW - UNMASKING AIDS
- V THE AGREE-DISAGREE GAME
- VI QUIZ QUESTIONS
- VII VIDEO SHOW - NATIONAL AIDS AWARENESS TEST
- VIII ROLE PLAY SCENARIOS
- IX QUESTIONS FROM THE QUESTION BOX
- X STATISTICAL ANALYSIS

Introduction

INTRODUCTION

Amidst intensifying global recession and major international upheavels, the 1980s witnessed the identification of the most serious pandemic of modern times, also described as the 'worst plague of the century' - that of the Acquired Immuno Deficiency Syndrome (AIDS) (Banerjee, 1993; Rajan, 1993). AIDS threatens every country, every society and every individual (Bandhopadhyay et al, 1994). For more than a decade now the world has struggled to come to terms with AIDS (Balaji, 1994). AIDS has become the crucible in which the future of health is being forged (Mann, 1991). AIDS, the great scourge of the 20th century, has been accorded more coverage and attention than any other infection in recent times (Desouza, 1993; Purushothaman. 1993). AIDS is a new global health problem which may become pandemic, a view expressed by many medical personnel and scientists (Ray, 1993). The impact of AIDS in the life of man has been dramatic and unprecedented (Aggleton et al, 1990). The AIDS pandemic is in one important respect unlike any other that has affected humankind in the past as its effect is predominantly on the entire community (Tinker, 1990; Dutta, 1993).

Acquired Immuno Deficiency Syndrome (AIDS) was first defined by Centre for Disease Control (CDC) in

1981 as a disabling or life-threatening illness caused by human immuno deficiency virus (HIV), characterised by a wasting syndrome or certain diseases due to immuno deficiency in a person with laboratory evidence for HIV infection and without other causes of immuno deficiency (Mukherjee and Kar, 1993).

AIDS since its occurrence traced first in 1981 in California, United States of America, has rapidly spread to different parts of the world. According to the Director General of World Health Organisation, "AIDS has turned into a major threat to the health, development and stability of nations around the world (Rao, 1993). The World Health Organisation (1993) estimates that there are 13 million individuals in the world infected with the Human Immuno Deficiency Virus (HIV) of which about two million have developed AIDS (Merson, 1993; Montagnier et al, 1993).

Since 1986 when the first incidence of HIV infection was detected in India, in Tamil Nadu, the infection has been spreading at an alarming rate and it is now geographically widely disseminated in India (John et al, 1993). According to van Dam (1993) AIDS is now well-established in India and a silent epidemic is on. National AIDS Control Organisation (NACO, 1993) estimates that India

today has around 1.5 million HIV seropositive cases, though only 15,807 individuals have actually tested positive on screening. 712 cases of death due to AIDS have been reported so far (The Hindu, March, 1994). The rapidity of spread of HIV/AIDS in India is cause for serious concern and immediate reaction (Purushothaman, 1993).

Among the states in India, Maharashtra reported the most number of HIV positive and AIDS cases (5,034 and 231 respectively) followed by Tamil Nadu (2,311 and 185 respectively). Manipur follows a close third (Shiv Lal, 1994).

AIDS is a sexually transmitted disease, but can also spread by non-sexual means eg. through infected blood and blood products, through infected needles, syringes and surgical instruments and from an infected mother to her new born baby (Roy, 1994). Blood and other body fluids as semen, vaginal secretions and breast-milk are the most effective agents of transmitting the infectious AIDS (Goswami, 1993). Once infected the individual remains infected and infective for the rest of his/her life (Rao, 1993).

AIDS is communicable and is caused by HIV 1 and HIV 2 (Ray, 1994). HIV enters the human body and progressively destroys the self-protective immune system of

the body by attacking the specialised T-4 helper cells in the white blood corpuscles of the blood (Nair, 1993). After entering the T-4 cell this bizarre retro virus having a fatal gene package, is transformed into deoxyribonucleic acid (DNA) within the immune cells (Roy, 1994). HIV lowers the body's resistance to other disease organisms leading to the immune system's irreversible breakdown leaving the individual a prey to progressive opportunistic infections and malignancies. (Ministry of Information and Broadcasting, 1987; Rao, 1993). AIDS is the end-stage of HIV infection (Weiss, 1993).

Though preventable HIV infection is incurable (Haynes, 1993). There is no vaccine to protect against infection and no treatment which can cure the infected (Rao, 1993; Tinker, 1992). Billions of dollars and thousands of man days of research later, all the scientific world has to show for its efforts is the exorbitantly expensive drug 3' - azidothymidine (AZT) which can only extend the life-time of an individual infected with the virus by a few months or years (Purushothaman, 1993). AIDS is like a misery - seeking missile spreading fastest where health care and education is poor (Sabatier, 1990; Bennett, 1992), targeting the most vulnerable - Third World Countries and the ethnic minorities (Kirp et al, 1992). HIV/AIDS attack the most economically active sector of any population - those aged

between 20 and 45 years, homing in on poverty, having profound social and economic ramifications (Bennett, 1993; Balaji, 1994).

Prevention of infection is the key to curtailing the ultimate impact of AIDS in the absence of a drug or vaccine (Cohen, 1993; Merson, 1993). Knowledge of the means for preventing AIDS can halt its spread (Kumar, 1993). It is therefore imperative that prevention strategies and plans are formulated and put into action immediately if there is to be any success in the future with respect to ensuring that the HIV infection does not in any way impede economic and social development at various levels - rural and urban, in India.

The sole way to reduce the impact of AIDS is primarily by public health education (Kapoor, 1990; Sengupta, 1991; Grant, 1994). World wide spread of HIV infection can only be controlled by efforts to understand the social, cultural, legal, ethical, economic and transmissional dimensions of it, thereby attempting behavioural change through a special response comprising awareness and education strategies (Rajan, 1992; Krishna, 1993).

Education is the only means to contain the transmission of HIV (Kumar, 1993; Ross, 1993). It is the

first step in creating appropriate attitudes about the virus in the community. HIV/AIDS is currently one of the key issues that is shaking the world. Therefore, it is essential to disseminate information on a health hazard, whose unchecked spread can dwarf almost every other ailment of this planet. A war waged against the virus today is sure to overcome the epidemic. Awareness is of prime importance for success in controlling the spread of HIV/AIDS. Hence this was adopted as the purpose of the proposed study.

The need for conducting this study was recognised owing to the unparalleled rise in rates of HIV infection and AIDS leading India on to the brink of an HIV epidemic. A strong need was felt to create awareness amongst the most vulnerable section of the population, the adolescents. Hence, the present study has been designed for "Creating Awareness Among Adolescents (17-19 years) on HIV/AIDS" with the following objectives :

1. To make the adolescents aware of the facts on HIV/AIDS - which is a grave threat to the stability of the world
2. To analyse the impact of the Educational Programme ^{on HIV/AIDS} on the pupils.

Review of Literature

REVIEW OF LITERATURE

Literature on Human Immuno Deficiency Virus (HIV) and Acquired Immuno Deficiency Syndrome (AIDS) will be reviewed under the followings sub-headings :

- A. Demographic trends of HIV/AIDS
- B. Epidemiology and aetiology of HIV/AIDS
- C. Diagnosis and prevention of HIV/AIDS

A. Demographic trends of HIV/AIDS :

Acquired immuno deficiency syndrome described as an obscure disease of unknown aetiology in 1981 was first reported in United States of America (Paintal, 1991; Chatterjee and Chatterjee, 1993). Within five years there was a rapid increase in the number of persons infected and AIDS assumed the shape of a major global public health problem. The HIV/AIDS epidemic has reached catastrophic proportions in a very short period (Gangakhedkar, 1992).

The World Health Organisation (1992) estimated that world wide 13 million adults and one million children are seropositive; there are 5000 new infections per day, at the rate of one new infection every 18 seconds, with one in every 250 adults infected with the human immuno

deficiency virus (Smith et al, 1987; Gangakhedkar, 1992; Chatterjee and Chatterjee, 1993; Rajan, 1993).

The fire of AIDS pandemic is increasingly burning in the developing countries who have minimum resources, inadequate screening facilities, less trained personnel and infrastructure for health care to fight AIDS (Kirp et al, 1992). According to Rinehart and Lande (1993) two-thirds of the HIV infected people live in the developing countries.

World Health Organisation (1988) reports that AIDS began to spread in Asia comparatively recently. The projection on estimated HIV prevalence rates emphasise the stabilisation and slight decline in HIV prevalence in industrial Western countries contrasting with the sharp rise in the prevalence in South and South-East Asian countries. Thailand and India are considered among the most affected in South-East Asia (Shiv Lal, 1992).

The estimated distribution of cumulative HIV infections in adults, in the world by continent or region (late, 1992) is given in Figure 1.

The estimated distribution of AIDS cases by geographical region can be glimpsed in Figure 2.

Figure 1

ESTIMATED DISTRIBUTION OF CUMULATIVE HIV INFECTIONS IN ADULTS, BY CONTINENT OR REGION, LATE 1992.

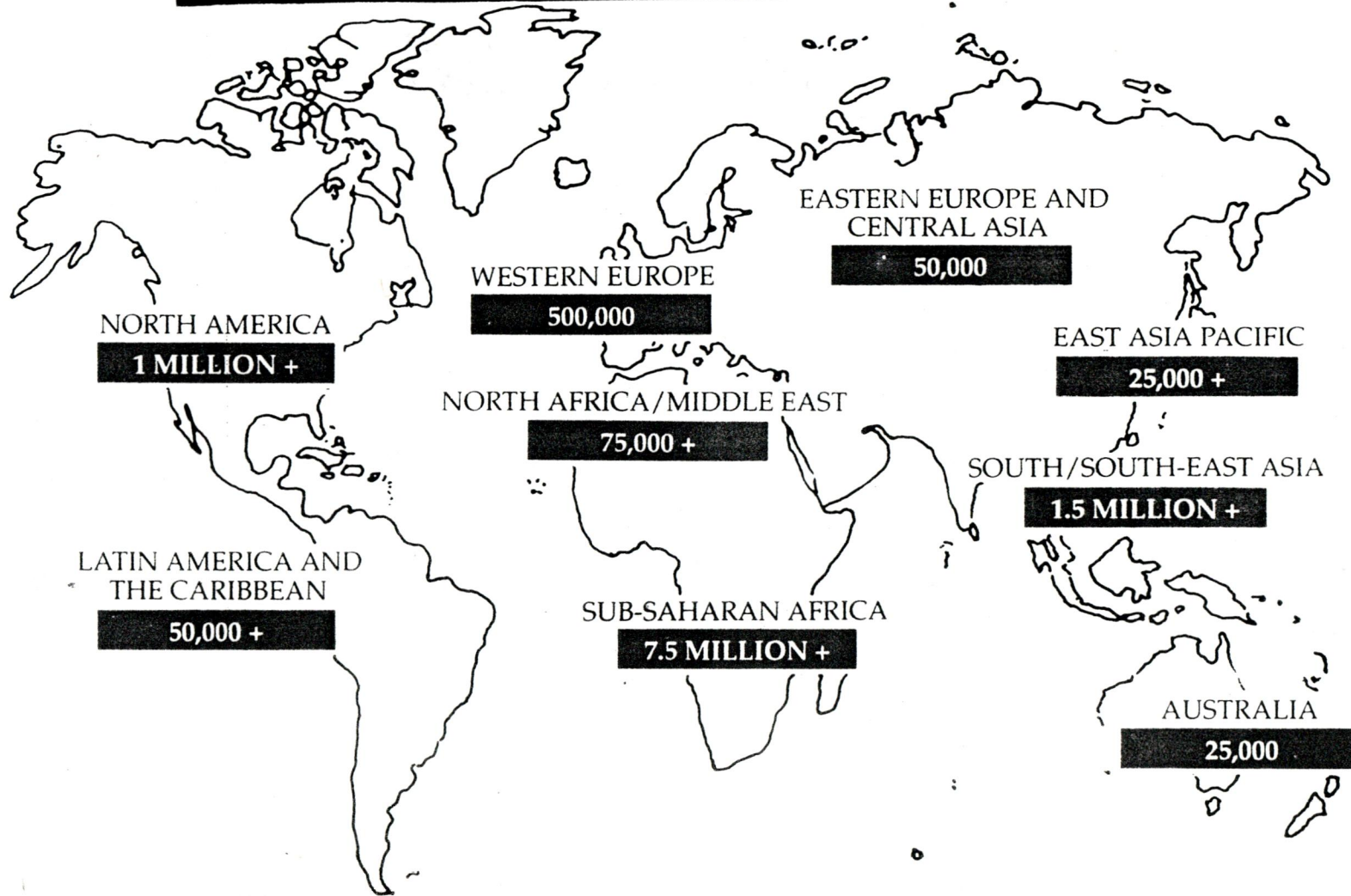
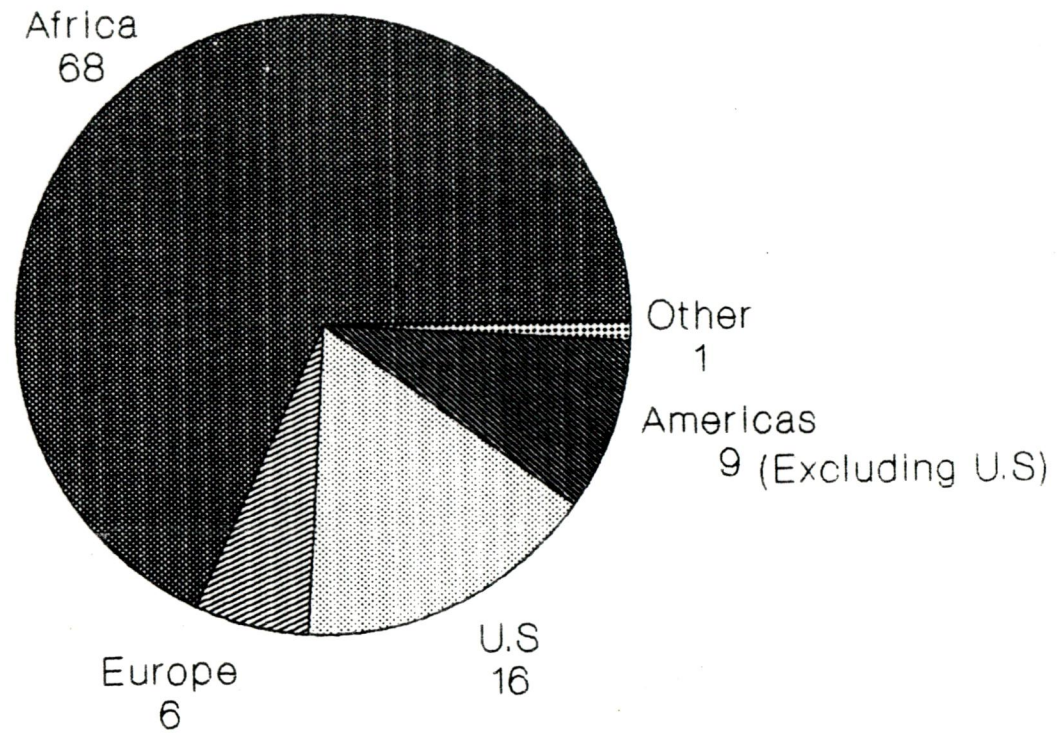


Figure 2

AIDS CASES BY GEOGRAPHICAL REGION

1992 estimate :1.7 million



India accounts for more than one fourths of Asian HIV-infected individuals (Gangakhedkar, 1992). Table I reveals the number of HIV positive samples tested in the States and Union Territories in India.

TABLE I
HIV INFECTION IN INDIA

As on		Number of samples tested	Number of samples found positive
December	1986	24,775	63*
January	1989	2,09,825	763*
November	1990	5,80,824	4,082*
February	1991	8,20,407	4,778*
September	1991	11,26,115	5,879*
July	1993	16,13,870	12,519 [⊕]
October	1993	19,33,834	13,448 [⊖]
March	1994	--	15,807 [×]

(* Paintal, July, 1991; * Shiv Lal, October, 1991; ⊕ Narottam et al, September, 1993; ⊖ Shiv Lal, January, 1994; × The Hindu, March, 1994)

Out of 24,775 samples screened in December, 1986, in India, only 63 were found to be positive. Within a span of seven years more than 13,000 samples tested positive as reported in October, 1993. The National AIDS

Control Organisation (NACO) reports (1994) indicate that this number has swelled to 15,807 seropositive samples necessitating the launch of a comprehensive National AIDS Control Programme throughout the country (The Hindu, March, 1994). NACO (1993) estimates that India today has around 1.5 million HIV-positive cases.

In India, the first incidence of HIV infection was detected in Madras, Tamil Nadu in 1986. The first AIDS case was reported in 1987 (Shiv Lal, 1992). The cumulative number of HIV infection and AIDS cases reported in India is presented in Table II.

