CHAPTER I

INTRODUCTION

1.0 INTRODUCTION

Good health confers on a person or group's freedom from illness - and the ability to realize one's potential. It is the functional efficiency of humans and a condition of a person's mind, body and spirit that is to be free from pain, illness and injury. Therefore, Health is best understood as the indispensable basis for defining a person's sense of well being. Health is defined in WHO Constitution as "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity". Developed countries give more priority to their health care systems through much higher allocation and better utilization of resources in order to improve quality of health. But in less developed and developing countries, yet struggling to attempt towards health care. Due to hindrance in the allocation of resources for health sector, population explosion, insufficient use of the resources and lack of public consciousness about health have made the matter worse. The health of populations is a distinct key issue in public policy discourse in every mature society often determining the deployment of huge society. They include its cultural understanding of ill health and well-being, extent of socio-economic disparities, reach of health services and quality and costs of care. Health care covers not merely medical care but also all aspects pro preventive care too. International health statistics reveal that current trends give priority for health issues at global level.

Endemic diseases arising from infection or lack of nutrition continue to account for almost two thirds of mortality and morbidity in India. In recent years, all the other diseases like malaria, tuberculosis, malnutrition, etc. have been overshadowed by a pandemic of AIDS claiming more lives. It poses a problem on the health systems and health care practices by threatening good governance and human security. Lack of medically insured population and high out-of pocket expenditure (71.13%) has made it difficult to cope up **(National Health Accounts India, 2005)**. India is facing challenges against the deadly diseases like HIV/AIDS which consume life of the people who are affected. Some religious people claim it is the result of 'immoral' acts making its confusing for others to understand. The social taboo, ignorance about AIDS

and stigma that prevails around the disease makes it difficult to provide awareness, risk behavior and disease prevalence. Thus the efforts made are in vain and are in nascent condition. HIV has caused devastation by destroying families and communities and taking away hope for future. The epidemic of AIDS has reduced the demand for education as children are withdrawn from schools and colleges in response to the rising health and household expenditure. Under the impact of the pandemic, teacher absenteeism, less time for teaching and disruption of school and college schedules affect awareness. Thus many people still do not have adequate knowledge about AIDS and HIV. Many organizations have taken up the task to provide services and help to the people who are infected and support to the families in which the disease has claimed lives. Research, health sector and education are not leaving any stone unturned for the matter. But still it needs a lot of funds, administration, monitoring and manpower to help successful implementation of strategies to fight with the disease. Though there is an exponential increase in funding and of activities aimed at prevention and support, the challenges that the disease brings are expected to outpace efforts of the Government to prevent its further spread.

1.1 STATEMENT OF THE PROBLEM

Specifically, the problem of the study can be stated as:-

Development of a Programme on AIDS Awareness for Student Teachers

1.2 OPERATIONALISATION OF THE TERMS

For the present study,

- **Development of AIDS Awareness Programme** refers to the preparation of the AIDS programme for the student teachers. The programme was developed based on the concept and AIDS preventive aspects.
- **Awareness** – For the present study, awareness means to assist individuals and groups in society to acquire a greater sensitivity and awareness of the AIDS in general and of its problems.
- **Effectiveness of AIDS Awareness Programme:** For the present study, effectiveness of the AIDS Awareness Programme means the enhancement in the awareness of the student teachers regarding AIDS and AIDS Education.

1.3 OBJECTIVES OF THE STUDY

The following objectives were framed for the study:

1) To develop AIDS Awareness Programme for student teachers.
2) To implement AIDS Awareness Programme on the student teachers.
3) To study effectiveness of AIDS Awareness Programme for student teachers.
4) To study the attitude of student teachers towards integration of AIDS Education on the school education.

1.4 HYPOTHESES

In the present study the researcher has assumed null hypothesis.

The following hypotheses were formulated for the present study:

H_o1: There will be no significant difference between the mean scores of the student teachers of the pre-test and post-test.

H_o2: There will be no significant difference between the mean scores of student teachers on attitude scale of pre-test and post-test of the student teachers.

1.5 DELIMITATIONS OF THE STUDY

The present problem in the study has been delimited to student teachers of English medium B. Ed. College affiliated to Sardar Patel University. The study is also delimited to few aspects of AIDS like concept of HIV and AIDS, signs and symptoms of the disease, mode of transmission, prevention and awareness and teacher education.

1.6 RATIONALE OF THE STUDY

India has an estimated 2.4 million HIV positive person in 2009 and the free ART program by National AIDS Control Program (NACP) has reported a decline in people dying due to AIDS related causes (Annual Report to the People on Health, 2011). AIDS has had a serious impact on the education sector worldwide. It is essential that teachers stand together to fight the disease, to protect our colleagues, our children and our future. NACO (National AIDS Control Organisation) representatives finally welcomed cooperation with the federations and like United Nations and World Health Organization, etc.

There is a culture of silence surrounding the disease due to cultural and moral values/ beliefs of the society. There is no set of prescribed form as to how AIDS education should be taken but when considering an education campaign the following points are prevalent as age, target group, literacy, language, sexual awareness, etc. The awareness programme helps to reduce incidence as people in low and middle income group do not have drug of AIDS which could save their life. Despite of an exponential increase in funding and of activities aimed at prevention and support of AIDS, the challenges that the pandemic brings are expected to outpace efforts to prevent its further spread.

Teachers have a key role to play in the global campaign to reverse the spread of HIV and AIDS. With no cure in sight, education, the 'social vaccine', is crucial to prevention and to combating AIDS. Teachers emerge from this study as researchers themselves, actively seeking to understand the complex manner in which AIDS is linked to issues such as poverty, conflict in society, corruption, human rights and certain cultural habits and beliefs.

Adolescents are the fastest growing representatives of HIV^{+ve} individuals in many countries. Also, high school teachers should be knowledgeable as well as comfortable in discussing AIDS related topics. Thus there is a need of teacher training and comprehensive AIDS education (Dawson L. J., et al., 2001). They can address vulnerability issues through co-curricular activities in the colleges and outreach activities in neighbouring communities. The youth in rural areas of India are unaware about the AIDS and have many misconceptions (Yadav, S. B. et al., 2011). Education is the only way to make them aware about the deadly disease. Student support structures of the colleges, such as the AIDS can coordinating teams and health and life skills departments, use various 'scenarios' to assist student teachers to develop specific attitudes and skills to address vulnerability issues.

The purpose is to sensitize them to the challenges they are likely to face, such as the mentee-mentor relationships, student teacher and community relationship, and to equip them with the appropriate skills to deal with these challenges. Also, to prevent the misconceptions' to bring awareness with the help of planned teaching programme to remove confusion about AIDS. This scenario addresses knowledge, attitudes and skills that participants need to adopt and maintain in order to promote healthy

behaviour. Also, teachers are finding hard to communicate AIDS issue to the learners due to the sensitive nature of the topic and secrecy surrounding the cause of the disease AIDS. Hence, teachers should be prepared to teach about AIDS (Onyango, M., 2009).

1.7 IDENTIFICATION OF VARIABLES

Variables are the characteristics or conditions that the researcher manipulates, controls or observes.

The Dependent variables are the characteristics or conditions that appear, disappear or change as the researcher introduces, removes or changes independent variables.

In the present study the dependent variable taken into consideration is:

- Content knowledge about AIDS Awareness.
- Attitude of the student teachers towards AIDS Awareness Programme.

Independent variables are the characteristics or conditions that the researcher manipulates and observes in his/her attempts to ascertain their relationship to observe phenomena.

In the present study the Independent variables identified are:

- AIDS Awareness Programme

1.8 SCHEME OF CHAPTERIZATION

The dissertation consists of five chapters. The scheme of chapterization is as follows:

Chapter-1: Introduction

The chapter begins with an introductory note and statement of the problem with the operationalization of key terms. It also lists the objectives of the study undertaken and thereby hypotheses were framed. The rationale of the study as perceived by the researcher has been described.

Chapter-2: Conceptual Framework and Review of related literature

This chapter consists of two parts: conceptual framework and review of related literature. The first part – conceptual framework focuses on the theoretical background of the study undertaken by the researcher. It includes history of AIDS, status of AIDS globally and in India, concept of HIV and AIDS, its signs and symptoms, prevention and treatment of AIDS, various organizations that work for AIDS education and awareness and teacher education. The second part - review of related literature focuses on different studies reviewed for the research. It includes researches, dissertations, thesis, programmes, and activities undertaken by various organizations for AIDS awareness and concept of AIDS.

Chapter-3: Research Methodology

This chapter focuses on the methodology adopted by the researcher in the present study. It describes the research design selected for the present study in detail, tools and technique used and procedure adopted for data collection and data analysis by the investigator.

Chapter-4: Analysis and Interpretation

This chapter of dissertation analyses the data collected through the experiment and interpretation based on the findings have been discussed on the basis of the calculated scores of pre test and post test.

Chapter-5: Findings, Implication and Conclusion

The last chapter deals with the findings and implications and conclusion drawn from the study. Some suggestions for future studies that can be undertaken in the light of the present field have been discussed.

1.9 CONCLUSION

This chapter mentions all importance aspects related to the research. The researcher presented information about the research problem, delimitation and operationalization terms, objectives, rationale of study and chapterization.

The next chapter is about theoretical frame work and review of related literature.

CHAPTER II

CONCEPTUAL FRAMEWORK

AND

REVIEW OF RELATED LITERATURE

2.0 INTRODUCTION

This chapter is divided into two parts. First part is the conceptual frame work which gives details of the disease AIDS studied by the researcher. The second part deals with reviews of the related literature. It presents the review of already done researches in the same area.