TABLE II

CUMULATIVE NUMBER OF HIV INFECTION AND AIDS CASES
REPORTED IN INDIA (STATE-WISE BREAK UP) AS ON JANUARY, 1994

State/ Union Territory	Number found HIV positive*	Number with AIDS [•]
Andhra Pradesh	96	1
Assam	4	1
Bihar	1	-
Goa	196	2
Gujarat	237	2
Haryana	39	1
Himachal Pradesh	11	3
Jammu and Kashmir	3	2
Karnataka	208	2
Kerala	106	76
Madhya Pradesh	44	17
Maharashtra	5,034	117
Manipur	1,734	8
Mizoram	20	-
Nagaland	112	-
New Delhi	745	42
Orissa	1	-
Pondicherry	421	6
Punjab/Chandigarh	-	47
Rajasthan	14	1
Tamil Nadu	2,311	152
Uttar Pradesh	265	8
West Bengal	81	6
Total	11,683	494

(* Nair, 1993; • Shiv Lal, 1994).

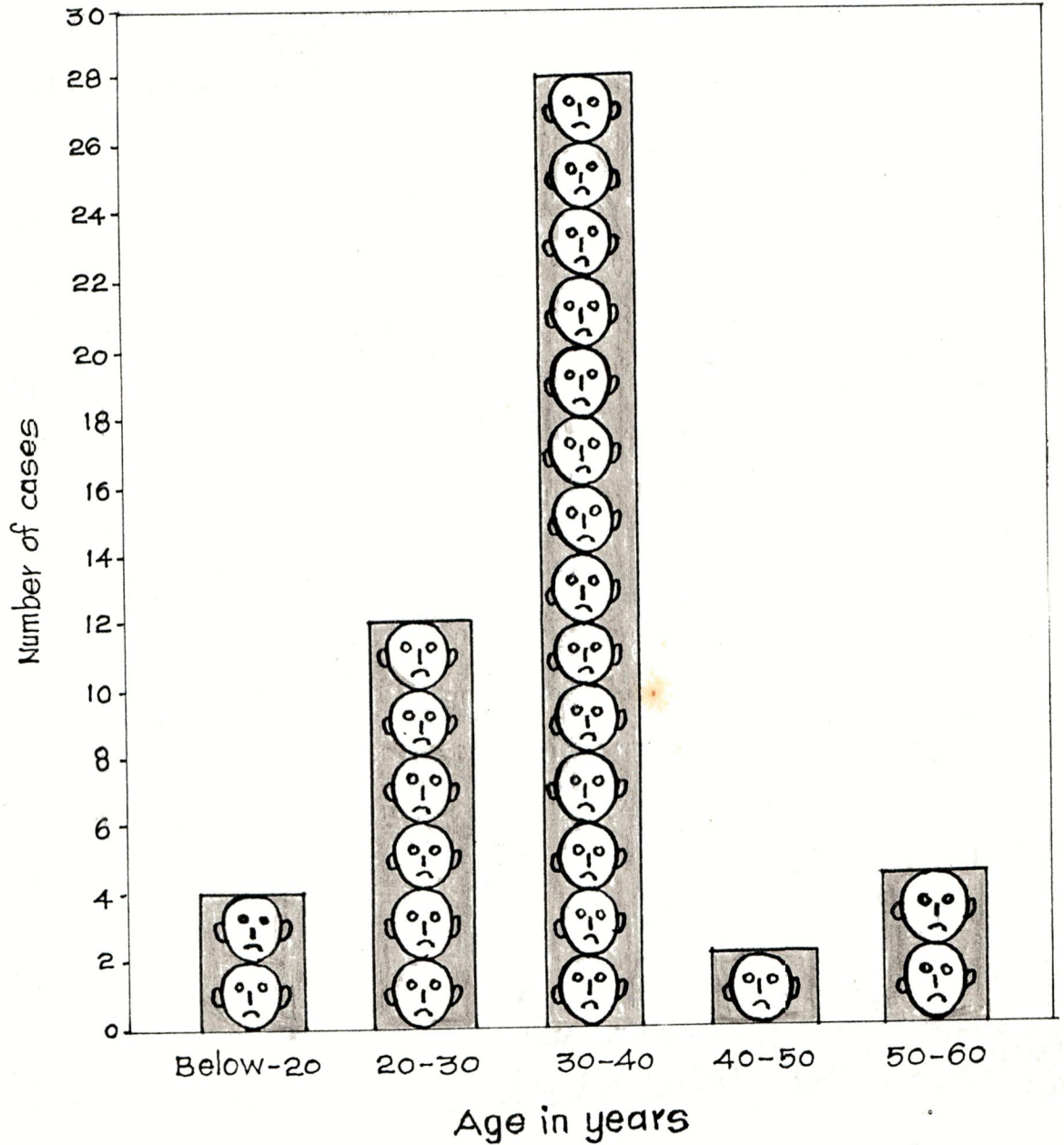
Tamil Nadu (152) and Maharashtra (117) lead the number of cases, followed by Kerala (76), Punjab/Chandigarh (42) and New Delhi (42). Other states reported one to 17 cases (Shiv Lal, 1994). It can be inferred from the table that the three epicentres of HIV infection in India are the capital cities of Maharashtra, Tamil Nadu and Manipur, namely, Bombay, Madras and Imphal (Shiv Lal, 1991, 1994; Mini Bhagya, 1993).

Within a span of one month, the National AIDS Control Organisation (NACQ) reported that the number of AIDS cases increased to 712, with Maharashtra (231) displacing Tamil Nadu (185) to occupy the top spot (The Hindu, March, 1994).

The problem of HIV and AIDS will have a great impact on the social and economic aspects of the society as it mainly affects the economically productive sections of the society, that is, those in the age group of 30-40 years (Shiv Lal, 1991; Tinker, 1992) as shown in Figure 3.

Figure 3

AIDS CASES IN INDIA (AGE - WISE DISTRIBUTION - 1991)



In the state of Manipur, Naik et al, (1981) tested 1412 samples of intravenous drug users of which 54.2 per cent were positive. 96.7 per cent of these were males and over 70 per cent were aged 20 to 29 years (Fleming, 1991).

According to World Health Organisation (1992) predictions, by the end of 2000 AD 30-40 million people would be infected with HIV globally (Ramachandran, 1991); 10 million will have developed AIDS and 90 per cent of them will be living in developing countries (Rinehart and Lande, 1993). Chatterjee and Chatterjee (1993) estimate that 5-10 million HIV infected children will be born by 2000 AD., and there will be 10 million AIDS orphans by then (Ramachandran, 1991).

India sits atop an AIDS volcano that will soon erupt engulfing millions (Bothra, 1990). By the end of the century, according to the National AIDS Control Organisation (1993), India, will have five million infected individuals and about 2 million cases of AIDS (Narottam et al, 1993).

With a high anticipated rise in prevalence rates, significant spread to the rural areas would be witnessed, since three-fourths of India's population lives in the rural areas (Gangakhedkar, 1992). Poverty is a key

factor contributing to AIDS pandemic as financial hardships force the man to leave families to find work, promote drug use and make prostitution of survival strategy (Richard, 1993). The health and social services system, strained by mounting caseloads and increasing costs, are struggling to provide even rudimentary care and help (Kirp et al, 1992).

B. Epidemiology and aetiology of HIV/AIDS :

The immune system is a phrase used to describe the many complex ways in which the body protects itself from possible infection and disease (Aggleton et al, 1990). The immune system is the organisms principle means of maintaining its integrity in the face of intrusion of foreign substances such as bacteria or viruses. The primary components of the immune system are blood, thyme bone marrow, spleen and lymph nodes. The white blood corpuscles (WBC) or lymphocytes contain the body's macrophages and natural killer cells, containing inherent properties destructive to foreign proteins (Carson et al, 1988).

Immune function is divided into two branches - humoral and cellular. The humoral branch refers to the activity of the B-cells which are formed in the bone marrow and produce antibodies. Cellular immune function is mediated by T-cells which develop to maturity in the thymus

and mediate immune reactions that are slower, direct, more extensive and highly specific to an antigen in character (Carson et al, 1988).

T - cells are of three types :

- a. Helper cells signal to B-cells to turn on antibody production
- b. Suppressor cells operate to limit antibody production
- c. Cytotoxic or effector cells destroy cells that bear antigens (Carson et al, 1988).

The function of T-cells are as follows :

- a. Direct and indirect destruction of antigens
- b. Regulation and activation of antibody based division of the defense systems (Carson et al, 1988).

The immune system disorders associated with HIV infection and AIDS occur primarily from the gradual depletion in a specialised group of white blood corpuscles - the T-helper cells, also called T-4 cells, and T-4 lymphocytes and CD-4 cells (Park and Park, 1991). Reproduction of the blood borne virus causes the destruction of the infected T-helper cells (Sahgal, 1991). Healthy individuals have twice as many 'helper' cells as 'suppressor'

cells, whereas in people with AIDS the ratio is reversed, indirectly indicating reduced cellular immunity (World Health Organisation, 1985). The normal T-4 cell count is 1,200 cells per microlitre of blood (Goswami, 1993). In people with AIDS, the T-4 cell count falls below 500 cells per microlitre of blood (World Health Organisation, 1985).

In due course the entire T-cell defense system is overwhelmed, rendering the individual to a multitude of potentially dangerous antigens that would normally be detected and destroyed. Antibodies to virus causing AIDS, detectable in the blood of exposed persons are compromised in their effectiveness by the inadequacy of T-cell back up (Carson et al, 1988). The antibodies are usually too few and ineffective against the virus (Park and Park, 1991).

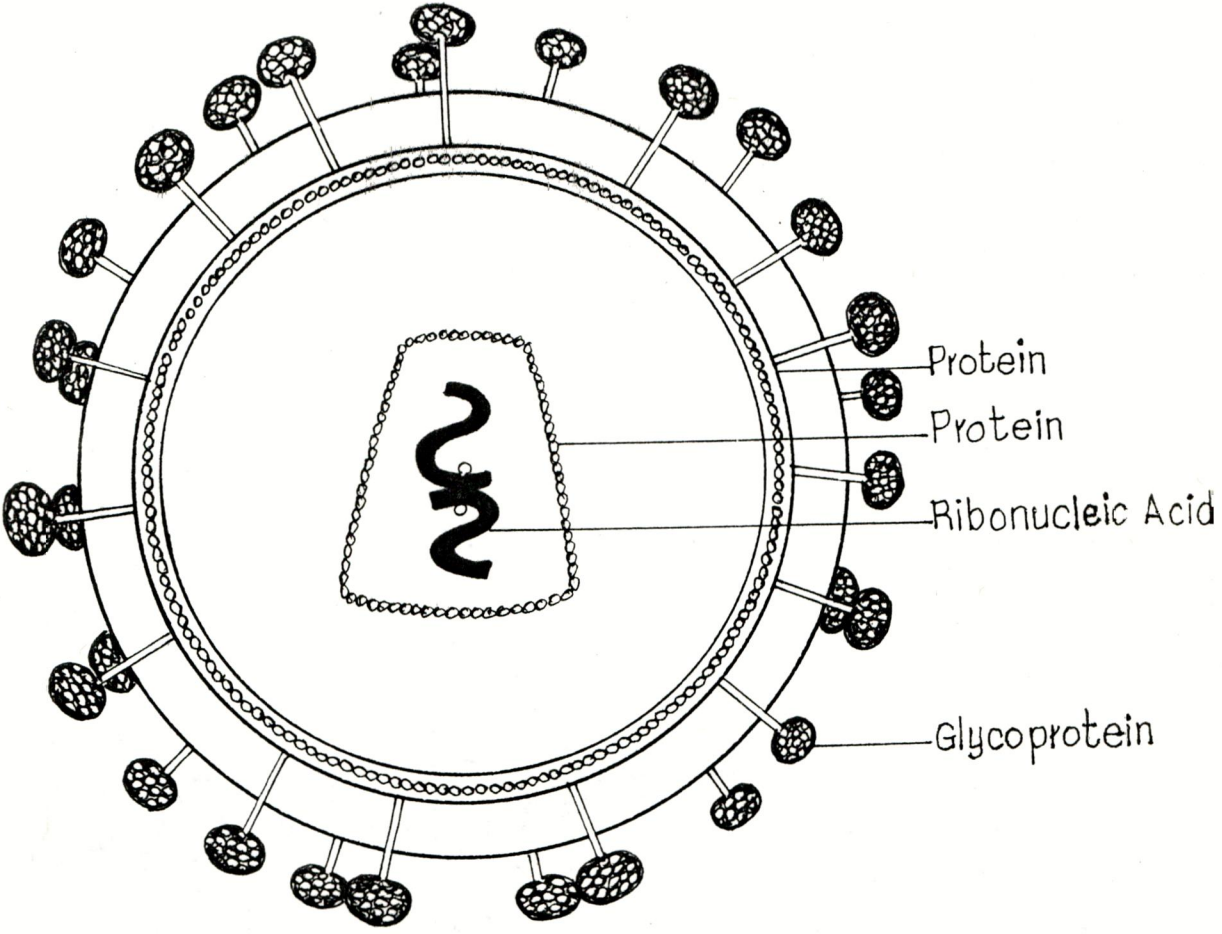
Luc Montagnier of Pasteur Institute, Paris and Robert Gallo of the National Cancer Institute, United States of America in 1983, discovered a new virus which they called Lymphadenopathy Associated Virus (LAV) and Human T Lymphocytic Virus III (HTLV III) respectively. An International Committee on Taxonomy of Viruses gave its present name - Human Immuno Deficiency Virus (HIV) (World Health Organisation, 1992).

Two strains of HIV belonging to same family but with different genetic make-up have been identified. HIV 1 was first discovered in 1983 and is more prevalent in Europe and the Americas. HIV 2 is more prevalent in Africa and was first discovered in 1986. Both HIV 1 and HIV 2 have been detected in India and both lead to AIDS (Ganapathy, 1993). HIV 2 is less virulent causing AIDS in 10 per cent cases or less, while HIV 1 causes AIDS in 90 per cent of the cases (Goswami, 1993).

Viruses are extremely simple, smallest known organisms (Aggleton et al, 1990). The human immuno deficiency virus looks like a rolled up porcupine, containing two single strands of RNA wrapped up in a core which resembles a cone with a dimple at its base. This core is protected by a spherical protein shell, encapsulated by an envelope which has a knob like protein sticking out of its surfaces, giving HIV its characteristic appearance (Figure 4) (World Health Organisation, 1992).

HIV dies quickly once outside the body in a dry form. It is very fragile, and even in a wet state, it does not live long when exposed to heat, bleach, detergents or disinfectants (Annaji, 1993). It cannot survive in the atmosphere, in water, on clothes, utensils or in toilets. HIV cannot penetrate unbroken skin (Surgey, 1992). When stored in blood banks at 4°C, it can live for about three weeks (or longer) till the cell disintegrates (Solomon, 1993).

Figure 4
HUMAN IMMUNO DEFICIENCY VIRUS (HIV)



Human immuno deficiency virus, which causes the failure of a part of the immune system in humans belongs to the 'retro' virus family (Aggleton et al, 1990). Retro means back in reverse direction (Pavri, 1990). These viruses defy a general rule of biological systems whereby the genetic commandments flow from the master molecule deoxyribonucleic acid (DNA) to ribonucleic acid (RNA), resulting in protein production to keep the system working (World Health Organisation, 1992).

Human immuno deficiency virus is slow acting and belongs to a subfamily of 'lenti' virus (Rajan, 1993). HIV is an RNA virus as its genetic information is encoded in RNA, rather than DNA. HIV can neither survive nor reproduce by itself. To reproduce, its genetic material must enter another cell - the T-4 helper cells being one of the favoured cells (Pavri, 1990). Developing a cure for HIV infection is hence difficult as anything which damages the virus is likely to damage the cell also (Aggleton et al, 1990). The viral RNA on entering the T-4 cell masterminds the production of its own DNA which has enough power and information to force the cell to manufacture raw materials, giving rise to new copies of HIV. Due to certain mechanisms, the viral DNA lies dominant in the host cell for several years before doing its work (World Health Organisation, 1992). By interfering with the very cells which protect us against

infection, HIV leaves the body poorly protected against particular types of diseases which these cells deal with (Aggleton et al, 1990). HIV infection is not the same as having AIDS. An HIV positive or HIV infected person has the virus that causes AIDS in his body (Rajan, 1993). It may take seven to ten years for those infected to develop AIDS (Cowley and Hager, 1991). All persons with AIDS are infected with HIV, but not all persons with HIV infection have AIDS. AIDS is only the end stage of this infection (Rajan, 1993; Venkatesan, 1993).

Epidemiological studies throughout the world reveal only three modes of HIV transmission :

1. Sexual intercourse
2. Through HIV-infected blood, blood products, transplanted organs or tissues, or use of non-sterile equipment
3. From an HIV infected woman to her foetus or infant before, during or shortly after birth (World Health Organisation, 1991).

HIV can spread through homosexual and heterosexual intercourse when a partner is already infected (World Health Organisation, 1992). Once infected, all body fluids contain the virus, the concentration being high in blood, semen and vaginal secretions and breast milk (Rao, 1993).

Heterosexual contact is the single largest cause for the spread of HIV in South-East Asia, though the probability of transmission through this route is one in 100 to one in 1000. Women are at a greater risk as there is one in ten chance for a women to pick up infection from an infected man as compared to a one in hundred chance for a man to pick up infection from an infected woman (Sundararaman, 1994). Unprotected anal, vaginal and oral intercourse with an HIV-infected person are potential routes of transmission from an infected partner to a non infected one (World Health Organisation, 1991). Anal intercourse is more risky than vaginal intercourse as the anus is not designed for the purpose, resulting in microscopic scars paving way for direct contact with blood facilitating easier transmission of HIV. In vaginal intercourse one in ten intercourse can pick up HIV infection while in anal intercourse the chances to pick up infection is one in two intercourses (Sundararaman, 1994).

World Health Organisation (1992) statistics reveal that the probability of transmission of HIV infection through infected blood is the highest - more than 90 per cent (Baweja et al, 1993). Contact with infected blood and blood products like platelets, factors VIII and IX, as in transfusions is likely to transmit the infection to the receipient of the infected blood or blood product (World Health Organisation, 1986; Garewal, 1994). Human immuno

deficiency virus can be transmitted through the use of HIV-contaminated needles or other invasive instruments (World Health Organisation, 1991). Any skin piercing instrument, including injections, ear piercing, tattooing, acupuncture or scarification can transmit the virus if the instruments used have not been sterilised and have previously been used on an infected person (Park and Park, 1991). Intravenous drug users (IVDUs) are at a high risk because they often share needles and syringes (Sarkar, 1993). Donation of organs like kidneys and eyes from an infected person to a non-infected person puts the person receiving the transplanted organ at the risk of acquiring HIV infection (Rao, 1993). Sperm donation by an HIV infected man can cause infection in the woman recipient of artificial insemination (World Health Organisation, 1991).

According to World Health Organisation (1991), a pregnant woman infected with HIV has an approximately 30 per cent chance of passing the virus to her foetus or newborn baby through the placenta (Grant, 1994; Merchant et al, 1993). Babies infected this way are 'born dying' and usually succumb during infancy or early childhood (Dworetzky, 1990). Reports of women infected with HIV after giving birth and subsequently infecting their infants, though rare, do prove that breast feeding does transmit the virus (World Health Organisation, 1987).

Among the probable means of acquiring HIV infection multipartner sex dominates (80 per cent) followed by blood and blood product transfusions (12 per cent), and sharing of unsterilised equipment by injecting drug users (5 per cent) (Shiv Lal, 1994). Heterosexual promiscuity is by far the most common route of transmission of HIV infection (Sundararaman, 1994). Of late the intravenous drug users have contributed to a substantial number of cases in the North-Eastern region of the country. The prevalence of HIV infection among these specific groups is presented in Table III (as on July, 1993).

TABLE III
 DETAILS OF SERO-POSITIVE INDIVIDUALS IN INDIA
 (AS ON JULY, 1993)

Category	Sero- positive	Percentage of total
Heterosexually promiscuous	5,380	42.97
Homosexuals	41	0.33
Blood donors	1,862	14.87
Dialysis patients	114	0.91
Antenatal mothers	60	0.48
Recipient of blood (blood products)	267	1.13
Relatives of HIV patients	117	0.93
Suspected AIDS related complex (ARC) / AIDS	556	4.44
Intravenous drug users	1,726	13.79
Others	2,396	19.15
Total	12,519	100.00

(Narottam et al, 1993)

The human immuno deficiency virus is not transmitted by casual person-to-person contact with the infected at home, at work or socially (Sundararaman, 1994); through physical contact, such as shaking hands and hugging

(Purushothaman, 1993); through blood donations provided sterile equipment are used (Nair, 1993); insect bites like mosquitoes, bed-bugs and moths (Pachauri, 1992; Nair, 1993); breathing, coughing, sneezing, spitting or through tears or perspiration (World Health Organisation, 1991; Kathiravan, 1994); sharing used clothes, vessels, food and drinks, door knobs and rails (Gordon and Klouda, 1988; Nair, 1993) and through swimming pools and toilet seats (Purushothaman, 1993 and Rao, 1993).

An HIV infected person (medically known as an HIV positive person) is one who has the Human Immuno Deficiency Virus in his/her body. Such a person remains infected and is infective for the rest of his/her life (Goswami, 1993). The person appears to be perfectly healthy and normal and will be asymptomatic for years before developing AIDS (Venkatesan, 1993). The clinical features of HIV infection have been classified into four categories.

1. Acute HIV infection
2. Asymptomatic infection
3. AIDS related complex (ARC)
4. Acquired Immuno Deficiency Syndrome (AIDS)

Any invasion of micro-organisms eg. the HIV, in the human body is neutralized by the production of chemicals called antibodies by the white blood corpuscles (Solomon, 1993). Antibodies to HIV can usually be detected

2-8 weeks after initial infection (Park and Park, 1991). But these antibodies are not powerful enough to neutralize the virus (Ganapathy, 1993). Tests for HIV antibodies are usually negative at the onset of illness (Rao, 1993). This period is called the 'window period' and approximately lasts for 3 months (Solomon, 1994). Within a few weeks of infection with HIV about 10-15 per cent of persons experience low grade fever, malaria, headache, bodyache, sore throat, body rash or enlargement of lymph gland (Rao, 1993).

Infected persons pass through a phase of symptomless infection lasting from several months to years (3 months to 12 years) after initial exposure (Deshpande, 1993). HIV antibody tests reveal positive results during this phase (Rao, 1993). Tests also show reduced number of T-4 helper lymphocytes in the blood (around 400-500 cells per microlitre of blood) (Park and Park, 1991). During this period the person might experience unexpected weight loss, persistent diarrhoea, wasting of muscles and brain disease, caused by direct effect of HIV on particular organs in the body (Aggleton et al, 1990).

The stage when a combination of two or more symptoms occurs in the person simultaneously is called AIDS Related Complex (ARC) (Venkatesan, 1993). Symptoms are

manifested only when the T-4 cells count falls below 200 cells per microlitre of blood, and the immune system starts failing being unable to fight off infection in its weakened state (Aggleton et al, 1990; Solomon, 1993). The symptoms include, unexplained diarrhoea lasting longer than a month; fatigue; malaria; unexplained fever, loss of more than 10 per cent body weight; night sweats and cough; milder opportunistic infections eg. oral candidiasis, herpes zoster, hairy leucoplakia of the tongue, tuberculosis, generalised lymphadenopathy and splenomegaly (World Health Organisation, 1986; Rao, 1993; Bandhopadhyay et al, 1994). A person in this stage might respond to antibiotics and treatment (Ganapathy, 1993). Once the T-4 cell count falls below 50, no treatment is effective and the person has progressed to the last stage of HIV infection, which is AIDS and needs to be hospitalised (Sundararaman, 1993).

Acquired Immuno Deficiency Syndrome (AIDS) represents the irreversible breakdown of immune defence mechanisms, leaving the HIV infected individual prey to progressive opportunistic infections and malignancies (Rao, 1993) like pneumocystis pneumonia (PCP), Kaposi sarcoma, Burkitt lymphoma, candidiasis, infections caused by cytomegalo virus and malignancies indicating immuno deficiencies and the presence of AIDS (Smith et al, 1987). Death is due to uncontrolled and untreatable infection (Park and Park, 1991).

C. Diagnosis and prevention of HIV/AIDS

At present prevention is the only cure for AIDS. According to World Health Organisation (1992) the three main objectives for prevention and control of AIDS are,

- to prevent HIV infection
- to reduce personal and social impact of HIV infection, and
- to mobilise and unify national and international efforts against AIDS.

1. Diagnosis of AIDS

Laboratory diagnosis of HIV infection is necessary for surveillance, blood safety and diagnostic purposes (Shriniwas et al, 1994). Serological tests involve testing for the presence of antibodies to HIV and not the virus itself (Kamat, 1991). They are of two types- screening and confirmatory tests. All sero-positives on screening are to be checked by a confirmatory test before a sample is declared positive (Rao, 1993).

The Enzyme Linked Immuno Sorbent Assay (ELISA) is the most widely used screening test (John et al, 1992, 1993; Rao, 1993; Solomon, 1993; Shriniwas et al, 1994). ELISA uses enzyme as an indicator for detecting the product of the immune reaction in the body (Kamat, 1991; Shriniwas et al, 1994).

The confirmatory tests are more specific and are used for validation of positive results of the screening assays (Shriniwas et al, 1994), the Western Blot being the most commonly employed test (Joshi, 1991; Kamat, 1991). It is difficult to perform and requires trained and efficient laboratory workers to interpret the test (Park and Park, 1991).

The current trend in HIV-antibody tests is towards simple, cheap, rapid, reliable kits, not requiring complex-laboratory back up; whose results can be interpreted on the spot (Jawetz, 1987; Shriniwas et al, 1994). Other tests like spot test, Simpli RED, immunoflourescence assay, pepti-LAV assay are also used (The Hindu, December, 1993; Shriniwas et al, 1994).

2. Prevention of the spread of HIV/AIDS

In view of the rapid spread of HIV/AIDS in our country, the government of India prepared a plan for prevention and control of AIDS in India in consultation with World Health Organisation. The objectives of the plan are as follows :

- Prevent HIV transmission
- Reduce morbidity and mortality associates with HIV infection
- Minimize the social and economic effect resulting from HIV infection (Shiv Lal, 1992)

According to Park and Park (1991) there are four basic approaches to the control of AIDS :

1. Prevention of HIV transmission
2. Specific prophylaxis
3. Primary Health Care
4. Education

For the prevention of HIV transmission through infected blood and blood products, the approaches that have proven effective include recruiting voluntary non-paid donors, screening donated blood for HIV, heat treatment of blood products like factors VIII and IX, use of presterilized disposable syringes and needles, and educating health care workers to reduce unnecessary transfusions (World Health Organisation, 1992). Strict sterilization practices should be ensured in hospitals and clinics (Park and Park, 1991).

The best strategy for preventing transmission from mother to child is to prevent the sexual transmission of HIV to women of reproductive age. Secondary prevention would depend on the avoidance of child bearing of women who know or suspect that they are infected (World Health Organisation, 1992). AIDS currently threatens the lives of a growing number of unborn and newborn babies (Mussen et al, 1990). Several studies have demonstrated that use of

condoms during sexual intercourse reduces the risk of transmitting HIV infection and that proper and consistent condom use can play an important role in AIDS prevention (World Health Organisation, 1992). Intravenous drug users should be discouraged from sharing needles and syringes, and encouraged to use disposable equipments or in the least repeatedly sterilize their equipments using household bleach (Sundararaman, 1994).

The prevention and control of AIDS, should not be seen as the sole responsibility of the health services. Commitment at all levels - individual, the family, health personnel, media etc., is required.

i. Individual : Individuals must adopt a lifestyle and behaviour which is compatible to health and curtails the transmission of HIV. Individuals with HIV/AIDS must take personal responsibility to ensure that they will stop the further spread of the virus.

ii. Family : Families must adopt values which promote health, and must provide understanding, compassion and care to help any family member with HIV/AIDS.

iii. Society : The society must avoid discriminating against people with HIV/AIDS, promote a supportive environment characterised by protective social norms, and strive to minimize socio-economic factors which tend to aggravate the situation.

iv. Health personnel : They must take appropriate precautions to prevent the spread of infection in other patients and among themselves; act as a role model for their community by providing compassionate and respectful care; and educate individuals and groups about the facts related to HIV.

v. Media : The mass media represent the most readily available and potentially most economical means of imparting information about HIV/AIDS. Along with other forces of communication, the mass media can effectively raise public awareness and concern about HIV/AIDS (World Health Organisation, 1992).

Medical researchers around the world are working furiously on drugs to interfere with HIV's production cycle at one stage or the other (Steinberg, 1989; Park and Park, 1991). Antiviral chemotherapy with the chemical compound 3'-azidothymidine or zidovudine (AZT) and dideoxyionasine (ddl) while not a cure, has proved to be useful in prolonging the life of severely ill patients (Gallo, 1988; Johnston et al, 1993). AZT, neither restores the immune system, nor does it destroy the HIV already installed in cells (Park and Park, 1991).

The efficacy of these drugs is variable and they have severe side effects, besides being very expensive. Some opportunistic infections can be treated effectively

with them, and they may prolong life by one or two years (Purushothaman,1993; Rajan, 1993). In all disciplines of medicine Ayurveda, Siddha, Homeopathy, Naturopathy, Unani or Yoga - nothing has yet been scientifically authenticated to prove that these forms of medicine have a cure for AIDS (Rajan, 1993). The future hope lies in the development of new drugs and the use of drugs in combination to combat resistance to AZT (Bartlett, 1993).

As the chances for developing an effective vaccine within the decade remain speculative (Grant,1994), education is the only vaccine we presently have at our disposal. AIDS prevention education should be planned, keeping in mind the culturally sensitive issues of all Indian communities (Kapoor, 1990; Kochavara, 1992). Schwarz (1993) is also of the opinion that bringing about a behavioural change through education is the only way to halt the spread of the virus. A good education Campaign should get into the minds of the people that there is a threat to the whole of India (The Hindu, August, 1993). Educational material and guidelines for prevention should be made widely available. All mass media channels should be involved in educating people on AIDS, its nature, transmission and prevention (Park and Park, 1991). According to Park and Park (1991) AIDS control programmes should be integrated into the country's primary health care system.

The hope for controlling the spread of AIDS and HIV infection in India lies essentially on effective health education rather than on therapeutic and other approaches. The message of AIDS preventive should reach people even at the grassroot level, to ensure their understanding of the message, by ensuring that largely illiterate population will also be served. Education is essential to remove the numerous misconceptions associated with AIDS and the compounding lack of information at the community, the society and the individual level (Sengupta, 1991).

India has the distinction of having conducted a systematic nationwide sero surveillance of HIV infection from 1986 and of defining epidemiology of HIV infection at a very early stage of the epidemic when only a few people with AIDS had been reported. The data from these studies provided the rational basis for formulating the National Medium Term Plan for AIDS Control (Paintal, 1991).

The trained and sensitized medical and paramedical personnel in the surveillance centres will be able to take care of the increasing need for serodiagnosis and act as nodal training and quality control centres in the respective states (Bharadwaj, 1991). The sensitized and strengthened clinical departments especially of internal Medicine and STD (Sexually Transmitted Diseases) clinics

will take up responsibility of counselling, care, and follow up of seropositive individuals, including individuals with AIDS (Paintal, 1991).

Limiting the spread of HIV requires constant surveillance, reporting and record keeping of cases for scientific purposes. The government of India has established a net work of surveillance centre in the country to screen people with high risk behaviours (Times of India, 1988). This includes establishment of four referral centres at Pune, Vellore and New Delhi where higher level diagnostic facilities are available (Park and Park, 1991).

The World Health Organisation launched a "Global Programme on AIDS" on Feb.1, 1987 to provide global leadership and to support the development of National AIDS Programmes (Park and Park, 1991). The World Health Organisation focuses on an important theme related to AIDS each year on 1st December - the World AIDS Day. This year, 1993, the theme is TIME TO ACT: it is high time to turn knowledge into action, to take more concrete action against HIV/AIDS (World Health Organisation, 1993). According to Merson (1993), "If we want to alter the course of the AIDS pandemic, the time to act is now" (The Hindu, 1993).

Methodology

METHODOLOGY

The procedure for carrying out the study on "Creating an Awareness Among Adolescents (17-19 years) on HIV/AIDS" comprised the following steps :

- A. Selection of area
- B. Selection of sample
- C. Selection of tool and formulation of questionnaire
- D. Pre-testing the tool
- E. Collection of data
- F. Planning and conducting the study, and
- G. Analysis and interpretation of data.

A. Selection of area

Residential pupils of the Avinashilingam Institute for Home Science and Higher Education for Women (Deemed University), Coimbatore, were selected for the study. It was expected that the pupils from both urban and rural areas would return to their own areas of residence and spread the knowledge acquired through the Educational Programme among the local people. Hence, the purpose of selecting residential pupils.

B. Selection of sample

According to Gupta (1992), a sample is that part of the universe which we select for the purpose of investigation. One hundred residential adolescents were selected by simple random sampling method for this study.