In this chapter an attempt has been made to review studies which provided some insight to the researcher for the development of an AIDS Awareness Programme and to know the effectiveness of the progamme.

2.1 CONCEPTUAL FRAMEWORK

The conceptual framework consists of the background of the research. It includes history of AIDS, status of AIDS in world and India, concept of HIV and AIDS, mode of transmission, signs and symptoms of the disease, AIDS Education, efforts by several organizations, role of teacher and teacher education.

AIDS has created havoc globally. It has claimed many lives and has taken the world by storm. It has become necessary to eradicate the disease from the world. Thus, it needs meticulous work and co-operation of people as well as government. There are also many myths surrounding the disease due to ignorance. In order to understand the concept and course of the disease, it is necessary to understand the history.

2.2.1 History of AIDS

It is difficult to trace the exact timeline for the discovery of the disease. The deadly disease was identified by M. S. Gattileb in Los Angeles during the spring of 1981 and reported to Centre for Disease Control (CDC), United States of America. The virus was extracted from a group of homosexual men with fatal life threatening pneumonia. Also, during the same year, CDC reported of an unusual skin cancer - Kaposi's

sarcoma claimed lives of many young people (WHO, 1988). The disease was initially named Lymphadenopathy Associated Virus (LAV) that causes AIDS was confirmed to be renamed as Human T-Lymphetropic Virus Type 3 (HTLV-3) by National Cancer Institute in Betherda, USA (Segal J., 1989). HIV is the descendent of Simian Immunodeficiency Virus (SIV) that cause disease in primates. There are several strains of HIV family that cause disease in different species of animals. Finally in 1986, an expert committee of WHO introduced a new term Human Immunodeficiency Virus (HIV) for the virus which was responsible for AIDS. It was confirmed that the virus had been acquired from somewhere into the healthy young men. Therefore, it was called a syndrome and hence Acquired Immuno Deficiency Syndrome (AIDS) was coined.

There are several theories that revolve around the origin and history of AIDS (Lemey, P. et al., 2003). The following theories trace the origin of AIDS:

- **The Hunter Theory**: It is the most common accepted theory that claims the transfer of the virus from the chimpanzee being killed and eaten or their blood getting into cuts or wounds on the hunter. The retroviral transfer from primates to hunters is still occurring today. Some of the infections were acquired through butchering and consumption of monkey and ape meat.
- **The Oral Polio Vaccine (OPV) Theory**: Some other claim that the HIV was transferred through medical interventions. The Oral Polio Vaccine (OPV) called *Chat* given to about million people in Africa had been cultivated in kidney cells of local chimps. And this may have resulted in contamination of the vaccine.
- **The Contaminated needle Theory**: The theory extends that the virus had been transferred from an infected hunter's blood to other people by the healthcare professionals in Africa that used single syringe for patients. Thus, the virus transferred from one person to another and mutating.
- **The Colonialism Theory**: During the late 19^{th} century the African slaves who were transported from Africa to America may have been the cause. The labourers and slaves lived in unhygienic condition without any sanitary facilities. Later the slave became ill and died of some disease. The slave trade had cost America the load of a severe disease.

- **The Conspiracy Theory**: Some believe that it is a 'conspiracy' or 'man–made' It claims that the HIV was manufactured as a part of a biological warfare programme, designed to wipe out large number of homosexual and black people from the United States of America. It claimed that the virus spread through smallpox inoculation programme through vaccine trials.

In 1985 a test became a landmark to detect an antibody developed using the principle of Enzyme Linked Immunosorbent Assay (ELISA) in which a positive test indicates the presence of infection of HIV. According to the 1987definition of the Centre for Disease Control (CDC), United States of America, AIDS is characterized by HIV encephalopathy, HIV wasting syndrome and certain diseases due to immunodeficiency (CDC, 1987).

Today, in developing country many people infected with HIV infection and AIDS hardly avail any medical help than the Western counterparts of the world where early diagnosis can receive medical treatment by the organizations.

2.2.2 Status of AIDS in the World

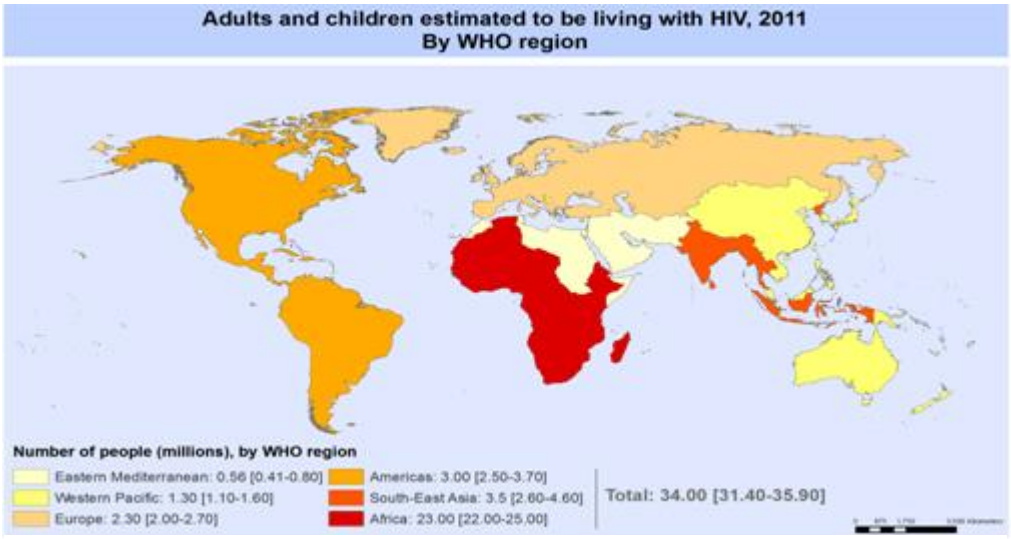
Since its discovery in 1981, in Los Angeles, San Francisco and New York in the US, AIDS has increased to epidemic properties globally. During the 1980s there were more than 38,000 cases of HIV/AIDS that geared up to 8 million in the 1990 and rocketed to 30-36 million in 2007(UNAIDS 2008 Report on Global AIDS Epidemic). It is estimated that 35.3 million people are living with the diseases AIDS.

Global summary of the AIDS epidemic | 2012

Number of people living with HIV	Total	**35.3 million** [32.2 million – 38.8 million]
	Adults	**32.1 million** [29.1 million – 35.3 million]
	Women	**17.7 million** [16.4 million – 19.3 million]
	Children (<15 years)	**3.3 million** [3.0 million – 3.7 million]
People newly infected with HIV in 2012	Total	**2.3 million** [1.9 million – 2.7 million]
	Adults	**2.0 million** [1.7 million – 2.4 million]
	Children (<15 years)	**260 000** [230 000 – 320 000]
AIDS deaths in 2012	Total	**1.6 million** [1.4 million – 1.9 million]
	Adults	**1.4 million** [1.2 million – 1.7 million]
	Children (<15 years)	**210 000** [190 000 – 250 000]

(Source: World Health Organization, 2012)

Worldwide, 2.3 million [1.9 million–2.7 million] people became newly infected with HIV in 2012 in which HIV infections among adults and adolescents decreased by 50% or more since 2001 in 25 countries. About 1.6 million [1.4 million–1.9 million] people died from AIDS-related causes worldwide in 2012 since the epidemic started with 36 million deaths. In 2012, more than 9.7 million people living with HIV had access to antiretroviral therapy. However, 7 million people who are affected with HIV still do not have access to Antiretroviral Therapy. (**UNAIDS, 2012**).



(Source: World Health Organization, 2012)

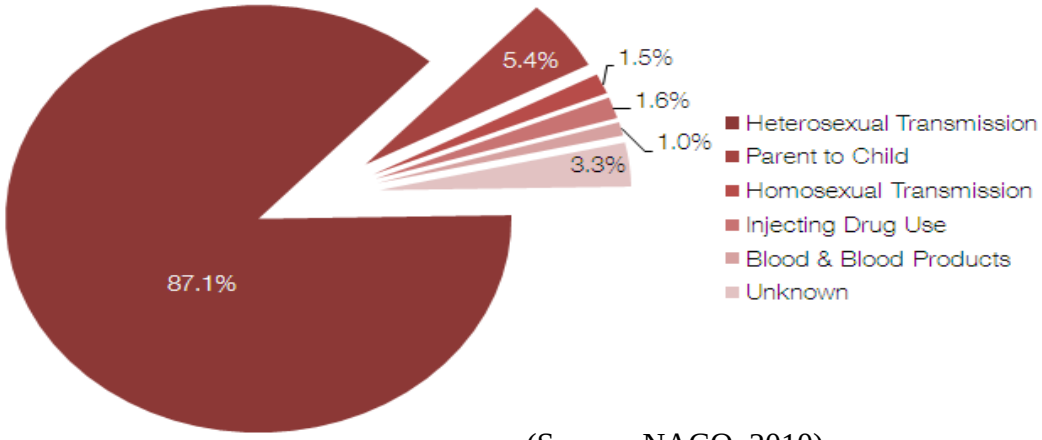
It is also significant from the map of the world by WHO, (2011) that about 34 million adults and children suffer from AIDS. The drastically affected areas is the African-subcontinent with 23 million people living with AIDS whereas the SouthEast Asia holds the second place in highly affected region where 3.5 million people live with AIDS.

Although, the death rate from AIDS has increased in recent years because of improved treatments .It remains among the leading killers of the person in the 15-49 age groups in the world. One of the terrible legacies of the AIDS is a generation of orphans who have lost one or both parents to this illness.

2.2.3 Status of AIDS in India

In 1987, a National AIDS Control Programme was launched to co-ordinate national responses. Later in the year, India's first cases of HIV were diagnosed among sex workers in Chennai, Tamil Nadu. Its activities covered surveillance, blood screening,

and health education. At the beginning of the 1990s, as infection rates continued to rise, responses were strengthened. In1992 the government set up NACO (the National AIDS Control Organization), to oversee the formulation of policies, prevention work and control programmes relating to HIV and AIDS. In the same year, the government launched a Strategic Plan for HIV prevention. HIV had now spread extensively. The AIDS awareness programme is network of national, provincial and district level resource institutions working together to enhance effectiveness of the programme in the country.

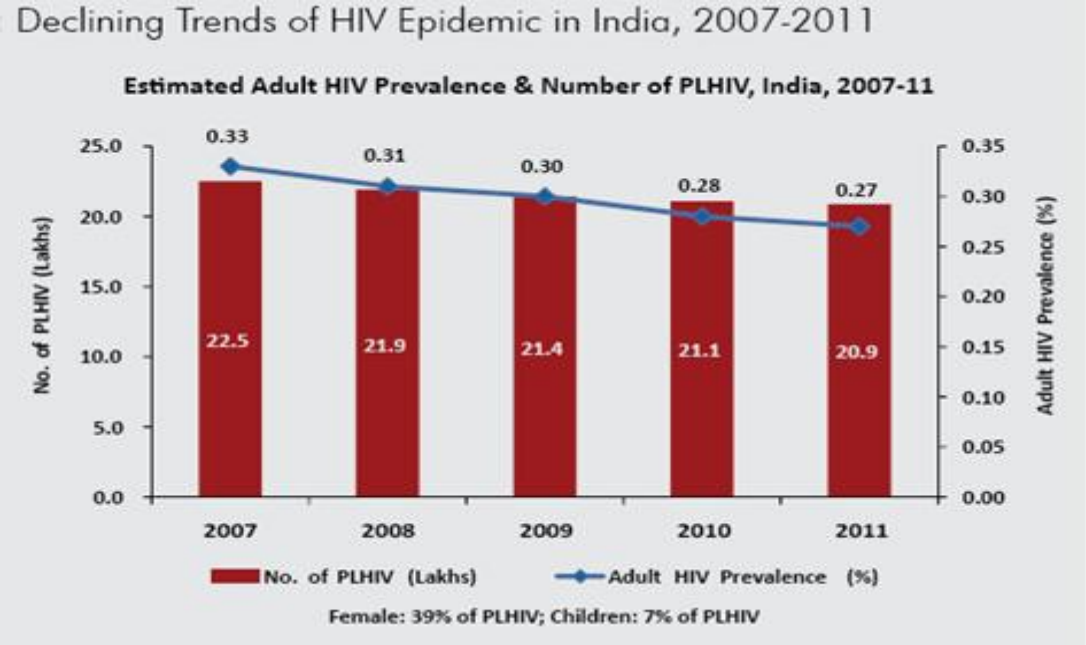


(Source: NACO, 2010)

It is evident from the chart that AIDS is caused mostly through heterosexual transmission in India. 5.4 % is transmitted from parent to child whereas 1.5 %, 1.6 % and 1.0 % is transmitted through homosexual transmission, injecting drug use and via blood & blood products (NACO, 2010).

India contributes about 17.5% of world's total population. In India, many states do not report the death of a person by AIDS. Over 0.10% decline in an estimated 1.93- 3.04 million people in 2009. The first National AIDS Control Programme (NACP) was launched in 1992 for prevention and control of HIV/AIDS in India. This was followed by NACP- Phase II in 1999 and NACP- Phase III in 2007 that shifted the focus from raising HIV/AIDS awareness to behaviour change, from national response to decentralised response and involvement of NGOs and network of People Living with HIV/AIDS. New HIV infections has declined by more than 50% during the last decade due to the interventions under National AIDS Control Programme

(NACP)(Annual Report of People on Health, December 2011) The Red Ribbon Express, (1st Dec, 2009-1st Dec, 2010) covered 152 stations of 22 states throughout the country reaching 80,000 people. The estimated number of People Living with HIV (PLHIV) in India reveals a steady declining trend from 23.2 lakh in 2006 to 20.9 lakh in 2011(NACO, 2013).



(Source: Technical Report India HIV Estimates, NACO & NIMS, 2012)

NACP-Phase III (2007-2012) has a goal of halting the AIDS epidemic. Approximately 61% male and 39% female have been reported in 2011. NACO (National AIDS Control Organization) representatives finally welcomed cooperation with the federations and with Education International to carry out training of teachers for imparting education about AIDS.

In a country where poverty, illiteracy and poor health are widespread, the spread of AIDS presents a daunting challenge. "How do you talk about AIDS to someone who does not know the basics about health and hygiene? Unlike developed countries, India lacks the scientific laboratories, research facilities, equipment, and medical personnel to deal with an AIDS epidemic. In addition, factors such as cultural taboos against discussion of sexual practices, poor coordination between local health authorities and their communities, widespread poverty and malnutrition, and a lack of capacity to test and store blood would severely hinder the ability of the Government to control AIDS if the disease did become widespread. To make a decisive dent into the problem of

AIDS awareness with the broader population and so far we have been at work only on high risk groups(female sex workers, gays, transgenders, injecting drug users, truck drivers and migrants). For the children growing up in the different communities the disparities naturally tend to get even worse when compounded by the widely practiced discrimination against AIDS.

In India, it is estimated that 2.27 million people are living with HIV (UNAIDS, 2010). In the phase II on NACO, the Adolescent Education Programme (AEP) was launched. The programme was aimed at teachers and peer educators to educate the student community about life skills, prevention and related stigma and discrimination regarding AIDS. Under the initiative 112,000 schools were covered and 288,000 teachers were trained (National AIDS Control Organisation, 2007). However, there is a difference between the amount of effort invested in AIDS curricula and training packages on a national level and also lack of actual education carried out in many schools.

In states that has low prevalence; officials claim that there is a need to encourage AIDS education as it is not significant enough to warrant a widespread response. But it is crucial to learn about AIDS so that the prevalence stays low. A number of states had decided not to implement the Adolescent Education Programme (AEP) in its present form, and also rejecting the material that has been supplied (National AIDS Control Organisation, 2007). Also, many young people across India are still not receiving information about AIDS (The Washington Post, 2007).

The NACP Phase- IV is coordinating the 2012-1017 national response to AIDS epidemic focuses on:

- Reducing new HIV infections, especially maintaining low prevalence in areas where it is already low
- Targeting high–risk groups and vulnerable populations with prevention campaigns
- Promoting and improving access to treatment and care
- Preventing mother to child transmission (PMTCT)
- Reducing stigma and discrimination
- Building the capacities of state and district level facilities

2.2.4 Human Immunodeficiency Virus *(*HIV) and Acquired Immunodeficiency Syndrome *(*AIDS)

Human Immunodeficiency Virus is like other viruses, need a host to multiply. They attack and destroy CD4 cells of immune system also use them to replicate itself. The cycle of infection continues with the release of these HIV from the infected cells. Thus the number of CD4 cell decrease in our body drastically. Within a few weeks of being infected with HIV, some people develop flu-like symptoms that last for a week or two, but others have no symptoms at all. People living with HIV may appear and feel healthy for several years. AIDS is the late stage of HIV infection, when a person's immune system is severely damaged and has difficulty fighting diseases and certain cancers. The human immune system can't seem to get rid of it. Scientists are still trying to figure out why. HIV can hide for long periods of time in the cells of your body and that it attacks a key part of your immune system. HIV destroys the white blood cells of our body and makes us prone to the disease. *Acquired Immunodeficiency Syndrome* is the final stage of HIV infection. People at this stage of HIV disease have badly damaged immune systems, which put them at risk for *opportunistic infections (OIs).*

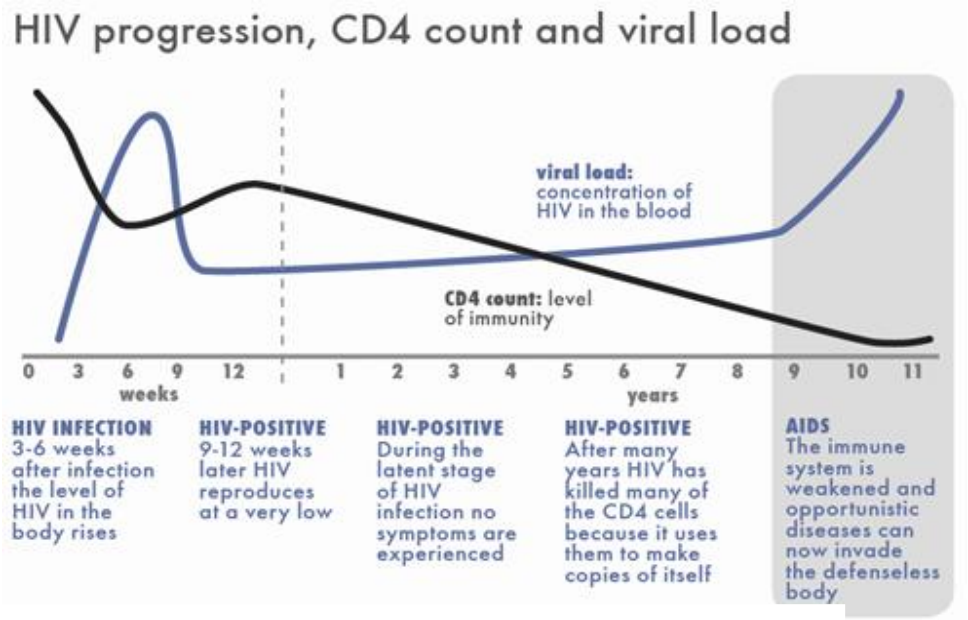
2.2.4.1 Signs and Symptoms

In infants, children, adolescents and adults; primary infection is usually asymptomatic or associated with features of acute retroviral syndrome having variable severity. The symptoms of HIV infection vary depending on the stage of infection. Though infected people tend to be most infectious in the first few months, many of them are unaware of their status until later stages. As the infection progresses it weakens the person's immune system, the individual can develop other signs and symptoms such as swollen lymph nodes, weight loss, fever, diarrhoea and cough. Without treatment, they could also develop severe illnesses such as tuberculosis, cryptococcal meningitis, and cancers such as lymphomas and Kaposi's sarcoma, among others.