Adolescents is a period which ranges from 13 to 21 years (Hurlock, 1990). The age range of the adolescents selected for the study was 17 to 19 years. Adolescence is a very vulnerable and impresssionable period in one's life and important concepts are formed in this period, thereby necessitating the selection of adolescents for this study. Pachauri (1991), Solomon and Ganapathy (1992) also opine that it is vitally important to reach the college community, (comprising of adolescents in the selected age group of 17-19 years) which is the vulnerable section of society at the threshold of adulthood and to explain to them the importance of controlling the spread of HIV/AIDS in India.

C. Selection of tool and formulation of questionnaire

Since the aim of the study was to find out the awareness of the selected respondents and to evaluate the impact of the Educational Programme on pupils, questionnaire was selected for the study owing to their

suitability. Questionnaire refers to a device for securing answers to questions by using a form which the respondent fills in himself (Gupta, 1992). The questionnaire was developed and designed with a lot of care and clarity for securing the essential information from the pupils. A few questions on the outcome of the Educational Programme were also included in the questionnaire which was administered after the completion of the programme.

D. Pre-testing the tools

In order to find out the reliability of the questionnaire prepared, it was pre-tested on a sample of 10 pupils belonging to the same institution. Based on the findings of the pilot study the tools were re-examined. Pre-testing was helpful in deleting irrelevant questions, in adding the suggested questions which seemed to be important for the study and in modifying the language of the questions. The questionnaire thus prepared to create awareness among adolescents in the present study is given in Appendix I.

E. Collection of data

For the purpose of collecting the data and conducting the study, the required permissions were sought from both the University and hostel authorities. A seminar

room was arranged with the necessary audio-visual aids to be used for the programme. The personal approach was used to make contact with the pupils and to establish a good rapport with them thus facilitating better interpersonal relations between the investigator and the pupils. The details of the study were explained to them to motivate them to participate in it whole-heartedly. The questionnaires which were distributed to the pupils in the first session of the Educational Programme consisted of major aspects such as :

1. Personal Background of the Respondents
2. Awareness on Concept of HIV/AIDS
3. Awareness of Knowledge of HIV/AIDS
4. Awareness on Treatment for HIV/AIDS
5. Awareness on Demography of HIV/AIDS
6. Awareness about Programmes on HIV/AIDS
7. Personal Views on Issues Related to HIV/AIDS

F. Planning and conducting the study

An Educational Programme of ten sessions formed the core of the study. The time duration of each session was three hours. Aggleton et al, (1990), Sengupta (1991), Reddy (1993) and Schwarz (1993) stressed that education is the only way to prevent the spread of the virus, especially in the absence of a vaccine and drug for HIV infection and AIDS. The educational campaign should impress upon the young on the most recent threat being faced

by India - that of the HIV/AIDS pandemic. The sessions included the below given aspects :

Session 1

Administration of the questionnaire to test the pupils awareness before education (Plate I). After collecting the completed questionnaire from the respondents they were allowed to enter the seminar room and observe the displays and charts exhibited in the room (Plates II and III).

Session 2

A game 'Wild Fire' was played (Plate IV) to impress upon the pupils at the start of the programme itself as to how AIDS is spreading like a wild fire in today's world and the measures to be undertaken to prevent the further spread of this epidemic. A description of the game is presented in Appendix II.

Session 3

Introductory lecture on HIV/AIDS (Plate V) accompanied by a slide show was held, where the following aspects were covered :

- Expansion of important terms
- Difference between HIV and AIDS
- Transmission of infection

Plate - I

ADMINISTRATION OF QUESTIONNAIRE TO RESPONDENTS



Plate - II

RESPONDENTS OBSERVING THE CHARTS EXHIBITED



Plate - III

RESPONDENTS OBSERVING LITERATURE ON DISPLAY



Plate - IV

WILD FIRE - A GAME



Plate - V

INTRODUCTORY LECTURE



Plate - VI

AUDIO-VISUAL AIDS USED



- Effects of HIV infection
- Testing procedure
- Prevention and protection
- Treatment and drug therapy
- Statistics related to AIDS

The brief content of the lecture is given in Appendix III. The lecture was supported by visual aids like charts, hand-outs, transparencies and slides (Plate VI).

Session 4

A video cassette "Unmasking AIDS" of one hour duration was shown to the pupils (Plate VI). The show was followed by a discussion as videos are a useful way of promoting discussions (Prakash, 1993). A brief description of the content of the video cassette is given in Appendix IV.

Session 5

A game, 'Agree-Disagree', was played (Plate VII). The game is an exercise on value clarification and it helps the pupils to explore their own values and attitudes related to AIDS. Group discussions were held after the completion of the game and doubts were clarified. Details about the game are given in Appendix V.

Plate - VII

THE AGREE - DISAGREE GAME



Session 6

A quiz programme on HIV/AIDS was conducted for the participants (Plate VIII). The respondents were divided into teams with four in each team. An elimination round was held and the top five teams were selected for the final round. All questions for the quiz were formulated by the investigator. The winners of the quiz were suitably rewarded. The questions put forth to the respondents participating in the quiz are given in Appendix VI.

Session 7

Another video show was held for one and a half hour where the cassette 'The National AIDS Awareness Test' was shown to the pupils (Plate VI). A stimulating discussion initiated by the pupils themselves followed thereafter. The content of the cassette, in brief, is given in Appendix VII.

Session 8

Role play was the activity for the last session. Role play involves presenting small spontaneous plays which describe possible real life situations. It involves taking on someone else's character which is less intimidating than having to express own ideas and emotions (Prakash, 1993).

Plate - VIII
QUIZ



The pupils were divided into groups with eight in each group. A situation was presented to each group and the respondents took on the roles of the character involved. Each group was given 20 minutes preparation time after which they role played their interpretation of the situation for 5-7 minutes (Plate IX). The six scenarios are presented in Appendix VIII.

Session 9

A group discussion on the concepts learned, information gained and knowledge acquired was held, where the doubts and misconceptions of the pupils were cleared. A question box was kept in one corner of the classroom where the pupils could put in the questions which they felt delicate to ask in the open. These questions were also discussed (Appendix IX).

Session 10

After conducting the educational programmes the questionnaire was administered to evaluate the impact of the course on the pupils awareness regarding HIV/AIDS.

Plate - IX
ROLE PLAY



G. Analysis and interpretation of the data

The data obtained through the questionnaire was informative and exhaustive. Great skill was required to consolidate, tabulate, simplify and quantify the data, using the following statistical analysis :

1. Paired 't' test
2. McNemer test
3. Percentage analysis.

The relevant statistical values were interpreted. The details about the analysis are given in Appendix X.

Scoring Analysis

Scores were used in the quantification and analysis of data regarding the pupils awareness on concept, knowledge and treatment related to HIV/AIDS. Every positive answer was given two scores, a negative answer one score and a question not answered was not scored. The maximum scores for the awareness on concept, knowledge and treatment are 12, 24 and 20 respectively.

Results and Discussion

RESULTS AND DISCUSSION

The findings of the study entitled "Creating Awareness Among Adolescents (17-19 years) on HIV/AIDS" are discussed under the following headings :

- A. A profile of the selected respondents
- B. Awareness on concept of HIV/AIDS
- C. Awareness on knowledge of HIV/AIDS
- D. Awareness on treatment for HIV/AIDS
- E. Awareness on demography of HIV/AIDS
- F. Awareness about programmes on HIV/AIDS
- G. Personal views on issues related to HIV/AIDS
- H. Respondents views on the outcome of the Educational Programme.

A. A profile of the selected respondents

The personal profile of the selected respondents as regards their area of residence, type of family, religion, age and income of the family are presented in Table IV.

TABLE IV
PROFILE OF THE SELECTED RESPONDENTS

S.No.	Particulars	Percentage N=100
1.	<u>Area of residence</u>	
	Urban	74
	Rural	26
2.	<u>Type of family</u>	
	Nuclear	90
	Joint	10
3.	<u>Religion</u>	
	Hindu	96
	Christian	3
	Muslim	1
4.	<u>Age of the respondents</u>	
	17 years	38
	18 years	52
	19 years	10
5.	<u>Income of the family</u>	
	Middle income	88
	Low income	7
	High income	5

From the above table it is clear that a vast majority of the respondents (74 per cent) were from urban areas like Madras, Ootacamund, Salem, Tiruppur, Erode and Gobichettipalayam. Twenty six per cent were from rural areas, especially from villages of Pollachi, Tiruppur, Coimbatore, Salem and Erode. Ninety per cent of the respondents belonged to nuclear families while 10 per cent lived jointly with their relatives. Among the selected samples 96 per cent were Hindus, three per cent Christians and the rest Muslims. The selected samples constituted 88 per cent of respondents from middle income families (Rs.1,200-Rs.5,000 per month), seven per cent from low income (below Rs.1,200 per month) and five per cent from high income families (above Rs.5,000 per month) (Housing Unit Development Corporation, 1987).

B. Awareness on concept of HIV/AIDS

Awareness on the concept of HIV/AIDS included facts such as the pupils understanding of the terms AIDS and HIV, expansion of AIDS and HIV and the difference between AIDS and HIV. Awareness of the respondents on the fundamental concept of HIV/AIDS was assessed twice - before and after the educational programme and the scores were quantified. The mean scores of the respondents were calculated to test its significance. The values obtained are presented in Table V.

TABLE V
AWARENESS ON CONCEPT

S.No.	Particulars	Mean of scores	Standard error of mean difference	't' value
1.	Before education	8.86		
			0.1743	13.99**
2.	After education	11.30		

**Significant at one per cent level

From Table V it can be discerned that the mean score for the respondents awareness on concept for before and after education was worked out to be 8.86 and 11.30 respectively with a meagre standard error of mean difference (0.1740), when the 't' statistic was 13.99 being highly significant at one per cent level of significance. The table values lead to the inference that the scores after education have been significantly higher than the scores before education, establishing without any doubt that the Educational Programme has been remarkably effective in creating an awareness on concept of HIV/AIDS among the respondents.

C. Awareness on knowledge of HIV/AIDS

The respondents awareness on knowledge regarding details of HIV infection, the modes of transmission of infection and the pupils source of information on HIV/AIDS were tested.

1. Awareness on details of HIV infection

The study revealed that the respondents familiarity with and understanding of the nuances of HIV infection and AIDS increased markedly after education as disclosed by a higher mean score (22.81) from an initial mean of 19.16 as presented in Table VI.

TABLE VI
AWARENESS ON DETAILS OF HIV INFECTION

S.No.	Particulars	Mean score	Standard error of mean difference	't' value
1.	Before education	19.16		
			0.1670	21.85**
2.	After education	22.81		

**Significant at one per cent level

The above table reveals a remarkable increase in the scores after education with 0.1670 as the standard error or mean difference and 21.85 as the 't' statistic, being highly significant at one per cent level. This thereby reinforces the fact that the respondents have benefitted immensely from the Educational Programme in acquiring a stronger knowledge base regarding the type of organism causing AIDS, the symptoms and effects of HIV infection. The respondents realised that merely by looking at a person, it cannot be discerned if he is infected or not (Krishnamurthy, 1994). It takes a blood test to confirm the presence of the virus in one's body (Solomon, 1994). They also came to know that symptoms develop in an infected person when the body's T-4 cell count falls below 200 per microlitre of blood, which may take anywhere between 10-12 years, after which the person's body slowly loses its immunity (Ganapathy, 1993). The pupils acquired the information that an infected person is not an immoral person and that homosexuality depends upon personal preference.

2. Modes of transmission of HIV infection

Mode of transmission of HIV infection refers to the way in which the virus can be transmitted from one person to another, the details of which can be glimpsed in Table VII.

TABLE VII
MODES OF TRANSMISSION OF HIV INFECTION

S.No.	Particulars	Before education N=100	After education N=100
1.	Sexual intercourse	52	97
2.	Unchecked blood transfusion	55	95
3.	Infected mother to her child	43	92
4.	Multi-partner sex	56	89
5.	Infected needles and syringes	50	87
6.	Homosexual relationship	26	85
7.	Unchecked organ and tissue transplantation	--	73
8.	Kissing, petting, fondling	49	--
9.	Insect bites	35	--
10.	Sharing food and water	23	--
11.	Sharing common toilets	20	--
12.	Sharing clothes	12	--

It is extremely heartening to note that majority of the respondents (85 to 95 per cent) after education gave accurate answers as to the possible modes of transmission of infection as sexual intercourse, unchecked blood transfusion, from an infected mother to her child, through multi-partner sex, by infected needles and syringes

and through homosexual relationships (Rajan, 1993)(Figure 5). It is shocking to note that none of the respondents prior to education knew that organ and tissue transplants from an infected person to a non-infected person can transmit the virus. It is to the credit of the educational programme → that 73 per cent of the pupils became aware of this fact after attending the sessions. It is indeed discouraging to note that a considerable percentage (30-50 per cent) of the respondents believed erroneously that kissing, petting and fondling; insect bites; and sharing food, water, toilets and clothes were agents of transmission, which they realised as incorrect after attending the programme as no respondent cited these as the means of transmission disclosing that education has had an overwhelmingly positive effect on them.

D. Awareness on treatment for HIV/AIDS

The respondents were asked about the testing procedure and treatment options and the protection measures to be taken to safeguard against HIV/AIDS.

1. Awareness on testing procedure and treatment options

Table VIII gives a representation of the data collected on the respondents' awareness on the testing procedure and treatment options available for HIV/AIDS.

Figure 5

MODES OF TRANSMISSION OF HIV INFECTION

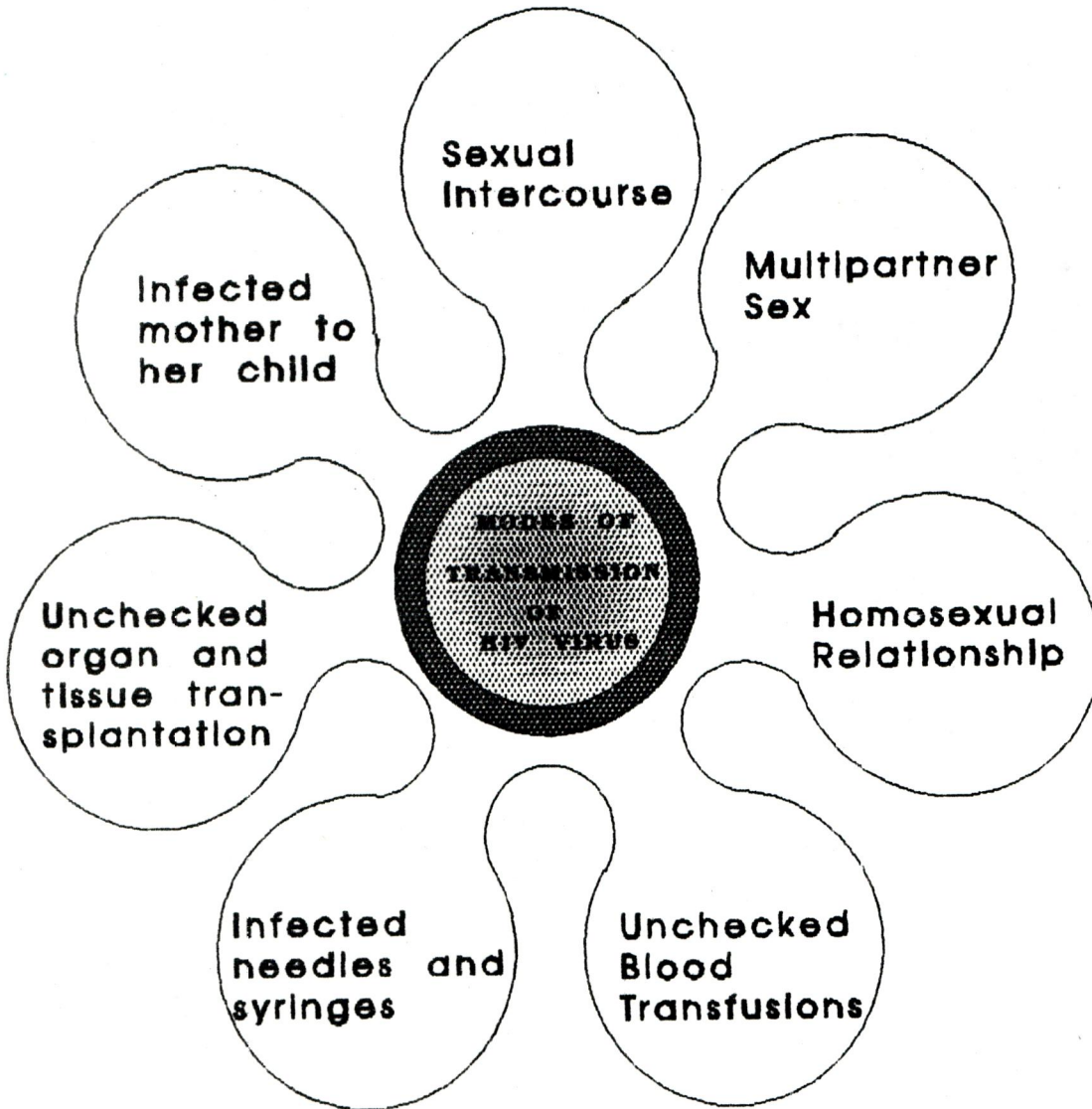


TABLE VIII
AWARENESS ON TESTING PROCEDURES AND TREATMENT OPTIONS

S.No.	Particulars	Mean scores	Standard error of mean differences	't' value
1.	Before education	14.75		
			0.1931	16.83**
2.	After education	18.00		

** Significant at one per cent level

Evaluation before dispensing education revealed that a majority of the respondents were unaware of the testing procedure and treatment options for those infected with HIV. This was remedied during the educational programme, revealed by a creditable increase in the mean of post-evaluation scores to 18.00, from an initial mean score of 14.75. With a standard error of mean difference of 0.1931, the 't' statistic stood at 16.83, which is highly significant at one per cent level of significance. This leads to the welcoming inference that the educational programme rates as very highly successful in raising the respondents level of awareness on drugs licensed for controlling the effects of the virus inside the body (like AZT) and the tests available for HIV antibody testing such as the Enzyme Linked Immuno Sorbent Assay (ELISA) and the

Western Blot (Shriniwas et al, 1994). The pupils opined that testing should not be made compulsory as it violates the basic human right of the individuals. The pupils understanding of the term 'HIV positive' was solicited leading to a majority of accurate responses that a 'HIV positive' individual has the virus in his/her body (Shiv Lal, 1994).