The first few weeks after initial infection, individuals may experience no symptoms or an influenza-like illness including fever, headache, rash or sore throat that cause decrease in the number of T cells (a specific type of lymphocyte/WBC that bear CD_4+ receptors .The gradual decline in these T cells (less than 200 cells/mm^3) of blood plasma cause AIDS. Also with the progression of the disease the patient is likely

develop opportunistic infections and other clinical symptoms associated with AIDS like wasting and finally death of an individual. The disease can take 2-15 years to develop as it depends on individual. The stage of HIV infection leads to AIDS as it progresses and causes other diseases due to weakening of immune system of the body.

HIV progression can be divided into 4 stages:



(Source: http://www.mediaaids.org/content/page/hiv_aids_overview

Stage	Description	Symptoms
1. Primary HIV infection	During this stage most individuals will not be aware they are infected. Symptoms normally occur within three months of infection and generally subside within two weeks.	A flu-like illness, swollen lymph nodes, diarrhea, fever and fatigue.
2. Asymptomatic stage	No symptoms manifest but the virus remains active.	
3. Symptomatic stage	Individual begins to feel unwell and experiences infections caused by bacteria and viruses that surround us all daily	Thrush, Herpes Zoster (shingles), Herpes Simplex, Oral Hairy Leukoplakia, Idiopathic Thrombocytopenic Purpura and Pneumococcal Pneumonia.
4. Acquired Immune Deficiency Syndrome (AIDS)	Individual's CD4 count is less than 200.	Pneumocystic Pneumonia, Kaposi's Sarcoma, Tuberculosis, HIV-Related Lymphoma.

2.2.4.2 Transmission and Diagnosis

The Human Immunodeficiency virus can is transmitted through different modes so one needs to be very careful. Usually most of the people have 'window period' of 3-6 weeks during which the antibodies are produced and are not detectable. HIV is transmitted by the following reasons:

- Unprotected sex
- Contaminated needles and medical equipments
- Negligence in blood transfusion
- Infected mother to the new born child
- Piercing /tattooing

Many people believe that it is a dangerous disease that has claimed many lives in the past. Due to ignorance and misconceptions about the diseases people have created many myths about the disease. It is rumoured that these myth give rise to stigma and discrimination among the people. There are also some common myths about the spread or transmissions of HIV/AIDS are as follows:

1. Saliva/ Tears/ sneezing /coughing, etc.
2. Shaking hands, kissing, hugging HIV infected person
3. Working with an HIV $^{+ve}$ person
4. Sharing clothes, food, utensils, toilet seats, etc with an infected person
5. Air /water/insect bites

All the above vectors do not transmit the HIV. Diagnosis of HIV infection is based on laboratory criteria. The person can confirm the test result after 6 months. The testing HIV/AIDS is voluntary.

In India, the Government in collaboration with NACO has set up Integrated Counselling and Testing Centres (ICTC) wherein a person can test for HIV and AIDS and avail guidance regarding their HIV status. The information is kept confidential.

2.2.4.3 Prevention and Treatment

The diagnoses and treatment includes testing and counselling services that must include the five C's recommended by **WHO** informed Consent, Confidentiality, Counselling, Correct test results and linkage to Care, treatment and other services.

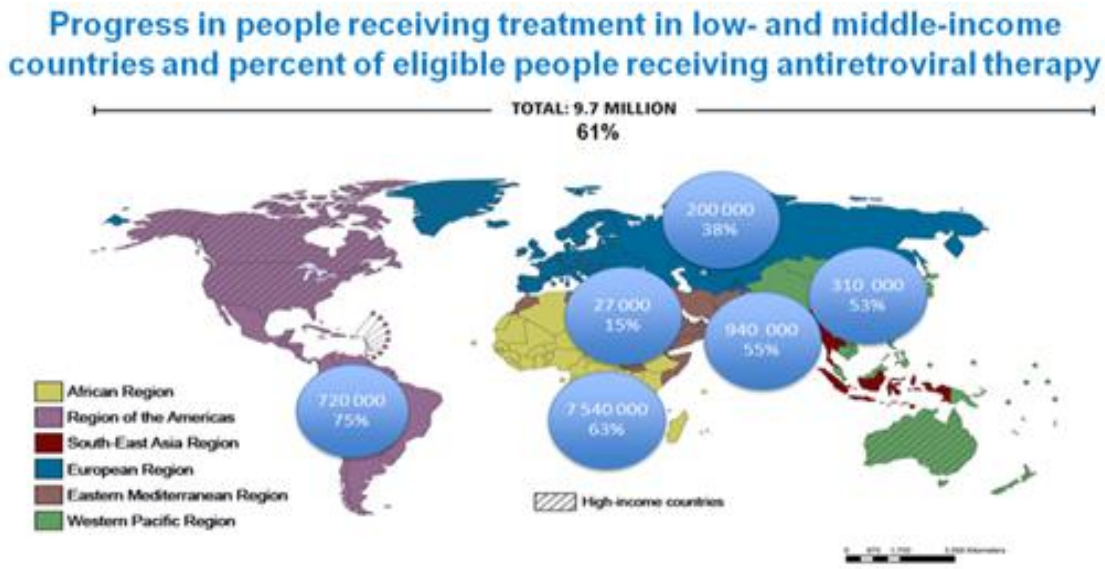
This disease can be prevented not cured. The measures followed by people in order to remain uninfected are by using the preventive measures stated below:

1. Testing and counselling for HIV and STD
2. Use of sterile injections
3. Anti Retroviral Therapy(ART)
4. Use of condoms by male and female
5. Voluntary medical male circumcision
6. Use of sterilized needles and medical equipments
7. Being faithful and monogamy with partner

All testing and counselling services must include the five C's recommended by WHO: informed Consent, Confidentiality, Counselling, Correct test results and linkage to Care, treatment and other services. Correct and consistent use of condoms during intimacy.

In most countries, reporting of AIDS cases have been incomplete in which children are rarely included. The advances in Anti Retroviral Therapy/(ART) and Highly Active Antiretroviral Therapy (HAART) mean that public health surveillances of AIDS does not provide reliable population-based information on the scale and magnitude of the AIDS epidemic globally. The widespread of ART have been declining mortality rate in countries with high income whereas, the low income countries is suffering with underreporting, delays in notification, lack of diagnostic capacity and weak health information systems.

HIV can be suppressed by combination antiretroviral therapy (ART) consisting of three or more antiretroviral (ARV) drugs. ART does not cure a person but controls the replication of the virus and provides strength to the infected person to fight against life threatening diseases.



(Source: Global AIDS Response Progress Reporting, WHO/UNICEF/UNAIDS, 2013)

According to researches by WHO more than 9.7 million people living with HIV in low- and middle-income countries were receiving ART at the end of 2013. Of this, about 630 000 were children. This is over 30-fold increase in the number of people receiving ART in developing countries between 2003 and 2012 (UNAIDS, 2013).

2.2.5 World Health Organization (WHO) and AIDS

Since the beginning of the epidemic, WHO has been leading the global health sector response to HIV as a cosponsor of the Joint United Nations Programme on AIDS (UNAIDS), WHO leads on the priority areas of HIV treatment and care, and HIV/tuberculosis co-infection, and jointly coordinates with UNICEF the work on the elimination of mother-to-child transmission of HIV.

In 2011, WHO Member States in collaboration with UNAIDS and UNICEF adopted a new Global health sector strategy on HIV/AIDS for 2011-2015. The strategy outlines four strategic directions to guide actions by WHO and countries for five years:

- Optimize HIV prevention, diagnosis, treatment and care outcomes.
- Leverage broader health outcomes through HIV responses.
- Build strong and sustainable health systems.
- Address inequalities and advance human rights.

There has been increase in health facilities (primary health centres and hospitals) and health care providers (doctors, nurses and paramedic staff) but still they are not accessible in remote areas. The Government and non-governmental agencies are having hard times in raising AIDS awareness among the people in every nook and corner of the world. Also, the expected outcomes have been less materialized and there continues to be a critical shortage of trained medical professionals and access to medications. Thus, it is high time to share the burden of increasing demands of AIDS awareness with the teachers.

2.2.6 AIDS Education

Education is empowering. It can address the social, cultural and economic conditions that contribute to increased vulnerability and can modify the behaviour.HIV education is associated with delayed sexual debut, fidelity towards partner and use of condoms improving attitudes of people. Education can play critical role in response to HIV and AIDS. Quality education helps to empower a safe and protective environment that creates a circle of support within the community that offer access to learning opportunities. It provides information and skills and developing values that allow people to make healthy decisions about their lives. Education also gives them possibilities to make independent choices. (Bankole *et al.*, 2007; Guiella and Madise, 2007; Hogan, 2005; World Bank, 2002; Kelly, 2000). In developing countries only 30 % of males and 19 % of females aged 15-24 have comprehensive and correct knowledge about HIV and AIDS (UNICEF, 2008).

AIDS interventions in education sector and partnership with other sectors and stakeholders to facilitate the access of services. Education needs to make changes if they are to play an effective role in provision for AIDS education. For mitigation and prevention of AIDS education can play n important role so it is essential to expand educational opportunities to wider range of offerings.

2.2.7 UNESCO and AIDS Education

Although there is a need for evidence-based information on AIDS education good practices and policies in education sector's response to these issues. The booklets on Good Policy and Practice in HIV & AIDS and Education series by UNESCO aims to expand the knowledge by lessons learnt in realm of safe, secure and supportive learning

environments. It consists of ideas, research results, and policies and programmes to respond to the needs of different communities of learners. The strategies and actions for educators include:

- Promote educator awareness of the needs of the learners and their environments
- Improving training of educators
- Establish supporting environment for educators to do their work

In Kenya, teachers used a curriculum developed by Program for Appropriate Technologies in Health (PATH) to train teachers and monitor the programme (YouthNet, 2004). It was found that it lead to increase in the confidence of teachers and openness to discuss issues. It was concluded that it is necessary to train teachers and shifted more focus on teacher education.

EDUCAIDS was launched in 2004 by UNAIDS Committee of Co-sponsoring Organizations and is led by UNESCO to achieve the goal of Education for All (EFA). UNESCO support country-level efforts to promote comprehensive education, plan and action and build partnership o promote coordination in AIDS education. The five essential components include:

a) Quality education
b) Curricula and learning materials
c) Educator training and support
d) Policy and management
e) Approaches and entry points

2.2.8 Role of Teacher and AIDS Education

Teacher must be knowledgeable and skilled in using correct guidelines in the classroom. Teachers may confront educational and psychosocial issues of children suffering from AIDS or whose parents are living with AIDS or died of AIDS. Teachers are also expected to provide answers to students' questions about AIDS in a culturally appropriate manner. Teachers are instrumental to the achievement of Educational for All goals and play a crucial role in school based AIDS awareness efforts. They have important responsibility to ensure that children and young adults acquire essential knowledge, skills and attitude for preventing AIDS and providing care and support (UNAIDS, 2009).

The UNAIDS Inter- Agency Task Team (IATT) on Education in 2003 has prescribed an interactive process of teaching and learning to enable a person to take greater responsibilities of their own lives, resist negative pressures, minimize harmful behaviours and make healthy choices. AIDS education requires detailed discussion on sex, illness, drug use and death. According to (ActionAid, 2003) teachers do not have experience regarding these issues and therefore require specialized training. Literature has shown that although AIDS education has been introduced and integrated in most of the countries, its delivery has not been yet successful and thus, schools face a lot of challenge on lack of relevant materials. (Githinji, 2011). According to UNESCO's International Institute for Educational Planning (IIEP) and UNAIDS Inter- Agency Task Team (IATT) on Education, 2009) teachers encounter several challenges when delivering AIDS education. These include:

- lack of appropriate instructional aids
- lack of expertise or basic introduction to HIV education
- cultural 'cost' of teaching sensitive topics
- parents' fear that 'evoking questions of sexuality within the classroom create sexual contacts between teachers and pupils'
- a culture of silence 'about sex, sexuality and HIV'
- lack of financial resources
- already overloaded curriculum

A study of teaching AIDS in Kenya and India reveal that teachers find it difficult to discussing topic with their students in schools (ActionAid, 2003).There are several weaknesses identified in school AIDS programmes identified by UNESCO, 2006) are as follows:

a) Conceptualization
b) Curriculum Integration
c) Linkages with school
d) Teaching methodology
e) Teacher competency
f) Curriculum and teacher support

2.2.9 UNESCO and Teacher Education

UNESCO's global strategy for responding to HIV and AIDS is guided by four key principles, and focuses on five core tasks (UNESCO, 2006). The guiding principles that are the foundation of UNESCO's response to HIV and AIDS are:

1. Work towards expanding educational opportunities and the quality of education for all.
2. A multi-pronged approach that addresses both risk (individual awareness and behaviour) and vulnerability (contextual factors).
3. Promotion and protection of human rights, promotion of gender equality, and elimination of violence (notably violence against women), stigma and discrimination.
4. An approach to prevention based on providing information that is scientifically sound, culturally appropriate, and effectively communicated, and helping learners and educators to develop the skills they need to prevent HIV infection and to tackle HIV and AIDS-related discrimination.

There is an urgency to develop concern regarding the AIDS. Timid approaches avoid discussion and confrontations of these complexities are doomed to failure. A diversity of responses is required to raise awareness among people. There are national strategies to provide supportive environment to children and people living with HIV/AIDS and the orphans. UNESCO has set key issues for schools and the education sector for the need of urgent action for raising awareness about AIDS.

The five core tasks of UNESCO's HIV and AIDS programme are:

• Advocacy, expansion of knowledge and enhancement of capacity.
• Customizing the message and finding the right messenger.
• Reducing risk and vulnerability.
• Ensuring rights and care for the infected and affected.
• Coping with the institutional impact.

Education sector should be leader in working together with the health, economic, agricultural, labour and social fields to alleviate the social and economic impact of the disease. There is a need to encompass measures to reduce contextual, environmental and societal vulnerability of the epidemic. Good quality education itself is a powerful tool against AIDS. In 2009, there were 890,000 new HIV infections among the youth aged 15-24(UNAIDS/UNICEF 'Children and AIDS, 2010) and in 2010, 5 million 15-24 year olds were living with HIV (WHO/UNAIDS/UNICEF, 2011).

Providing young people with the basics of HIV/AIDS enables them to protect themselves and avoid or reduce high risk behaviours (UNESCO, 2009; Paul-Ebhohimhen V.A. et al., 2008). AIDS education dispels false information that can

lead to blame and fear among the young and stigma makes it more reluctant to be tested. AIDS education to young people may seem inappropriate to some because on doing so will encourage young people in indulging in risky behaviours. Often young people are denied life-saving AIDS education because adult consider it to be too 'adult' for the young. In India, such attitudes are based on religious, cultural and moral views rather than evidences. The belief that 'immoral sex' and drugs will lead to HIV infection will affect the sentiments of people living with HIV/AIDS (PLWHA) and will also be discriminated by society.

In order to prevent from being infected with HIV, people need comprehensive information about how it is transmitted and what they can do to prevent themselves from being infected and thus this information should be delivered without moral judgment. Schools play a pivotal role providing AIDS education to young people as it has capacity to reach large population of students who are receptive to new learning.

A UNESCO study in 2009 found out that Eastern and Southern Africa children had 'low levels of knowledge' regarding HIV/AIDS which contributed to, among the other factors, lack of teacher training, little incentive to teach and embarrassment in teaching (UNAIDS/UNICEF, 2010).Sex education that focuses on abstinence is based on the belief that encouraging young people to avoid sex until they are married is the best way to protect from HIV infection. AIDS education requires discussion of sex, illness, drug use and death. Many teachers are not likely to have experiences to deal with such issues in class, and thus require specialized training. On doing so, the teachers can be comfortable in discussing them without letting personal values conflict with the needs of the students (UNESCO; Teachers and HIV & AIDS, 2009).

The UNESCO focuses on the following points for teacher education:

- Emphasizing the essential role teacher training and education policy play in national development goals.
- Producing and disseminating policy guidelines on open and distance learning e-learning, and use of ICTs in teacher education.
- Advocacy to improve the training and status of teacher worldwide. Integrating international standards regarding HIV/AIDS and life skills into national teacher education policies.

- Promoting exchange of good national practices and lessons learnt within groups of countries with common teacher-related agendas through networking and exchange.
- Promoting the development of a professionally-trained corps of teachers who provided the human contact, understanding and judgment necessary to prepare our children for the world of tomorrow.

2.2.10 Teacher Education in India

According to Goods Dictionary of Education Teacher education means, — "all the formal and non-formal activities and experiences that help to qualify a person to assume responsibilities of a member of the educational profession or to discharge his responsibilities more effectively." Earlier in the scope of teacher education was limited and narrower goals which only focused on polishing skill training. It helps to gather information in order to make valuable judgments about what is going on and which strategies to adopt. It is training and equipping human resource to teach at different levels or stages of education. The Bachelor of Education (B.Ed.) is a common teacher education programme providing objectives to build abilities, skills, attitudes and competencies in teachers aiming at different dimensions (Mangla, 2001). The role of teacher is manifold and should be proficient to understand objectives of education, knowledge of pedagogy, understanding the curriculum and characteristics of learners.

Teaching is the noble profession entrusted for nurturing human skills that enable the society to survive and nation building. Teacher education facilitates improvement in school education by bridging gap between school and higher education as well as preparing qualified, committed and competent(NCF, 2003). Many need to renew their enthusiasm and commitment to their All teachers need to enhance their skills, not necessarily qualifications, for the delivery of the new curriculum. A large proportion need to strengthen their subject knowledge base, pedagogical content knowledge and teaching skills and also focus on specialist skills in areas such as health and physical education, HIV and AIDS support, diversity management, classroom management and discipline, and so on. Teacher are expected to face the new changes by undergoing through training for new trends in education according to the change in social needs.