2. Awareness on safeguards against HIV/AIDS

Safeguarding oneself from the virus appears to be the only reliable means of protection from HIV/AIDS. The knowledge that one can protect oneself from acquiring HIV infection increased in the respondents after attending the Educational Programme as evidenced in Table IX.

TABLE IX
SAFEGUARDS AGAINST ACQUIRING HIV INFECTION

S.No.	Particulars	Before education	After education
1.	Avoiding sex with infected persons	27	93
2.	Testing blood prior to transfusion	47	90
3.	Being faithful to a single partner	28	88
4.	Seeking safe and hygienic medical care	32	75
5.	Avoiding homosexual relationships	20	69

It is pleasing to note that education raised the level of awareness of the respondents on avoiding sex with infected persons (93 per cent), testing of blood for HIV antibodies prior to transfusion (90 per cent), being faithful to a single partner (88 per cent), seeking safe and hygienic medical care (75 per cent) and avoiding homosexual relationship (69 per cent) as the ways of safeguarding oneself from HIV infection. All the respondents after education considered it as imperative for youth to learn the methods of protection, registering a significant increase from the response before education.

E. Awareness on demography of HIV/AIDS

The respondents were tested regarding the statistics related to HIV/AIDS, the scores of which are given in Table X.

TABLE X
AWARENESS ON DEMOGRAPHY OF HIV/AIDS

S.No.	Aspect	Favourable responses before education	Favourable responses after education	McNemer value
1.	AIDS was identified in the year			
	a. 1980-1985 in the world	31	97	21.44**
	b. 1985-1990 in India	28	90	7.60**
2.	AIDS was first identified in			
	a. North America in the world	27	98	19.86**
	b. Tamil Nadu in India	10	76	4.97*
3.	Number of HIV infected individuals in India : 10,000 - 15,000	22	91	4.64*
4.	Number of individuals have died of AIDS in India : 2,000 - 3,000	8	75	7.75**
5.	Maharashtra has the most number of HIV positive cases	53	88	24.61**
6.	Bombay, Madras and Impal are the three epicentres of HIV infection	46	94	29.25**

* Significant at five per cent level

** Significant at one per cent level

As far as the awareness on the year of identification of AIDS in the world and India is considered, the McNemers' value of 21.44 and 7.66 indicate that the change towards an accurate response after education was remarkably significant at both five and one per cent level, proving the exceptional effectiveness of education of the on the respondents.

Comparison of the responses on the data of HIV infected individuals in India before and after education divulged a McNemers' value of 4.97, significant at five per cent level of significance. This reinforces the inference that education has indeed been instrumental in developing an accurate information base in the minds of the respondents.

It is sad to notice only eight per cent favourable responses on the statistics of death due to AIDS prior to education. Education displayed a 75 per cent raise towards a favourable response, with a McNemer value of 7.75, significant at both five and one per cent level of significance validating the benefits of education.

Maharashtra has the maximum number of HIV infections (Narottam et al, 1993), a fact corroborated by 53 and 88 per cent favourable responses before and after education respectively. A very high degree of significance is revealed by the McNemer statistic of 24.61, substantiating the belief that the Educational Programme was of immense help to the respondents.

Forty six per cent of the respondents before attending the educational classes and 94 per cent after were aware of the fact that Bombay, Madras and Imphal are known as the three epicentres of HIV infection in India as Maharashtra, Tamil Nadu and Manipur have the maximum number of HIV/AIDS cases among all Indian states (Goswami, 1993; National AIDS Control Organisation, 1993). The McNemer's statistic (29.25) was very highly significant at both five and one per cent level confirming the exceptional success of the educational programme.

F. Awareness about programmes on HIV/AIDS

The respondents awareness on programmes on HIV/AIDS was tested and the following aspects were covered - the organisations working on HIV/AIDS, events conducted, and the type of interest exhibited by the respondents in organising programmes on HIV/AIDS.

1. Organisations working on HIV/AIDS

Organisations in the government, non-government and voluntary sector are working to control the spread of HIV infection in India (Krishnamurthy, 1994). It is very disappointing to note that a majority of the respondents (70 per cent) were unaware of this fact before education. The Educational Programme helped to increase the level of awareness of the respondents on the organisational and individual efforts taken for HIV-infected persons, which

is very commendable. The awareness level of respondents on voluntary organisations and social workers was higher (80-85 per cent) compared to that of governmental and non-governmental organisations and clubs (like Leo and Rotary) (60-70 per cent). Almost all the respondents were aware of the pioneer work being carried out by the National Service Scheme (NSS) in the field of AIDS prevention.

2. Awareness of events conducted

It is very discouraging to note that very few of the respondents (12 per cent) were aware of events conducted on HIV/AIDS in the vicinity of their area of residence before participating in the educational programme. It is extremely heartening to note that after education all the respondents cited the ten day long programme as an event attended by them which was enormously useful as they gained a lot of knowledge and information on the facts of AIDS.

3. Type of interest exhibited by respondents in organising programmes

After the completion of Educational Programme the respondents were asked whether they were interested in conducting and organising programmes. It is a striking feature of the study that 95 per cent of the pupils expressed a strong desire and interest to conduct and organise programmes in their local area compared to only a

12 per cent favourable response before education. It is noted with great appreciation that the respondents considered it imperative for the youth to come forward and communicate their willingness to contribute their mite for the society and be instrumental in its betterment.

Ninety per cent of the respondents quoted a lot of innovative ways of communicating with the people on HIV/AIDS, by including dramatic experiences and exhibitions besides lectures and seminars in the programmes to be conducted by them. An average of 80 per cent of the pupils expressed a desire to include novel games, puppet shows, film and slide shows in their programmes.

G. Personal views on issues related to HIV/AIDS

The questions on the personal views and opinions on issues related to HIV/AIDS solicited the pupils responses on aspects such as educating the youth, preference of media for educating youth, prevalence of HIV infection in the community, topic of discussions with friends, respondents reaction on facing HIV infected individuals saving the community from HIV infection and changes made in way of life after education.

1. Educating youth on HIV/AIDS

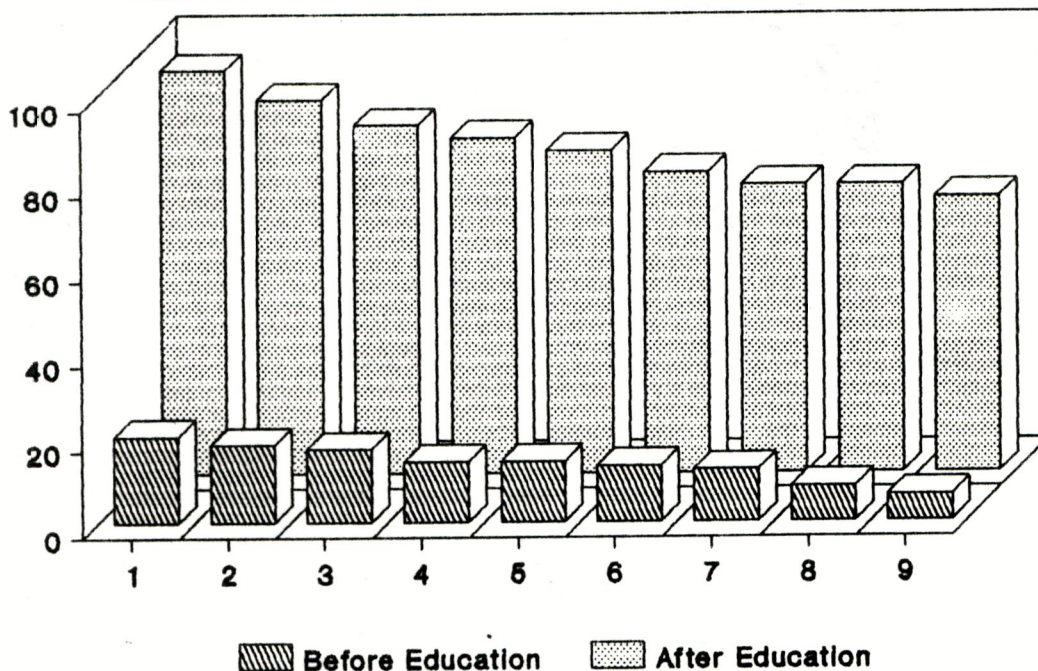
It is very heartening to note the fact that a majority of the respondents (92 per cent) after education

believed that the problem of HIV/AIDS facing the world at large is indeed daunting and very serious especially because AIDS is spreading fast (95 per cent), striking those in the economically productive age group of 20-45 years (68 per cent). In the current era of permissive sex (88 per cent) and prevalence of drug addiction (76 per cent) and homosexuality (71 per cent), with the youth willing to take enormous risks (79 per cent), the seriousness of the problem becomes manifold. Poverty, ignorance (82 per cent), lack of awareness (68 per cent) and lack of manifestation of obvious symptoms in the initial stages also contribute their share in adding to the seriousness of the spreading pandemic (Dasgupta, 1994; Roy, 1994) (Figure 6).

Against this backdrop the respondents realised that awareness was essential to prevent the further spread of AIDS (98 per cent), to protect ourselves (93 per cent), to encourage public to adopt preventive measures (93 per cent) and to save the future of the human race (88 per cent).

All the pupils in their response after education believed that educating youth is imperative to prevent AIDS from spreading stepping into the next century (97 per cent), to create an awareness (90 per cent) and to clear doubts and misconceptions (88 per cent). Youth being the instruments of social change (84 per cent) should be

Figure 8

REASONS FOR SERIOUSNESS OF AIDS EPIDEMIC

1. AIDS is spreading rapidly
2. Era of permissive sex
3. Ignorance about AIDS
4. Youth take more risks
5. Prevalence of drug addiction
6. Prevalence of homosexuality
7. Economy of country is affected
8. Lack of awareness on AIDS
9. Symptoms of AIDS are not obvious

educated to take precautions against the risk of infection (81 per cent) and should be encouraged to share the knowledge they have gained with others (77 per cent).

2. Preference of media for educating youth

Transfer of information from one individual to another needs a media. In the context of education of youth, the respondents were asked about the media through which youth can be educated. The pupils preference of media for educating youth on HIV/AIDS can be glimpsed in Table XI.

TABLE XI
PREFERENCE OF MEDIA FOR EDUCATING YOUTH

S.No.	Particulars	Before education N=100	After education N=100
1.	Curriculum based education	38	96
2.	Conducting educational classes, lectures and seminars	35	94
3.	Through mass media - radio, television, films, newspapers and magazines	25	85
4.	Discussions with friends	10	78
5.	Through games, plays, skits, dramas and exhibitions	--	63
6.	Through NSS camps and Youth Forums	--	60
7.	Through audio-visual aids - video, slides, puppets.	--	57

It is indeed striking to observe that by the respondents own choice education, both curriculum based and educational classes including lectures and seminars, has emerged as the best media for spreading awareness among youth on HIV/AIDS, with an overwhelming majority opting for it (94-96 per cent). Utilising the mass media was the choice of 85 per cent of the respondents after education, registering an increase of 60 per cent from the response before education. Friends as a means of obtaining information which was selected by only 10 per cent prior to education rose to 78 per cent after education giving an indication that discussions with friends on HIV/AIDS increased during the course of the Educational Programme. It was very discouraging that none of the respondents prior to education mentioned games, dramatic experiences (like plays, skits and dramas) exhibitions, NSS camps, youth forums and the use of audio-visual aids as media for education. This was remedied after the Educational Programme evidenced by on almost 60 per cent increase in awareness about using the above as potential educational media, which is highly commendable.

3. Prevalence of HIV infection in the community

The pupils response on the prevalence of HIV infection in the community dealt with the individuals who are most and least prone to acquire HIV infection. Table XII gives a detailed representation on the individuals most likely to get infected.

per cent of the respondents. The fact that health care workers like doctors, nurses and other workers in the hospital are also susceptible to infection was unknown to respondents prior to education. 51 per cent of the respondents became aware of this after education which is to be appreciated.

The respondents felt that the risk of infection can be minimised by practising safe sex with a single partner (98 per cent) taking proper medical care and precautions (96 per cent) like using disposable syringes (91 per cent) and testing blood before transfusions (90 per cent). Those individuals who adopted protective measures were the least likely to get infected (Sundararaman, 1994).

96 per cent of the respondents were well aware that the epidemic of HIV/AIDS was not restricted to any one community or a section of population and can spread to anyone irrespective of caste, creed, race, religion or sex (Pachauri, 1992; Rajan, 1992).

4. Frequency and topic of discussion with friends

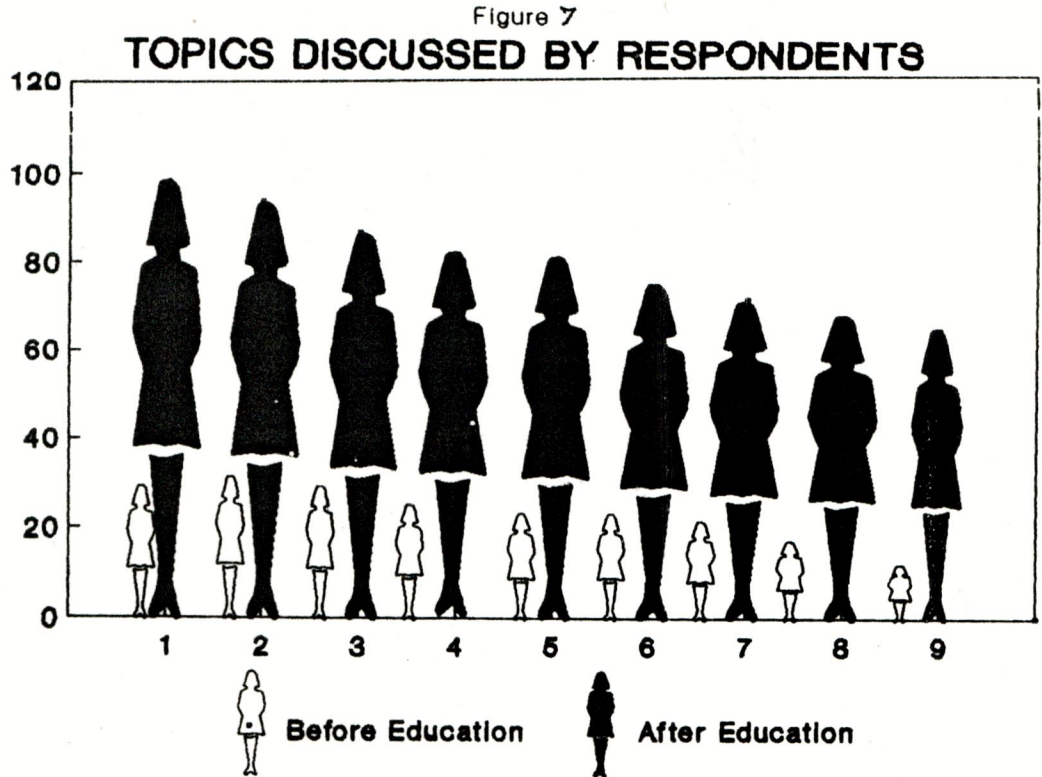
The pupils frequency of talk on HIV/AIDS with friends increased considerably, by 48 per cent, after acquiring more information and knowledge regarding HIV/AIDS. Nearly half of the respondents discussed the topic always or once or twice in a month. An average of 45 per cent of the

pupils mentioned that they talk about HIV/AIDS once in a week or whenever the topic arose, following a lecture, television or radio programme or a magazine article.