In India, the education system has been making efforts to up-date the curriculum of teacher educator to make it more responsive, content based and dynamic with regard to meet the needs of 21st century. More focus is on pre-service teacher education and training.

The objectives of teacher education given by NCTE – curriculum framework (1988) have been harmonized with the changing objectives of institutional education and demands of the society, because schools and colleges are regarded as instruments of social change. The role of teacher extends to the students and society as well. Thus the curriculum of pre-service teacher education has been designed keeping in mind the changing scenario of school, colleges and their interrelationship with their community. The objectives of teacher education are as follows:

The newly visualized teacher education program as put forth by NCERT is as follows:

- Emphasizes learning as a self-learning participatory process taking place in social context of learner's as well as wider social context of the community to nation as a whole.
- Puts full faith in self learning capacity of school children and student teacher and evolving proper educative programme for education.
- Views the learner as an active participative person in learning. His/her capabilities or potentials are seen not as fixed but capable of development through experiences.
- Views the teacher as a facilitator, supporting, encouraging learner's learning.
- Does not treat knowledge as fixed, static or confined in books but as something being constructed through various types of experiences. It is created through discussion, evaluate, explain, compare and contrasts i.e., through interaction.
- Emphasizes that appraisal in such an educative process will be continuous, will be self-appraisal, will be peer appraisal, will be done by teacher educators, and formal type too.

There is a need to become proactive to cope up with the AIDS situation in the country and help to pursue the objectives of eradication of the disease from the map of the world. Education on AIDS will help to slow down the rate of new infections among

adults through responsible behavior. Clearing misconceptions about HIV and AIDS will help to decrease the social outcast faced by People Living with HIV/AIDS (PLWHA). Ignorance about the disease can lead to social stigma encouraging more number of people to skip the HIV testing voluntary. Also it would support those who have been affected by bringing awareness among the people that will help to live without stigma from the disease among people and develop empathy. It will also help to volunteer and lessen the burden of the Government and other organizations who are struggling to delete the evidences of the disease at macro level.

Teacher education will in turn help education to raise awareness among people as teachers are the one who reach people and can interact with them. Being in a noble profession has its own impact on people's mind. If the citizens of the country are aware about the disease then it will lead to lessen struggle to decrease death by AIDS. Thus including AIDS education in the curriculum has its advantage but many teachers are embarrassed about discussing the topic in the class or sharing their thoughts. In a country like India having conservative thoughts and is a taboo to discuss such topics with children or even adults. Thus, it is responsibility of every teacher education institution to train teachers on such topics so that they can impart correct knowledge about AIDS education rather than thinking it as sex education (NCTE, 2009). Knowledgeable and trained teachers can give correct guidelines to students.

Teachers are also regarded a noble profession after doctors. Teachers are the one who are trusted and respected by people as well as they can reach to large crowd. They interact with the stakeholders of education system and interact with them. Parents can rely on teachers for raising awareness about the deadly diseases as well as equally benefitted by the awareness about AIDS (Vikas Modi, 2009-2010). They may have limited information about AIDS or maybe they are too embarrassed to discuss about the sexual matters and AIDS. Together health care industry and education system can contribute in a mammoth way. Thus there are efforts made in educating teachers regarding AIDS awareness.

The student teachers need an understanding of the special medical, social, psychological and educational needs of the society because the teachers may have to confront educational and psychosocial issues of children whose parents are living with HIV/AIDS. Teachers may be entrusted with information about a pupil's, parent's or

staff members' HIV status and they must understand the legal and ethical requirements regarding confidentiality of the disease. Teachers are expected to provide HIV and AIDS education in schools in order to answer students' questions about HIV in a culturally and developmentally appropriate manner. The student teacher as participants will benefit in the sense that strategies that can strengthen HIV/AIDS teacher training programmes might be adopted by the government which will help broader scientific community and benefit as other researchers would be able to extend and augment their knowledge on the topic and further expand the range of research on the issue.

2.3 REVIEW OF RELATED LITERATURE

Many studies have found that there is an urgency of research on AIDS prevalence and its status across the world. Advocacy by governmental and non-governmental organizations has brought significant results within three decade of the discovery of the disease. Also, AIDS is included in the curriculum in the secondary and higher secondary to make the young aware about the consequences of the infected people by the HIV. There is a lot of effort to develop programmes to convey the message to the students, youth and adults about the deadly disease.

UNAIDS (2013) focuses on *Global report: UNAIDS report on the global AIDS epidemic. Joint United Nations Programme on HIV/AIDS* highlights continued progress towards the global vision of 'Zero new HIV infections, Zero discrimination and Zero AIDS-related deaths'. The annual number of new HIV infections continues to decline, with especially sharp reductions in the number of children newly infected with HIV. More people than ever are now receiving life-saving antiretroviral therapy, contributing to steady declines in the number of AIDS-related deaths and further buttressing efforts to prevent new infections.

Madzivanyika G.C. (2013) conducted a study on *Knowledge levels and perceptions of teachers of HIV/AIDS and their role in HIV/AIDS prevention: A case of primary schools in Seke, Chitungwiza in Zimbabwe* The main objectives of the study was to determine teachers' knowledge and perception of HIV/AIDS, their role in HIV/AIDS prevention and to provide recommendations for teacher training on HIV/AIDS. It was a case study that consisted of self structured questionnaire based on rating scale for data collection.

Major findings were the teachers lacked correct information about AIDS and only few had attended any seminar or workshops on AIDS awareness.

Deakin University (2013) booklet on *Sexuality and Education matters, Preparing pre-service teachers to teach sexuality education* assists pre-service teacher education programmes to enable teacher to be equipped with knowledge, skill, comfort and confidence to integrate sexuality education content, issues and activities in health education programmes. It also provides effective teaching and learning activities, assess resources, deal with potentially sensitive issues with students and parental concerns.

Board of Education of the City of New York (2012) is a booklet on *A Supplement to a Comprehensive Health Curriculum* providing student with appropriate-age, comprehensive, and up-to-date education. It helps the educator to make thoughtful decisions about their health. It incorporates latest medical research and HIV testing laws to help students.

NCERT (2010) has developed a material *Adolescent Education Programme Training and Resource Materials* as a part of updating and revising Adolescent Education top changing context and concerns of young people. It is reformulated from different sources to suit the requirements of school education curriculum, cultural ethos of Indian society and to respond to the concerns of young people. It consists of five sections and each section deals with a broad thematic area and several activities that deal with the core sub-themes. The fact sheet provides additional information to the resource person as well as the students.

HEAIDS (2010) is an initiative of Higher Education and Training undertaken by South Africa. The main objective was to enhance personal and professional competencies of teacher education graduates through the training module and identification, evaluation and dissemination of strategies for HIV/AIDS education. The major findings were HIV and AIDS knowledge and curriculum need to be integrated, attitude and behaviour change needs a longer process than simply exposure, need for professional development programmes and age appropriate pedagogy should be used.

EDUCAIDS (2008) provides guidance on the *Technical and operational aspects of AIDS response*. They are intended for technical staff, programme implementers and managers

in ministries of education, technical staff in UN and other development cooperation agencies, and civil society partners. The secondary audiences of these Overviews are much broader and include school principals, educators, parents and communities. The booklet also provides analysis of selected resource materials, synopsis, bibliography, etc. on five components of comprehensive education sector response to HIV and AIDS.

UNESCO (2008) has developed a booklet *Good Policy and Practice in HIV & AIDS and Education: Booklet: 3* that discusses the issues affecting educators in context to HIV and AIDS that includes training, conduct and care and support. The booklet consists of approaches to teacher education and training of pre-service and in-service teachers. Fostering safe and supportive learning environment for educators in schools. Care and support the teachers and personnel infected and affected by HIV.

Oyewale, T. (2008) conducted a *Study of HIV/AIDS knowledge and attitude among teachers in Abuja, Nigeria*. The main objectives were to describe HIV/AIDS knowledge among teachers in junior secondary schools and to describe attitude related to HIV/AIDS. Close ended questionnaire and statements for measuring attitude were used as tools for the study. The researcher found out that teachers were knowledgeable about HIV but had poor attitude towards people infected with the disease.

Oza, D. (2006) developed an advocacy programme through B.Ed. course on *Adolescence Education for secondary school students*. The main objectives were to orient B.Ed. students about concept and importance of Adolescence Education, to identify various plug in points from each subject content related to adolescence education, to develop various curricular and co-curricular activities in school for adolescents and to study the effectiveness of these of activities conducted on the students of secondary section of Vadodara city. Discussion and co-curricular activities were the techniques used in the study. Major findings of the study were there are several plug-in-points with the content of many school subjects and students could use these plug-in-points in the classroom and overall students' attitude towards school teachers and studies improved. They have developed positive attitude for it.

Education International/World Health Organization (2004) has developed a booklet *Training and Resources Manual on School Health and HIV/AIDS Prevention* that

contains participatory learning experiences for teachers to help adults and students prevent HIV infection and related discrimination.

Shim (2002) studied the *Attitude of health behaviors on HIV/AIDS related knowledge through use of distance education*. The main objective of the study was to investigate the effectiveness of technology based curriculum to change attitudes of students related HIV/AIDS. The study consisted of two independent non-equivalent control group designs through pre-test and post-test. A 2X2 factorial design ANOVA was used for analyzing significant difference between the groups. The major finding was that no significant differences in HIV/AIDS attitude were found between the two groups after the treatment. **NACO (2000)** has been published a guide *Learning For Life- A Giude to Family Health & Life skills education for teacher and students* for teachers as a resource guide in imparting education about adolescence, HIV/AIDS and STIs to the students. It consisted of a set of learning material to increase the knowledge on adolescence, HIV/AIDS/STIs; to develop positive attitude and self assertiveness skills towards sexuality and people living with AIDS.

Koshi (1995) had conducted a study for *The awareness of AIDS among adolescent's girls of missionary school*. The objective of the study was to know the awareness level of AIDS among the adolescent girls and to find their knowledge and attitude towards AIDS. Questionnaire was used to check the awareness. The major finding was that the girls of missionary school were very less aware about AIDS.

Ludescher, G. (1992) conducted a study on *AIDS related knowledge and attitude among secondary school students*. The main objective was to find the knowledge of HIV among the secondary school students and to study their attitudes about the disease. Close ended questionnaire were used as tool for the study. The major findings were that majority of the students has less knowledge about the disease and its transmission and prevention. They also had misconceptions about HIV infection.

Pahad, A. (1997) had conducted *An experiment to study the cognitive and affective effects of informative and persuasive approaches of the video films regarding AIDS in students of Faculty of Home Science, M.S. University, Baroda*. Questionnaire and opinionnaire were used in the pre-test and post-test for collection of data. The major findings were that 50%of the girls knew about the modes of transmission, preventive

measures and treatment of HIV/AIDS. After the programme the researcher found out that video films are ideal medium for imparting AIDS education.

2.4 IMPLICATIONS FOR THE STUDY

While reviewing the literature, it was found that number of studies was conducted in the different areas of education as well as healthcare and medical field as the concept of AIDS is not confined to a particular field. There have been studies mostly based to check the knowledge of the students, teachers, parents, etc. (Madzivanyika G.C., 2013; Oyewale, T., 2008; Koshi, 1995). The studies, reports and booklets by International Organizations like UNESCO, EI/WHO, EDUCAIDS suggests professional development of teachers and teacher educators. Also, activity based curriculum are the main focus of these studies (NCERT, 2010; Oza, D., 2006). Most of the researches are based on the test to check attitudes of the students, teachers, etc. (Ludescher, G. 1992; Oyewale, T., 2008) have shown a poor attitude of people on the concept of AIDS. Some studies suggest activity and technology based curriculum for AIDS Education (Shim, 2002; Pahad, A., 1997). NACO, (2000) suggests life skill based education for students and teachers. In the present study also the researcher tries to implement AIDS Awareness Programme for student teachers to improve the knowledge and attitude on AIDS Education and awareness.

2.5 CONCLUSION

Most of the studies are concerned with the AIDS awareness of the disease but still there are some misconceptions about the disease. The unfavourable attitude of the people against the infected person is due to ignorance and misconceptions about the disease. Many programmes at national and international level have been developed for the school students as well as teachers to enhance the knowledge about AIDS. These programmes should be carried about the length and breadth of the country as well as the globe.

CHAPTER III

RESEARCH METHODOLOGY

3.0 INTRODUCTION

Research methodology is the systematic method / process dealing with enunciation of identifying problem formulating hypothesis, collecting of facts of data analyzing these data and reaching at certain conclusion either in the form of these forwards the problem concerned or certain generalization for some conceptual formulation. It is also comprised of a number of alternative approaches and interrelated and frequently overlapping procedures and practices. Since there are many aspect of research methodology, the line of action has to be chosen from a variety of alternatives. The choice of suitable method can be arrived at through the assessment of objectives and hypotheses and comparison of various alternatives.

The present chapter deals with the research methodology used in the present study for generalization. It includes research design, research type, sample, population and tools used for the study.

3.1 RESEARCH DESIGN

The present research was experimental in nature. It was a single group pre-test and post-test design. The researcher has made an attempt to prepare a program on AIDS awareness and the same was tried out on a group of student teachers. It can be illustrated as under:

E - O_1 X O_2

Where, O_1 – Pre-test

O_2 – Post-test

X - Treatment

E – Experimental group

3.2 POPULATION

The population of the study comprised of all the student teachers of B.Ed. College in the academic year 2013-14 of Sardar Patel University.

3.3 SAMPLE

A sample is the small proportion of a population selected for the observation and analysis. A sample is true representative of population.

The sample comprises of student teachers of Waymade College of Education, Vallabh Vidyanagar. Simple random sampling technique was used for selection of student teachers as sample for the study. The sample size consisted of 53 student teachers of Waymade College of Education.

3.4 TOOLS

The research tool plays a vital role in procuring sound data which helps in arriving at conclusion about the study. It is also necessary for the researcher to develop skills in construction of the tool and use them effectively in the study.

- **Questionnaire**: A questionnaire is a systematic compilation of questions that are used to gathering information from the sample of population. It was used to provide marking short responses 'Yes'/'No'/ 'don't know'. It comprises of 20 questions with close ended options.
- **Attitude Scale:** An attitude scale is designed to measure the attitude of a subject or a group of subjects towards an issue, institution and group of people. 5-point Likert scale was used that consisted of five responses which indicate how much a person agree or disagree with the statement. The student teachers had to respond by putting a tick (√) before a statement relating to AIDS awareness. The Tool contains 30 statements out of which 23 statement are having Positive Polarity and remaining 7 Statement are Negative Polarity.

Procedure for construction of tools

Self constructed tools by the researcher were used in the study for the purpose of data collection. The researcher had used two tools for the implementation of the tests. The

researcher read books, articles, journals, e-books available in the internet that were related to teacher education and education on AIDS awareness for brainstorming before preparing the research tools.

Various activity kits, programme module, research articles on HIV and AIDS concept. Also, programmes and activities prepared by WHO/UNESCO/UNAIDS/EI were used references for preparation and selection of the questions for construction of the questionnaire and statements for the attitude scale. The researcher prepared questions based on the concept and understanding of AIDS Awareness. The researcher made an attempt to understand the importance of the topic and the role of a teacher in the society and contribution of teachers for the upliftment of society.

Initially, researcher had prepared 80 questions and 50 statements for the pre-test and the post test. The questions and statements were based on the concept of HIV and AIDS Education, signs and symptoms, transmission of the disease, prevention of AIDS, teacher education and role of teacher. Minor changes were made and items were reduced to 20 questions and 15 statements for the pre-test and post-test each on the analysis by the experts. Changes made in the programme were to suit the cultural background of the level, understanding and cultural differences.

The researcher had conducted a pre-test and a post-test for the study. The questions were given in the pre-test and post-test and the statement were used in the attitude scale. The researcher had used two tools for the collection of data.

3.5 PLAN AND PROCEDURE FOR THE PROGRAM

The planning and procedure of the conduction of the experimental programme on AIDS Awareness program can be divided into three phases:

Phase I: Development of AIDS Awareness Program

In the very first phase, the researcher referred various techniques related to AIDS awareness programme developed by UNESCO, UNAIDS, WHO, UNICEF, NACO, NCERT etc. A group of activities were designed and selected by the researcher to create awareness about AIDS. The researcher discussed basics and useful information about how to prepare design and implement activities based on AIDS awareness with the various experts in the field of Education. Keeping in mind the objectives of the

research, various activities were designed like Battling HIV, Guardian Angel, Jumble fumble, Mark your words, etc.

The researcher planned two sessions every day for implementation of the programme with the consultation of the college authorities and needed arrangements for conducting the activities. The duration for each session was one hour in which the researcher has to provide necessary instructions for conduction of the programme implement the programme and carry out necessary discussion and summing up the session by advocacy of AIDS awareness information by the researcher. After preparation of the activities, the programme was sent to the experts' for suggestions and views. Necessary modifications were made as per experts' recommendations and AIDS Awareness Programme was finalized module of the activities was implementation on student teachers.

Phase II: Implementation of AIDS Awareness Programme

In this phase, the researcher had selected the student teachers of Waymade College of Education. The researcher has developed a 5 day programme consisting of 9 sessions that is two hours for each day. Each session of 60 minutes was taken up by the researcher to implement the activity designed for the session. Keeping in mind the availability of resources, daily schedule of the student teachers and convenience the program was implemented. Student teachers were assigned different tasks for execution of various activities as planned for the programme. Summing up of each session was done with the help of discussion by researcher about AIDS awareness. The table given below the description of implementation of the programme:

Table No. 3.1 Schedule for Implementation of AIDS Awareness Programme

Session No.	Duration	Name of the activity	Modes and methodology used for classroom interaction
1	1hrs	Guardian Angel	A Blindfold activity
2	1hrs	Mark your words	Game
3	1hrs	History of AIDS	PowerPoint presentation
4	1hrs	Battling HIV	Game

5	1hrs	An Animated tutorial :TeachAIDS	HIV and AIDS, Health Education and Animated Tutorial
6	1hrs	Jumble fumble	Game
7	1hrs	Case study	Group Discussion
8	1hrs	Role Play	Discussion
9	1hrs	Discrimination	Activity

The day wise schedule of the implementation phase has been discussed in detail as under:

Day 1

Activity No. 1: Guardian Angel

In the first session, the researcher conducted a blindfolded activity that was an icebreaker for teaching such sensitive topic such as AIDS. An icebreaker is a brief interactive way to help the participating student teachers to know each other and feel comfortable before discussing sensitive topics. It was done to build a rapport with the student teachers. The activity enabled the student teachers to enhance awareness of psycho-social experiences. A group of participants guided the blindfolded participants to reach for particular destination. The blinded folded participants had to identify their partner's voice and follow directions suggested their partner. The group of observers has to observe the participants. After the game was over, the researcher discussed the game with the class and their views on confusion and feelings of all the groups.