The respondents discussed among themselves about the cause, effect, symptoms and prevention of infection; the magnitude of spread of AIDS; sexual permissiveness, homosexuality and commercial sex workers; treatment and awareness on AIDS; about how to help the infected individuals and the government programmes on HIV/AIDS. Figure 7 provides a glimpse of the topics discussed by the respondents.

5. Respondents reaction on facing HIV-infected individuals

The respondents were asked about the type of reaction they would exhibit on coming into contact with an individual infected with HIV. Their reactions would convey whether they had any prejudice towards an infected individual or not. It is praiseworthy to note that most of the respondents (87 per cent) expressed normal feelings towards an individual infected with the virus, 11 per cent expressed pity and sympathy and only a minority (2 per cent) expressed negative feelings like disgust, anger, hatred and repulsion. There was a reduction of 82 per cent in the negative response after education, thereby proving that education helped to remove the prejudices of the respondents.



1. Cause, effect, prevention and symptoms of infection
2. Magnitude of spread of AIDS
3. Sexual permissiveness
4. Homosexuality
5. Commercial sex workers
6. Treatment of AIDS
7. Awareness on AIDS
8. The HIV-infected individuals
9. Government Programmes on AIDS

If the respondents were to realise that the person they are talking to is HIV-infected, 95 per cent of them would continue the conversation as before exhibiting no prejudice, three per cent expressed a desire to politely get away from the situation and two per cent desired to abruptly end the conversation. Ninety two per cent of the respondents after acquiring knowledge felt it best to let an individual infected with HIV to continue studying in their college as before, four per cent of the pupils wished an open announcement to be made in college leading to isolation of the person in college. Four per cent of the respondents wished the individual to leave college.

It was extremely disheartening to note that an average of 62 per cent of the pupils expressed negative responses of desiring to terminate conversation with an HIV-infected individual, and wishing the infected individual to leave college following an open announcement. The impact of education is seen in the remarkable decrease in the percentage of respondents offering a negative answer (an average of three per cent) thereby validating that the Educational Programme contributed to removing prejudice in the minds of the respondents against HIV-infected individuals.

6. Saving the community from HIV infection

The respondents opined that taking precautions oneself was the best way to save the community from HIV infection (98 per cent), the next best method being caring and treating the infected at government expense (67 per cent). It was heartrending to note that 18 per cent of the respondents before education considered isolation, hospitalisation, imprisonment and institutionalization of the infected as a way to saving the community. Education removed their prejudices after which none of the respondents considered these as effective means of protecting the rest of the community from infection.

7. Changes made in respondents way of life after education

Ninety per cent of the respondents had decided to change their way of life after learning about HIV/AIDS exhibiting an increase of 62 per cent from the response before education, by ensuring proper and hygienic medical care and precautions (88 per cent), by deciding not to isolate the infected individuals (81 per cent), by practising safe and single partner sex (75 per cent) and creating awareness and teaching people about AIDS (73 per cent).

The respondents were interested in learning more about HIV/AIDS especially to acquire more scientific details about the virus, about the treatment, cure and drugs and about the latest advancements in the field of testing and treating the infection. They also expressed a burning desire to know more about the rapidly changing statistics, ways of prevention, dealing with and managing the infected.

H. Respondents views on the outcome of the Educational Programme

After the completion of the Educational Programme the respondents views on the outcome of the programme was solicited. Responses were obtained on how the pupils benefited from the programme, their views on sharing the information gained and their suggestions to control the spread of HIV/AIDS.

All the respondents believed that such well organised programmes are the need of the hour and very essential, especially for the youth. The doubts and misconceptions of all respondents were cleared by their participation in the sessions. The programme was considered to be innovative (95 per cent), extremely interesting (92 per cent) and useful (90 per cent) by all the respondents who also believed that they were benefitted by a lot of information through the programme. Eighty eight per cent of the pupils made a conscious decision to attend more such

programmes. Eighty five per cent of the respondents were of the view that the programme which gave them a clear picture of AIDS also helped them to understand the psychology of those infected with the virus.

It is extremely heartening to note that all the respondents agreed to share the knowledge gained through the programme and pledged their support to spread awareness on HIV/AIDS in their local areas.

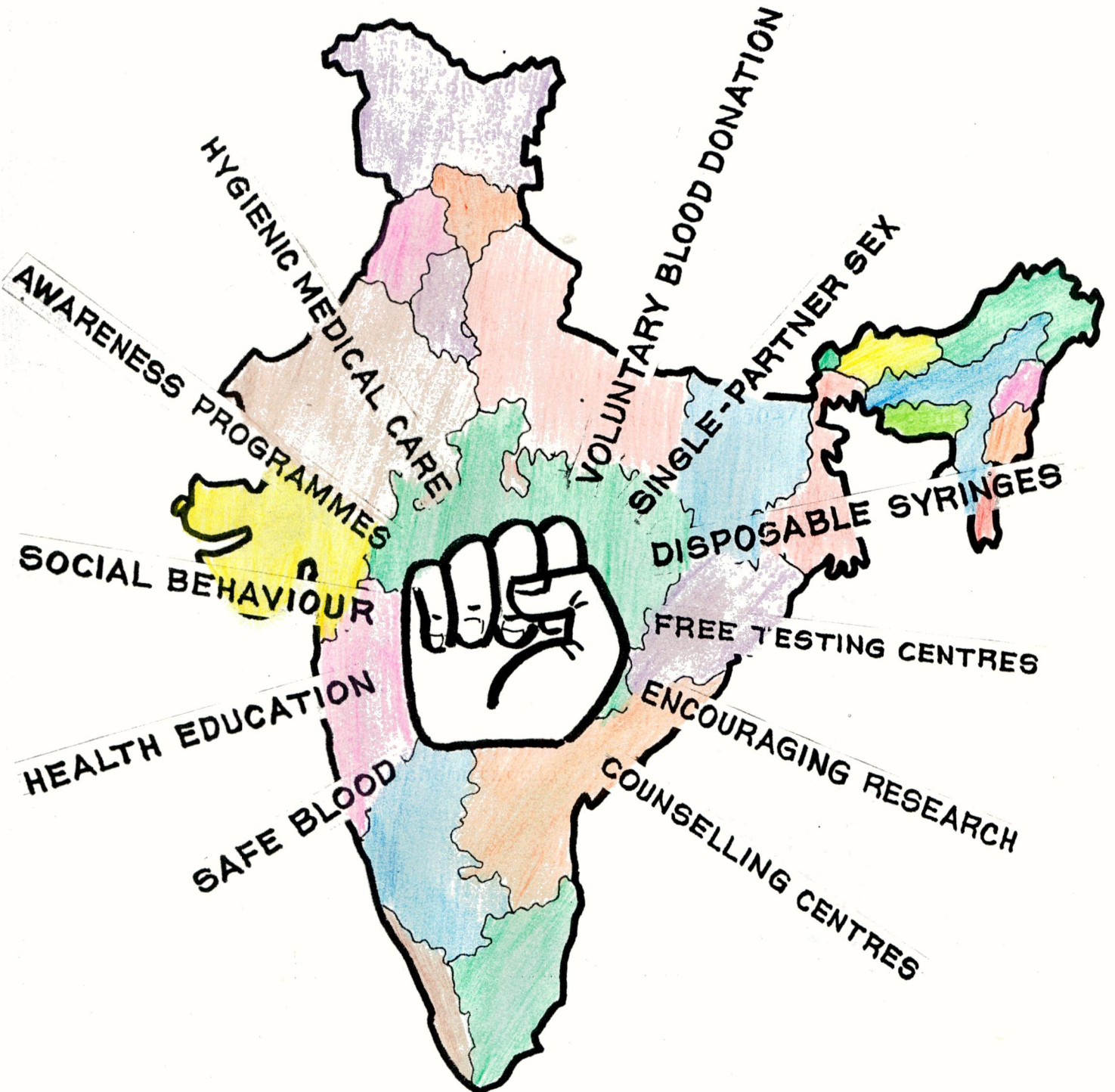
2. Suggestions to control the spread of HIV/AIDS

All the respondents welcomed the efforts taken by the Indian Government in controlling the spread of HIV/AIDS. They also suggested a few steps that could be adopted by the government and voluntary organisations to prevent AIDS from stepping into the 21st century, a glimpse of which is provided in Table XIII, (Figure 8).

TABLE XIII
SUGGESTIONS TO CONTROL THE SPREAD OF HIV/AIDS

S.No.	Suggestions	Before education N=100	After education N=100
1.	Incorporating AIDS and health education in educational institutions	30	95
2.	Conducting comprehensive nationwide awareness programmes	27	92
3.	Safer blood banking system	21	91
4.	Counselling and staff training	19	87
5.	Encouraging scientific research on HIV/AIDS	16	78
6.	Ensuring hygienic medical care	13	70
7.	Distribution of disposable syringes	10	67
8.	Advertising through mass media	8	63
9.	Organising exhibitions, games, skits, plays, dramas and shows of films, slides and puppets	6	52
10.	Establishing free, easily accessible testing centres	3	47
11.	Releasing appropriate messages and materials on AIDS	2	31

CRUSADE AGAINST AIDS

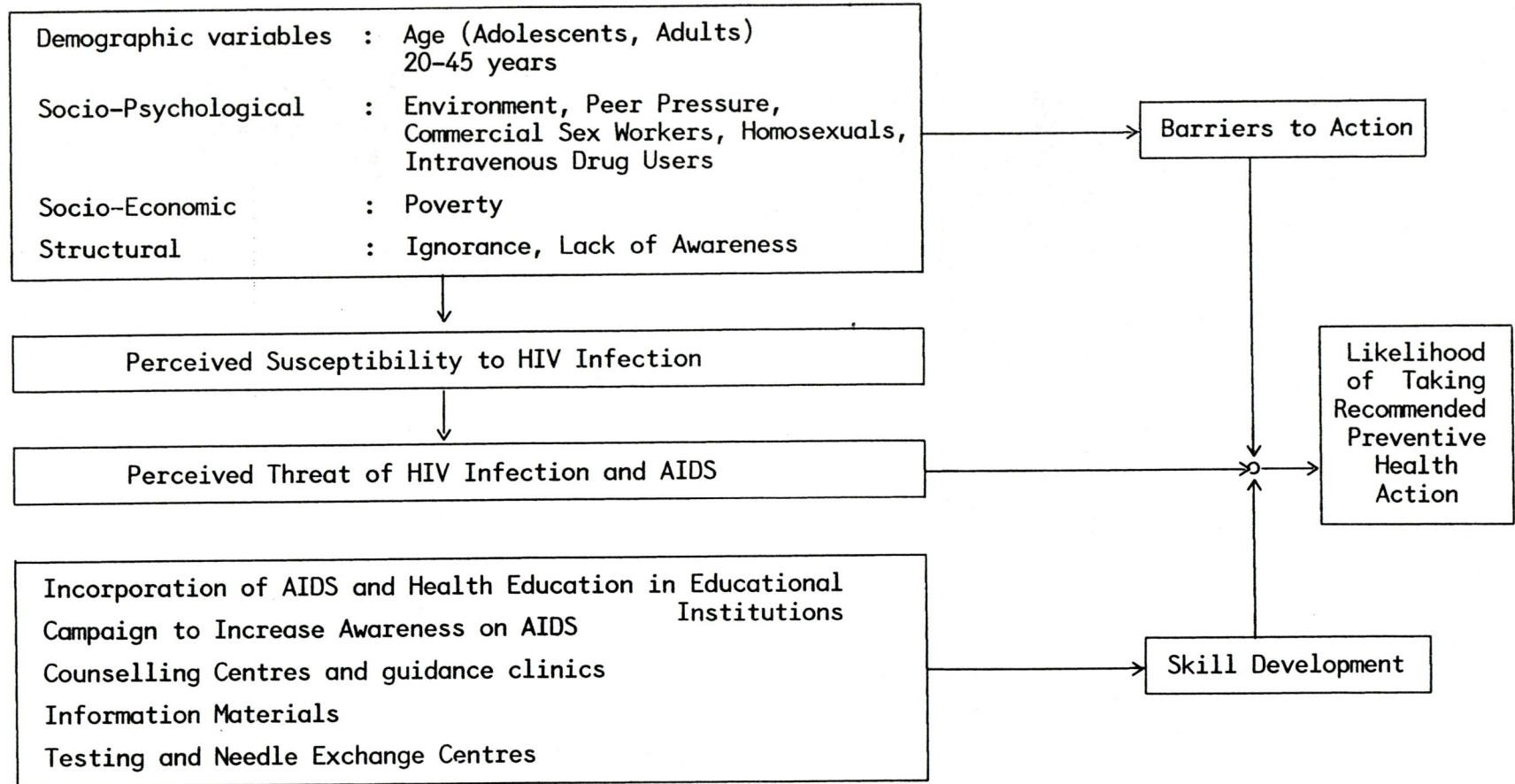


Majority (80-95 per cent) of the respondents after education considered incorporation of AIDS and health education in educational curricula, spreading awareness by conducting nationwide programmes, safer blood banking system, counselling and staff training and encouraging scientific research on HIV/AIDS as very crucial steps in controlling the spread of AIDS. Ensuring hygienic medical care, distribution of disposable syringes, utilising the mass media for advertising the programme, conducting exhibitions, dramas, plays, skits, puppet shows and film shows were the steps proposed by 50-70 per cent of the pupils. Establishment of free and accessible testing centres and releasing appropriate messages and materials on AIDS were the choice of 47 per cent and 31 per cent respectively.

The major findings of the study have been represented schematically in Figure 9.

FIGURE 9

SCHMATIC REPRESENTATION OF THE FINDINGS
EDUCATION FOR THE PREVENTION OF AIDS



Summary and Conclusion

SUMMARY AND CONCLUSION

The present study on "Creating Awareness Among Adolescents (17-19 years) on HIV/AIDS" was an endeavour to impart education to the selected respondents. A total of 100 residential pupils were selected randomly to participate in the 10 day Educational Programme comprising 10 sessions of three hours duration. A questionnaire was designed and adopted to collect the required information from the respondents before and after imparting education.

The major findings of the study have been summarized in the following paragraphs :

1. Seventy four and 26 per cent of the selected respondents were from urban and rural areas respectively. Ninety per cent of the respondents belonged to nuclear family and 10 per cent belonged to joint family. Among the samples, 96 per cent were Hindus, three per cent Christians and the rest Muslims. Of the 100 respondents selected, 52 per cent were 18 years old, thirty eight per cent were 17 years and 10 per cent were 19 years old. 88 per cent of the respondents belonged to middle income group, seven per cent to low income group and the remaining five per cent to high income group.
2. The respondents level on the fundamental concepts of HIV/AIDS such as the meaning and expansion of the terms and understanding the

difference between HIV and AIDS, was very low prior to participation in the Educational Programme. This was remedied during the course of the programme after which there was a remarkable increase in the scores of the adolescent respondents.

3. The benefits obtained by the respondents from the Educational Programme was evidenced in the rise of the level of awareness on knowledge related to the nuances of AIDS. The respondents awareness on the modes of transmission of HIV infection such as sexual intercourse, transfusions of infected blood and blood products, transplantation of infected organs and tissues from an infected mother to her child, increased after education paving the way for a stronger knowledge base in the minds of the respondents.
4. The respondents realised that safeguarding oneself from HIV infection by adopting preventive measures was the key to halting the further spread of the epidemic. Avoiding sex with infected individuals (93 per cent), testing blood prior to transfusion (90 per cent), being faithful to a single partner (88 per cent), ensuring safe and hygienic medical care (75 per cent) and avoiding homosexual relationships (69 per cent) emerged as the best safeguards against infection, registering an average increase of 70 per cent from the response of the pupils before education.

5. It was heartrending to note an average of 70 per cent incorrect responses before education by the pupils to questions on the demography of HIV/AIDS. The Educational Programme disclosed information on the statistical distribution of HIV/AIDS in the World, and in India. Majority (95 per cent) of the respondents gave accurate answers after participating in the sessions establishing beyond any doubt that the Educational Programme contributed towards raising the respondents awareness level on the demographic profile of HIV/AIDS.
6. The Educational Programme disseminated information on the various organisations and individuals working towards controlling the spread of HIV/AIDS. The respondents awareness about the above aspects increased creditably after education. Most respondents (71 per cent) were unaware of events conducted on HIV/AIDS in the vicinity of their residential areas. It is encouraging to note that after education the respondents cited the Educational Programme as one of the events attended by them. They expressed a strong desire and interest in conducting and organising programmes on HIV/AIDS.
7. The most striking feature of the study was that the respondents considered awareness, education of youth to be instrumental in saving the future by preventing the further spread of the epidemic. The respondents

choice indicated education, both curriculum based and educational classes as the best media for the education of youth.

8. A clear picture about the prevalence of HIV infection in the community was provided to the respondents whereby their knowledge on the individuals most and least prone to infection increased. Commercial sex workers; homosexuals; intravenous drug users; recipients of untested blood and blood products, unchecked transplants and injections from unsterilised needles and syringes; child getting infected from its mother and health care workers were cited by 80-90 per cent of the respondents as the most likely individuals to acquire HIV infection.
9. Discussions among the respondents on HIV/AIDS increased manifold and were more frequent after their participation in the Educational Programme. The respondents conversed about the cause, effect, symptoms and prevention of infection; magnitude of spread of AIDS; sexual permissiveness, treatment and awareness of AIDS.
10. The negative reaction of the respondents on coming face to face with HIV-infected individuals in different walks of life revealed prejudice against the infected individuals. It was extremely encouraging to take note of the fact that only a minority of the respondents (2 per cent) expressed

negative feelings and reactions after education displaying a comendable reduction of 82 per cent from the response before education. It is extremely praiseworthy to note that the educational sessions contributed to dispelling the prejudices of the respondents and also helped in developing an healthier outlook towards those infected with the virus.

11. The impact of the Educational Programme encouraged the respondents to decide on important changes in their lives such as practising safe and single partner sex (100 per cent), insisting on hygienic medical care (88 per cent), not to isolate the infected individuals (81 per cent), and creating awareness among people on AIDS (73 per cent). Besides taking precautions oneself the respondents also pledged their support in educating people known to them about the ways of protecting oneself from acquiring the infection.
12. It was noted with immense pleasure that the respondents expressed an overwhelming desire and interest to learn more about HIV/AIDS and stressed that such Educational Programmes are the urgent and most pressing need of the hour especially for the youth.
13. The respondents offered suggestions on the prevention and control of the spread of HIV/AIDS that could be adopted by the government organisations and voluntary agencies. They suggested incorporating AIDS

and health education in the curriculum of schools and colleges (95 per cent), conducting nationwide awareness programmes (92 per cent), establishing safer blood banks (91 per cent) and counselling centres (87 per cent), encouraging scientific research on HIV/AIDS (78 per cent), ensuring hygienic medical care (70 per cent) and distribution of disposable syringes (67 per cent) as steps to be adopted in the war against AIDS.

In conclusion it can be said that education emerged as the most effective method to bring about an awareness on the burning issue of HIV/AIDS, which is a mighty challenge to the world today. An integrated approach through the greater involvement and participation of community based organisation, including women's and youth groups is desired, as it has a critical role to play in efforts to bring about behavioural change among individuals and to mitigate the challenge posed by the threat of AIDS.

RECOMMENDATIONS

The following are the recommendations made :

1. HIV and AIDS education can be integrated into the existing curricula in schools and colleges and also in the health services.
2. AIDS education activities need to be supported by other essential services as those for HIV testing, counselling and staff training, management of individuals with AIDS and safer blood banking system.

3. Appropriate messages and materials are to be designed with the help of the target audience and suitable channels of communication are to be selected for imparting education.
4. A trans-sectoral approach is the immediate need of the hour, which will enable mobilisation of human resources through sensitisation of leaders social workers, women and youth.
5. Doctors, Health Educators, Social Workers and other para-medical personnel are to be encouraged in educating the public and also individuals with HIV infection and AIDS.

It is hoped that with this humble beginning, more such Educational Programmes would be organised and conducted and follow-up research would enable us to increase awareness among the public with special reference to women and youth, so as to prevent and control the spread of HIV infection and AIDS.

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Appendices

APPENDIX - I

QUESTIONNAIRE TO ELICIT INFORMATION ON THE
AWARENESS OF ADOLESCENTS (17-19 YEARS) ON HIV/AIDS

GENERAL INFORMATION

1. Name of the respondent :
2. Age :
3. Religion :
4. Address :
5. Residential Area : Rural Urban
6. Type of Family : Nuclear Joint
7. Family Background :

Name	Age	Relation- -ship to respondent	Sex	Educa- -tional Qualifi- -cation	Occupa- -tion	Income	Other source of income
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SPECIAL INFORMATION

I **AWARENESS ON CONCEPT OF HIV/AIDS:**

1. Have you heard of AIDS ? Yes No
2. What do you understand by the term AIDS ?

3. Do you know the expansion for AIDS ?

Yes No

If yes, write the expansion _____

4. What is meant by HIV ?

5. Do you know the expansion for HIV ?

Yes No

If yes, write the expansion _____

6. Does HIV infection and AIDS mean one and the same ?

Yes No

II AWARENESS ON KNOWLEDGE OF HIV/AIDS :

1. AIDS is caused by a

a. Virus b. Bacteria

c. Parasite

2. AIDS is

a. Communicable

b. Non-communicable

3. HIV is a

a. Blood borne organism

b. Water Borne organism

c. Air borne organism

4. Can you tell by looking at a person whether he/she is infected or not ?

Yes No

If yes, how ?

- 1.
- 2.
- 3.
- 4.
- 5.

5. A person with HIV infection (before getting AIDS)
- a. Looks perfectly healthy
 - b. Shows symptoms of the infection
 - c. Dont know
6. When are the symptoms of AIDS manifested in person infected with HIV ?
- When the T4 cell count falls
- a. Below 200
 - b. Below 300
 - c. Below 350
 - d. Don't know
7. How long goes it take for a person to develop symptoms once infected with HIV ?
- a. 6 months
 - b. Within one year
 - c. Within two years
 - d. 2 - 10 years
 - e. More than 10 years
 - f. Don't know
8. One can get infected with HIV through
- a. Unchecked blood transfusion
 - b. Sharing food or water with infected person
 - c. Unprotected sexual intercourse
 - d. By sharing needles
 - e. From an infected mother to her child
 - f. By using common toilets

- g. By sharing clothes with infected persons
- h. By kissing, petting, fondling
- i. By mosquito and other insect bites
- j. By having homosexual relationship
- k. By having multiple sex partners
- l. Other (specify)
- m. All of the above
- n. None of the above

9. Can a women with HIV/AIDS pass the virus on to her baby ?

Yes No

If yes, when does it happen ?

- a. During pregnancy
- b. During delivery
- c. During breastfeeding

10. One can know whether a person is infected or not by

- a. Physical symptoms
- b. Blood test
- c. Urine test
- d. X Ray, ECG
- e. Others (Specify)
- f. Don't know

11. When a person has AIDS

- a. the person dies soon
- b. the person's body loses its immunity
- c. there is no change in the person
- d. don't know

12. Are people infected with HIV immoral people ?

Yes No

Give reasons:

- 1.
- 2.
- 3.
- 4.
- 5.

13. Do you think homosexuality is wrong ?

Yes No

Give reasons:

- 1.
- 2.
- 3.
- 4.
- 5.

14. What are the sources of your information on HIV/AIDS ?

- a. Friends
- b. Family members
- c. Teachers
- d. Books
- e. Newspapers, magazines
- f. Television
- g. Radio
- h. Others (specify)

III AWARENESS ON TREATMENT FOR HIV/AIDS :

1. Is there any treatment available for HIV infection ?

Yes No

If yes, can you name them ?

- 1.
- 2.
- 3.
- 4.
- 5.

2. Are you aware of any drugs used in the treatment of HIV infection ?

Yes No

If yes, can you name them ?

- 1.
- 2.
- 3.

3. Are you aware of any test for HIV/AIDS ?

Yes No

If yes, can you name them ?

1.

2.

3.

4. Do you know what the test involves ?

Yes No

Does it involve

a. testing for the presence of HIV

b. testing for the presence of HIV antibodies

c. testing for AIDS

d. don't know

5. What is meant by "HIV Positive" ?

a. the person has the virus in his/her body

b. the person has AIDS

c. the person has died of AIDS

d. don't know

6. Should testing for HIV infection be made compulsory?

Yes No

Give reasons :

1.

2.

3.

4.

5.

7. Is HIV infection preventable ?

Yes No

8. Is AIDS curable ?

Yes No

9. Can people protect themselves from getting HIV infection ?

Yes No

If so, by

a. avoiding sex with infected persons

b. carrying out a test for HIV before
blood transfusion

c. not donating blood

d. being faithful to a single partner

e. avoiding homosexual relationships

f. by practising safe sex

g. by seeking medical treatment under
safe and hygienic conditions

h. Others (specify)

10. Should young people be taught how to protect themselves from HIV infection ?

Yes No

How ? 1.

2.

3.

4.

5.

IV AWARENESS ON DEMOGRAPHY OF HIV/AIDS :

1. AIDS was first identified in the world

a. Before 1970

b. 1970 - 1975

c. 1975 - 1980

- d. 1980 - 1985
 - e. 1985 - 1990
 - f. don't know
2. AIDS was first identified in India
- a. 1975 - 1980
 - b. 1980 - 1985
 - c. 1985 - 1990
 - d. 1990 - 1994
 - e. don't know
3. AIDS was first identified in the world in the continent of
- a. North America
 - b. South America
 - c. Europe
 - d. Australia
 - e. Africa
 - f. Asia
 - g. don't know
4. AIDS was first identified in India in the State of
- a. Maharashtra
 - b. Madhya pradesh
 - c. Manipur
 - d. Tamil Nadu
 - e. don't know
5. Do you know the numbers of HIV infected persons in India ?
- a. less than 1,000
 - b. 1,000 - 5,000

- c. 5,000 - 10,000
- d. 10,000 - 15,000
- e. More than 15,000
- f. Don't know

6. Do you know the number of persons who have died of AIDS in India ?

- a. less than 500
- b. 500 - 1,000
- c. 1,000 - 1,500
- d. 1,500 - 2,000
- e. 2,000 - 3,000
- f. More than 3,000
- g. Don't know

7. Which Indian state has the most number of HIV positive cases ?

- a. Tamil Nadu
- b. Manipur
- c. Maharashtra
- d. Madhya pradesh
- e. Mizoram
- f. Don't know

8. Which are the three epicentres at HIV epidemic in India ?

- a. Calcutta, Imphal, Bombay
- b. Bombay, Madras, Imphal
- c. Delhi, Bombay, Calcutta
- d. Madras, Bombay, Delhi
- e. Don't know

V **AWARENESS ABOUT PROGRAMMES ON HIV/AIDS:**

1. Are you aware of any organisation or people doing research in HIV/AIDS or working for HIV infected people ?

Yes No

If yes, tick your answer

- a. Government organisation
- b. Non-government organisation
- c. Voluntary agencies
- d. Social workers
- e. Clubs (eg. Leo, Rotary)
- f. Any other (specify)
- g. Don't know

2. Have any programmes been conducted in your local community to combat the problem of HIV/AIDS ?

Yes No

If yes, what was the duration of the programme ?

How many such programme were conducted ?

3. Have you attended or participated in any programme on HIV/AIDS in your area ?

Yes No

4. Would you be interested in conducting, organising or attending an education programme on HIV/AIDS in your local area ?

Yes No

If yes, then your programme would include

- a. Lectures and seminars
- b. Film shows
- c. Slide shows

- d. Puppet shows
- e. Games
- f. Dramas, plays and skits
- g. Exhibitions
- h. Any other (specify)

VI PERSONAL VIEWS ON ISSUES RELATED TO HIV/AIDS:

1. The problem of HIV/AIDS among students in India is

a. Very serious

b. Not serious

- Give reasons :
- 1.
 - 2.
 - 3.
 - 4.
 - 5.

2. Is awareness about AIDS important ?

Yes No

- Give reasons:
- 1.
 - 2.
 - 3.
 - 4.
 - 5.

3. Is HIV/AIDS education important for young people?

Yes No

Give reasons for your answer:

- 1.
- 2.
- 3.
- 4.
- 5.

4. By what means should people be educated ?

1.

2.

3.

4.

5.

5. Does HIV infection and AIDS occur only among certain selected people in our community ?

Yes

No

Give reasons:

1.

2.

3.

4.

5.

6. The people most likely to get infected with HIV are

1.

2.

3.

4.

5.

7. The people least likely to get infected with HIV are

1.

2.

3.

4.

5.

8. Do you talk among your friends about HIV/AIDS ?

Yes No

If yes, how often?

- a. always
- b. Once a week
- c. Once a fortnight
- d. Once a month
- e. Any other frequency

Mention the topic of your talk

- 1.
- 2.
- 3.
- 4.
- 5.

9. How would you react if you come across a person infected with HIV ? Will you show

- a. pity and sympathy
- b. disgust
- c. anger
- d. hatred
- e. repulsion
- f. compassion
- g. ignore the person
- h. no feelings
- i. Others (specify)
- j. normal feelings

10. If you were to suddenly realise that the person you are talking to is HIV infected would you
- a. abruptly end the conversation
 - b. politely get away from the situation
 - c. continue talking
 - d. any other reaction
11. If a person is found to be infected with HIV in your college it is best to
- a. announce it to all students
 - b. isolate the person in college
 - c. ask the person to leave college
 - d. let the person continue as before
 - e. Any other reaction
12. The best way to save the rest of the community from getting HIV infection would be to
- a. isolate the infected person
 - b. take proper precautions oneself
 - c. treat all infected persons at government expenses
 - d. hospitalize them permanently
 - e. imprison them
 - f. institutionalise them
 - g. Any other reaction
13. Have you made any changes in your own way of life as a result of what you have learnt and heard about AIDS ?
- Yes No
- If yes, what are they ?
- 1.
 - 2.
 - 3.

14. Do you think you need more information on HIV/AIDS ?

Yes

No

If yes, on what aspect ?

1.

2.

3.

4.

5.

15. Do you think the government should take steps to prevent the spread of HIV/AIDS ?

Yes

No

If so, what steps would you suggest

1.

2.

3.

4.

5.

16. What are your views on the Educational Programme you participated in

1.

2.

3.

4.

5.

17. Would you share the information that you have gained from the programme with others ?

Yes No

How do you propose to disseminate the information ?

18. What in your opinion was the outcome of the Educational Programme ?

1.

2.

3.

4.

5.

A P P E N D I X - II

WILD - FIRE

Wild fire is a game played to make participants realise the seriousness of the problem of AIDS facing us today. The participants are made to sit in a circle and a casual dialogue is begun by the facilitator who is assumed to be an individual infected with HIV. As the game progresses more participants are assumed to acquire the infection, who then proceed to form an inner circle, with the outer circle representing the society comprising individuals who are not infected. An animated conversation between those assumed 'infected' and the society follows leading to the clarifications of a lot of values, beliefs attitudes and behaviours. The duration of the game is one-and-a-half hours after which all the participants shake hands, forget about the assumed 'infections', but remember the values acquired and return to their usual comaraderie.

A P P E N D I X - III

INTRODUCTORY LECTURE

A brief account of the Introductory Lecture given by the investigator is presented below. The lecture was supported by visual aids, example charts, slides, transparencies, hand outs.

Acquired Immuno Deficiency Syndrome (AIDS) needs no introduction. Much has been and is being said and written about the disease. AIDS has been in public attention for so long now that it needs no introduction. It has been accorded more coverage and attention than any other disease in recent times. Yet most of us are not only quite unaware of what it exactly is but are really misinformed about the disease and its dangers. It is very important to educate ourselves about the disease because the cure of this disease as of now does not lie in any medicine but in preventing ourselves from getting it. The need of the hour is "to curb the further spread of this epidemic".

AIDS, since its occurrence, traced first in 1981, has rapidly spread to different parts of the world with alarming speed, so much so that now it has turned into a major threat to the health, development and stability of nations around the world. The AIDS pandemic will have a

particularly devastating effect on society, because it strikes effectively at young and middle aged adults, people who are in the prime of life.

AIDS is called a syndrome, because it consists of various symptoms, infections and conditions. AIDS is a condition caused by the proliferation of a virus called Human Immuno Deficiency Virus (HIV), within the human body. It can remain in the body for as long as 10 years before any damage shows up by manifest symptoms. HIV and AIDS do not mean the same. AIDS is the end stage of HIV infection.

HIV is retro virus, a group of virus that is still largely unknown. It is a slow virus and has a deadly effect by first weakening and then destroying the body's immune system. HIV penetrates into the helper T-cells of the WBC, the master cell population in the body's immune defence system. It attacks T cells and paralyses the immune defence system leaving the body vulnerable for all types of infections. All body fluids contain T-helper cells, and once infected all body fluids contain the virus. The concentration is high in blood, semen and vaginal secretions. A person with AIDS may succumb to infections as minor as that of common cold and also to opportunistic infections which are rarely seen in healthy persons.

HIV infection is preventable but incurable. Once infected the person remains infected for life. There is no cure for the infection nor has any vaccine been discovered. Researches to discover new drugs for treatment of HIV infected persons are underway. The doctrine "Prevention is better than cure" is very apt here as only adoption of preventive measures is likely stop the spread of the infection.

A person may become infected and not know it for a very long time (for as long as 10 years). During this time the person looks and feels healthy, but can infect others. There is no way of telling if a person has HIV just by looking at him or her.

Billions of dollars and thousands of man-days of research later, all that the scientific world has to show for its efforts is the western drug AZT (Zidovudine) which can only extend the life time of an infected person by a few months or years. Even this is beyond the reach of those in developing countries due to its exorbitant cost.

Mode of transmission

HIV is known to transmit from one person to another in three ways:

1. Through sexual intercourse; by exchange of semen or vaginal fluid from a HIV infected person to his or her non-infected partner

2. Through HIV infected blood; through untested transfusions of HIV-infected blood or through use of unsterilised needles and syringes
3. From infected mother to baby; during pregnancy or shortly after.

The virus is not transmitted through :

- casual contact with an infected person, like shaking hands, hugging, sharing food from the same plate, sharing clothes
- from mosquitoes, moths or bedbugs
- sharing toilets
- from doorknobs or rails
- blood donations, provided the equipment used are sterile
- from swimming pools
- from tears, saliva
- coughing or sneezing.

STATISTICS

WHO, in 1992, estimated that there are 8 to 10 million HIV infected persons in the world, of which 3 million are women and 1 million are children. The latest statistics as given by WHO, in 1993 indicate that the global total has swelled to more than 13 million of which 60 per cent are men and 40 per cent women.

In India, by 1993 approximately 11,500 people had tested positive with Maharashtra reporting the maximum number at 5,000 persons, followed by Tamil Nadu with 2,300 and Manipur with 1,700 persons infected. It is estimated that approximately 1 million persons in India are infected.

TESTS

Serological tests for testing the antibody to HIV virus and not the virus itself are of 2 types - screening and confirmatory tests. All sero-positive on screening tests are to be checked by a confirmatory test before a sample is declared as positive. The most widely used screening test is ELISA - Enzyme Linked Immuno Sorbent Assay. The confirmatory test commonly employed is the Western Blot Test.

CONCLUSION

Most of us are yet to see a HIV-infected or an individual with AIDS in our normal lives. AIDS is presently underground and it is only a matter of a few months or years before each of us are touched by the epidemic in one way or the other.

The first response of the Indian society to AIDS was one of denial - refusing to acknowledge the presence of AIDS in the community. This was followed by blaming certain segments of society for spreading the infection. This is a prejudiced view as HIV/AIDS is truly indiscriminate, recognizing no boundaries of race, sex, class or age.

The rapidity of spread of HIV in India is cause for serious concern and immediate reaction. Projections for India by WHO point to the highest number of HIV infections in the world by 2000 A.D. It is estimated that by the end of this century 40 per cent of the total HIV infections will be in the Indian sub-continent.

An AIDS worker has rightly said "So far education is the best medicine we have. Spread it around".

APPENDIX - IV

VIDEO SHOW

Unmasking AIDS

This is an Australian Production where young college students are introduced to the topic - HIV and AIDS. They learn about the important concepts through the medium of puppets and drama. It is presented in the form of a play and deals with unmasking AIDS, dealing with the truth and confronting it head-on and not hiding behind false masks.

APPENDIX - V

THE AGREE-DISAGREE GAME

Objective of the game

To explore values and attitudes related to AIDS.

Needed materials/arrangements

Large room, five large pieces of white chart paper with one of the following written on it :

1. Strongly Agree
2. Agree
3. Strongly Disagree
4. Disagree
5. Not sure / confused

Method

- a. The four pieces are stuck on the four corners of the room and the 'confused' in the centre
- b. The participants are asked to stand together in the middle of the room
- c. Statements will be read one by one. After one statement is read, the participants should immediately go to the piece of chart paper which best describes their response to it.

- d. The importance of responding to first reaction and acting accordingly was emphasised.

Some statements

1. Compulsory testing is the only way to control the spread of HIV
2. Those infected with HIV have only themselves to blame
3. If unmarried persons came to know that they are HIV positive, they should not get married
4. HIV infection and AIDS mean one and the same
5. Commercial sex workers, drug users and homosexuals are responsible for the spread of AIDS
6. Injecting drug users should be provided clean needles on request
7. People who have HIV/AIDS should be put in isolation
8. There is nothing abnormal about having sexual relations with persons of one's own sex.
9. Safer sex should be taught to all young people in universities, colleges and schools
10. People with HIV/AIDS must be punished if they do not inform others that they are infected

11. Prostitution should be banned to prevent the spread of HIV/AIDS

12. People with HIV/AIDS should not have children

e. When they have responded to each statement as directed they should find another person, standing at the SAME piece of paper and each should take 1-2 minutes to explain why she is standing there.

NOTE: They should not argue/discuss, but listen to the other's views, even if different from their own.

f. At the end of all statements, the following issues/questions can be taken up for discussion :

- How did it feel to think about these statements?
- What kind of things did you think about when you were choosing a side?
- How much does peer pressure affect your values and their expressions?
- Was it easy to change your stand? If you did so, what made you do that?
- How did it feel setting forth your views before other participants especially when you were in the minority?

- Before this exercise, how often did you think about the values behind these statements?
- How did it feel to listen without being able to argue/discuss?

Likely outcome of the exercise

Group members will begin to see their own values related to AIDS, reflect over prevalent societal values and gain an opportunity to learn the appropriate ones from one's own peers. The exchange of ideas will be useful in bringing out the range of reactions and possibilities for unlearning and learning, and sensitise the group to the complexities of preventive work.

Duration of exercise with discussion

One to one and a half hours.

APPENDIX - VI

QUIZ QUESTIONS

ROUND I

1. How is HIV virus called ?

HIV is not a single virus but a family of many viruses called retro viruses.

2. How does it weaken the Immune system ?

HIV attacks the white blood cells called CD4 cells or T-4 cells which play a vital role in controlling the immune system..

3. What does HIV positive mean ?

It means that a person has the HIV virus. This person does not yet have AIDS.

4. Is AIDS also an STD ?

Yet it is, but unlike most other STD's it is not curable.

5. How is HIV spread from an infected mother to an unborn child ?

HIV may be communicated during pregnancy or childbirth if the mother is HIV positive. There is a chance of 30% that it will be passed on to the unborn child.

6. How is it spread by blood transfusion ?

The chances of passing on the HIV when the blood used for transfusion is infected is close to 90%

7. How is HIV infection spread ?

The virus is spread from a infected person to someone else, only through

- a) Sexual intercourse
- b) Contaminated blood
- c) Passage from an infected mother to her baby

Round II - Abbreviations

- 1. GPA - WHO's Global Programme on AIDS
- 2. What is UTA programme - Universities Talk AIDS
- 3. What is STD - Sexually Transmitted Disease
- 4. What is APAC Project - AIDS Prevention And Control
- 5. What is GBSI - Global Blood Safety Initiative
- 6. What is ARC - AIDS Related Complex
- 7. HTLV-III - Human T-cell Rymphotrophic Virus Type III
- 8. ELISA - Enzyme Linked Immune Sorbent Assay
- 9. IF Assay - Immuno Fluroscent Assay
- 10. RIPA - Radio Immuno Precipitation Assay

Round III - Risk Factors (High, Low, No risk)

High risk, Low risk, No risk (with reasons)

- 1. Having sex under the influence of intoxicants
High risk (because one does not know of the right precaution like wearing a condom).
- 2. Buying blood from a commercial blood donor
High risk (if blood is not screened).

3. Liberated girls are on oral pills, so they don't insist on condoms
High risk (oral pills help in contraception only, not HIV)
4. Being bitten by a mosquito that has bitten someone with HIV
No risk.
5. Having anal sex with a condom
Low risk (because anal sex is very risky and condom may prevent it).
6. Using vaseline or hair oil for lubricating condom
High risk (because they weaker a condom and hence may pass on virus)
7. Having sex with a STD infected partner without a condom
High risk (STD's are the fastest way of spreading virus).
8. Macho men never wear rain coat
High risk (because AIDS does not spare anyone).
9. College girls using public toilet during menstruation
No risk
10. Washing and reusing a condom
High risk

11. Sharing needle with a group of injecting drug users
High risk (unsterilised needles are an important factor in the transmission of AIDS virus).
12. Sharing marijuana, brown sugar with a group of drug addicts
Low risk (if taken orally).
13. HIV infected man wanting to have a child
High risk (he may pass on infection to wife as well as their child).
14. Deep kissing
No risk (provided the HIV infected person does not have any wounds in mouth).

Round IV - Beliefs (Fact/Fallacy)

1. The female determines the sex of a baby
Fallacy
2. Masturbation is normal and healthy
Fact
3. Circumcision increases the sexual power of the man
Fallacy
4. A girl can get pregnant if she has sex during her period
Fact

5. Birth control pills cause cancer
Fallacy
6. Condoms help prevent the spread of STD's
Fact
7. STD's can be cured if the infected boy has sex with a virgin
Fallacy
8. A girl can get pregnant if a boy ejaculates near a girls vagina
Fact
9. Once you have had an STD and have been cured, you can't get it again
Fallacy
10. Abstinence is the only method of birth control that is 100% effective
Fact
11. It is unhealthy for a girl to swim during her period
Fallacy
12. Before the girl has had her first period she can become pregnant
Fact
13. Girls and boys can have sexually transmitted disease without having any symptoms
Fact

Round V - Buzzer Round

1. What are the sub types of HIV virus ?
HIV 1 and HIV 2
2. When did the first indication of the AIDS begin ?
In 1981
3. Where was the first indication of AIDS found ?
New York and California
4. Which day is observed as the World AIDS day ?
December 1
5. Name any sportsperson infected with HIV ?
"Magic" Johnson, Arthur Ashe.
6. Name of type of Genetic material present in HIV
RNA
7. Which vaccine should not be administered to a child showing signs of HIV infection ?
BCG vaccine
8. Is there a cure for HIV ?
No
9. Can you get HIV if someone with the infection sneezes on you ?
No

10. Are patients suffering from tuberculosis susceptible to AIDS ?

Yes

11. Can a dialysis machine get infected with HIV ?

Yes

12. AIDS is an epidemic ?

Yes

13. Can you get HIV infection from food or drink ?

No

14. Can mosquitoes spread HIV/AIDS ?

No

15. Does birth control pills protect women against STD ?

No

16. Can you identify an HIV positive person by looking at his/her face ?

No

17. Is there risk in tatooing and ear piercing ?

Yes

18. When is UTA observed ?

November 23 to December 1.

19. Who organised UTA ?

NSS (National Service Scheme)

20. What is the incubation period of HIV in adults ?
29 months
21. What is the incubation period of HIV in children ?
12 months
22. We know that it is possible for a HIV infected pregnant mother to transmit it to her child. How long will it take for the child to develop the symptoms ?
Within 5 years
23. Into which cell of the immune system does the HIV enter ?
T - Helper Cells or T4 Cells
24. Can HIV be transmitted through sweat ?
No
25. What is the average period required for AIDS virus to produce the late clinical stage of AIDS ?
About 10 years
26. Which is the primary route of HIV infection in children ?
Prenatal route
27. Can fat people have HIV ?
Yes

28. Is infection with HIV lifelong ?

Yes

29. Is HIV found in tears ?

Yes

30. Is there a condom which females can use ?

Yes

31. Boys are more likely to get STD when they intercourse at the time of partners menstrual period ?

No

32. Can you pass HIV through unbroken skin ?

No

33. Is, HIV passed through oral sex ?

Yes

34. Is HIV passed through anal sex ?

Yes

APPENDIX - VII

VIDEO SHOW

The National AIDS Awareness Test

This video is an American production where an Awareness test is administered by the two comperes who also provide right answers along with explanations by experts. The video includes various interviews with people with HIV infection and people with AIDS.

APPENDIX - VIII

ROLE PLAY

Role playing involves presenting small spontaneous play which describe possible real life situations. In role playing we take on some one else's character. This is less intimidating than having to express our own ideas and emotions. A situation or problem is given to the group and they take on the roles of the people involved. The action evolves as the play goes along.

Scenarios

1. Rebecca's parents are out of town and she has the house to herself. A few friends come over and after it is quite late, they begin to leave. Ashish does not seem keen to leave and asks her if she would mind if he left a little later since his parents had locked the house and gone out and were returning only after 11.30 p.m. He has given Rebecca several hints throughout the evening that he likes her more than the other girls.

2. Akshay is a young college student who went for a blood test to a private laboratory and was informed as part of his results that he had tested HIV. He is also angry because he feels he contracted it from a sex worker and wants to finish the female species by passing the virus to them. Akshay is your classmate and he is sharing plans with you.

3. Arpitha has been going steady with Ramesh for the last one and a half years. They have had sex with each other many times. Of late, Arpitha has reason to suspect that Ramesh is not being faithful to her and is having sexual relationships with several other girls. She is very worried as she has heard about HIV/AIDS and consults her friend Rohini, on what she must do.

4. Tara stays in a women's hostel. The women have some privacy in their room's and there are rumours that drugs are taken on the premises. Tara receives news that her boy friend is marrying another girl obeying his mother's wishes and is very distressed and upset. She walks into Roshani's room and finds her getting some apparatus ready. Roshani offers her a new drug that relieves tension and pain but is reportedly not addictive.

5. Radha is a first year student, in a co-educational college. She had been educated in a girls school throughout. She feels at a loss in college and wants to make friends with boys. She does not know how to achieve this, so she gives into one the requests of her boy friends to be 'popular'. One day a boy asks her to have sex with him.

6. Aarathi has few friends and has difficulty getting along with her parents. She is an only child and spends a lot of her time alone. Ajeeth lives in the neighbourhood

and has grown close to her. She likes him too. Ajeeth invites her to a friend's place when her friend is out of town. Ajeeth also assures her that he loves her too much to get her into any kind of trouble.

APPENDIX - IX

QUESTIONS FROM THE QUESTION-BOX

The following were the questions obtained from the Question Box, which were discussed in class.

1. What is meant by homosexuality ?
2. Is homosexuality abnormal ?
3. What is sodomy ?
4. Is there a female condom ?
5. Are condoms the only way of preventing the sexual transmission of the virus ?
6. Is masturbation abnormal ?
7. Who are 'gays' ?

APPENDIX - X

STATISTICAL ANALYSIS

The following statistical analysis were used in interpreting the data collected.

1. The paired 't' test :

The paired 't' test was used in the grantification and analysis of data regarding the pupils awareness on concept, knowledge and treatment related to HIV/AIDS. The paired 't' test is used for judging the significance of the mean of the difference between the two related samples (Kothari, 1993). The relevant test statistic, 't' was calculated from the sample data and then compared with its probable value based on t-distribution (from the table) for a particular degree of freedom.

The 't' statistic is calculated using the following formula

$$t_{n-1} = \frac{\bar{d}}{S.E.(\bar{d})}$$

where t = calculated 't' value

n - 1 = degrees of freedom

n = sample size

\bar{d} = mean of the differences calculated by the formula

$$\bar{d} = \frac{d}{n}$$

where d = sum of the differences

n = sample size

S.E. (\bar{d}) = Standard error of the mean difference calculated by the formula

$$S.D.(\bar{d}) = \sqrt{\frac{S.S.(\bar{d})}{n(n-1)}}$$

where n = sample size

$(n-1)$ = degrees of freedom

S.S. (\bar{d}) = sum of squares of the mean difference calculated by the formula

$$S.S.(\bar{d}) = d^2 - \frac{(d)^2}{n}$$

where d^2 = sum of the squares of the individual differences

d = sum of the differences

n = sample size

2. McNemer test :

The McNemer's test was used in the analysis of the data collected on the respondents awareness on the demography on HIV/AIDS. The McNemer's test is a non-parametric test used when the data are nominal and relate to two related samples. This test is specifically useful with before-after measurements of the same subjects (Kothari, 1993). Through this test the significance of any observed change in views of the same subjects before and after the treatment is judged thus :

Before treatment	After treatment	
	Do not favour	favour
Favour	A	B
Do not favour	C	D

(A+D) indicates change in people's responses whereas (B+C) shows no change in responses. The test statistic under McNemer test (which is a modification of the Chi-square test) is worked out as under:

$$= \frac{(\sqrt{A+D}-1)^2}{A+D} \text{ with degree of freedom} = 1$$

3. Percentage analysis :

Percentages were used in the analysis and interpretation of data regarding the pupils awareness on programmes on HIV/AIDS, pupils personal opinion on issues related to HIV/AIDS, and their knowledge on source of information, modes of transmission and preference of media for education.