Activity No. 2: Mark your words

In the second session, researcher gave each student teacher a word-sheet to find the words related with HIV/AIDS. It was done to familiarize with terminologies related to HIV/AIDS.

Day 2

Activity No. 3: History of AIDS

In the third session, researcher had prepared a PowerPoint presentation for teaching the student teachers 'History of AIDS'. The presentation comprised of the various

theories associated with the origin and history transmission of the AIDS from one continent throughout the globe followed by discussion.

Activity No. 4: Battling HIV

In the fourth session, the researcher had prepared an activity that enables the student teachers to understand the concept of invasion of HIV on human immune system. The activity helps the student teachers to interact with each other and participate enthusiastically.

Day 3

Activity No. 5: An Animated Tutorial on TeachAIDS

In the fifth session, the researcher used 'TeachAIDS' an HIV and AIDS, Health Education and Animated Tutorial for student teachers to impart the knowledge of concept, mode of transmission, symptoms, testing, prevention of AIDS. It also helped to clarify some myths about HIV. After the tutorial, there were more discussion on the myths and concept clarity of AIDS.

Activity No. 6: Jumble fumble

In the sixth session, the researcher has assigned a task for the student teachers. The group task consisted of a stack of cards with terminologies and another stack with definitions/characteristics related to AIDS written on it. Each group has to match the terminologies with their respective definitions correctly. The discussions of the definitions lead to overcome the hesitation of the student teachers on discussion about terminologies.

Day 4

Activity No. 7: Case study

In the seventh session, the researcher allotted four case studies related to AIDS that is a case to each group. The groups had to discuss the case and share their views in the class about the questions in each case study.

Activity No. 8: Role Play

In the eighth session, the researcher gave a task to 6 groups of student teachers. The groups enacted their characters in the role play and discussed the situation with the class. It increases active learning and spontaneity among the student teachers. The activity enabled the student teachers to develop empathy for people living with HIV/AIDS and discussed the trauma experienced by the people or family. It also helps in spontaneous preparation of the acts by the student teachers.

Day 5

Activity No. 9: Discrimination

In the ninth session, the researcher bought different coloured candies and seek volunteers who would distribute those candies in the class after discussion of the rules by the researcher. The activity was to enable the student teachers the stigma and discrimination with people who are suffering from AIDS.

Phase III: Post Implementation

In this phase, the researcher administered post test was administered by the researcher after the implementation of the programme.

3.6 DATA COLLECTION

Data were collected through various tools constructed by the researcher. The pre-test and post-test were implemented to study the understanding and awareness of the student teachers about AIDS. Attitude scale was administered to study the attitude of the student teachers for integrating AIDS education in school education.

3.7 DATA ANALYSIS

Data was analyzed by quantitative method. The data collected through the test pre-test and the post test was analyzed using t-test quantitative techniques. And the data collected through attitude scale were analysed by employing t-test. The statements of attitude test were calculated using percentage (%) score.

3.8 CONCLUSION

This chapter gives detail information about the research design, population, sample, construction of tools, AIDS awareness program, data analysis, validation of the program, day wise conduction of the programme and technique to analyze the data.

The detailed analysis and interpretation of the data has been presented in the next chapter.

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

4.0 INTRODUCTION

The present chapter is devoted to analysis and interpretation of the data collected to achieve the objectives of the study and to test the hypotheses.

Once the data are collected and organized, the next step in a research process is the analysis and interpretation of the same in order to get a meaningful picture out of the raw information collected. Analysis of data involves the breaking down of complex factors in to simpler parts and combining the parts in a new arrangement for the purpose of interpretation. Statistical techniques generally form the basis of analysis in research work. Interpretation of data is the process by which the analyzed data are given meaning and significance. Careful and critical thinking is essential to safeguard against misinterpretation.

4.1 DATA ANALYSIS

The data analysis and interpretation of the programme was presented in this chapter objective wise. In the present study, the researcher had first administered the pre-test in order to know the level of understanding and attitude of the student teachers then the researcher had implemented the programme for AIDS awareness with the same group test administered and lastly administered the post test to know the effect of the program. Scores of pre-test and post test are recorded even mean was found and then at the last phase the mean of both the test compared. To, know the effect of the AIDS awareness.

- **Objective 1: To develop AIDS awareness programme for student teachers.**

To know the knowledge of AIDS possessed by the student teachers questionnaire was prepared. Attitude scales were was prepared to assess attitude of the student teachers towards integration of AIDS awareness education. The tests were developed for assessing the awareness of student teachers on AIDS.

The activities were selected as per the local specific level of the student teachers. Each activity focuses on enabling the researcher to transact a specific theme in the classroom situation through learning approaches that build or respond the experiences of learners. Every activity has well defined objectives, elicits the process of organizing the activity and sums up the learning session by its conclusion. There are 9 session in total of one hour duration each. Each session consisted of a theme and an activity or programme based on it. The activity carried out in the session had specific objectives. After conduction of the activity summing up of the session was carried out by researcher using discussion and clarifying doubts and misconceptions. There is a logical flow to each session allowing new skills to build on previous one.

The program material has been designed for providing knowledge of AIDS also respecting the cultural taboos of India. Keeping in mind the objectives of the research, the researcher designed nine activities like TeachAIDS animated tutorial, Battling HIV, Case study, role play, Guardian Angel, Jumble fumble, Mark your words, etc. Necessary modifications were made in the programmes as per experts' recommendations.

Using these kind of indirect activity approach is often more culturally acceptable to impart knowledge about AIDS. Development of such programmes for student teachers in its nascent stages as it needs validation and universal acceptability.

- **Objective 2: To implement AIDS Awareness programme on the student teachers.**

Necessary arrangements and preparation was made by the researcher with the help of the authorities for conduction of the programme. The researcher needs to understand the knowledge and attitudes of the teaching community to implement any attitude change programme. The researcher administered the pre test on the student teachers.

An ice breaker is used to build rapport among the group of student teachers. Therefore Guardian Angel Game was used to start the session. In every session efforts were made to develop knowledge and attitude of the student teachers with the special focus on being non-judgmental, empathic and improving the overall skills of the student teachers.

The sessions gave hands-on experience to encourage the student teachers to conduct the session in classrooms of their own later on while teaching topics such as AIDS. The sessions focused on active listening, critical thinking, communication skills, decision making skills, self–esteem, psycho-social experiences, peer pressure, discrimination, etc.

The activities kept the student teachers involved eliciting answers from them. Role play was very effective to develop negotiation skills, empathy and interpersonal skills, etc. These kinds of programme keep the sessions lively, fun and interactive while dealing with sensitive topics such as AIDS.

Using these kind of indirect activity approach is often more culturally acceptable to impart knowledge about AIDS Awareness efforts must be followed by multi-pronged and culturally compatible techniques of education that go beyond segments easier to be convinced or changing the attitude.

After the conduction of the AIDS awareness programme the researcher administered post-test. The post test helps to determine to what degree the student teachers has achieved knowledge and change in attitude.

- **Objective 3: To study the effectiveness of AIDS Awareness Programme for student teachers.**

It is important to analyze the current level of understanding of the student teachers. Thus the researcher carried out pre-test that provided a baseline to measure the knowledge about the concept AIDS and awareness. The post test helps to determine any change in the level of knowledge about the concept AIDS Awareness of the student teachers.

To study the effectiveness of the AIDS awareness programme t-test was employed on the data collected through pre-test and post-test. To achieve this objective null hypothesis was framed by the researcher. The null hypothesis is as:

H_o1: There will be no significant difference between the mean achievement scores of the student teachers on the pre-test and post-test.

The analysis of the data has been presented in the tabular form as given below:

Table No. 4.1 Calculated Mean, S.D., SEm, df and't' value.

Test Group	No. of students	Mean scores	S.D.	SEm	r	df	t-value
Pre-test	53	12.47	2.02	0.28	0.57	52	14.36
Post-test		16.06	1.75	0.24			

The computed t-value is 14.36 which are tested on 0.01 and 0.05 levels of significance. t-value at 0.01 significance is 2.68 at 0.05 significance is 2.01 for degree of freedom 52.

The computed t value that is $t_{(cal)}$ 14.36 is greater than that of the table $t_{(0.01)}$ level is 2.68 & $t_{(0.05)}$ levels is 2.01 for 52 degree of freedom(df).

Therefore, the Null Hypotheses (H_o) is rejected. It means that there is no significant difference between the mean achievement scores of pre-test & post-test is rejected. Also, there is significant difference between the mean scores questionnaire of pre-test & post-test, which shows effectiveness of AIDS awareness programme to develop knowledge about AIDS for the student teachers. So, the treatment is found to be effective as evident through analyzed data.

- **Objective 4: To study attitude of student teachers towards integration of AIDS education in the school education.**

To realize the fourth objective of the study i.e. 'to study the attitude of student teachers towards integration of AIDS education on the school education' the collected data analyzed quantitatively using t-test. Further about the change in attitude of student teachers about the AIDS Education, the researcher has again analyzed the data collected through attitude scale by employing percentage analysis.

H_o2: There will be no significant difference between the mean scores of student teachers on attitude scale of pre-test and post-test.

The analysis of the data has been presented in the tabular form as given below:

Table 4.2 Calculated Mean, S.D., SEm, df and 't' value.

Test Group	No. of students	Mean scores	S.D.	SEm	df	t-value
Pre-test	53	54.98	4.97	0.68	52	6.64
Post-test		60.94	5.10	0.70		

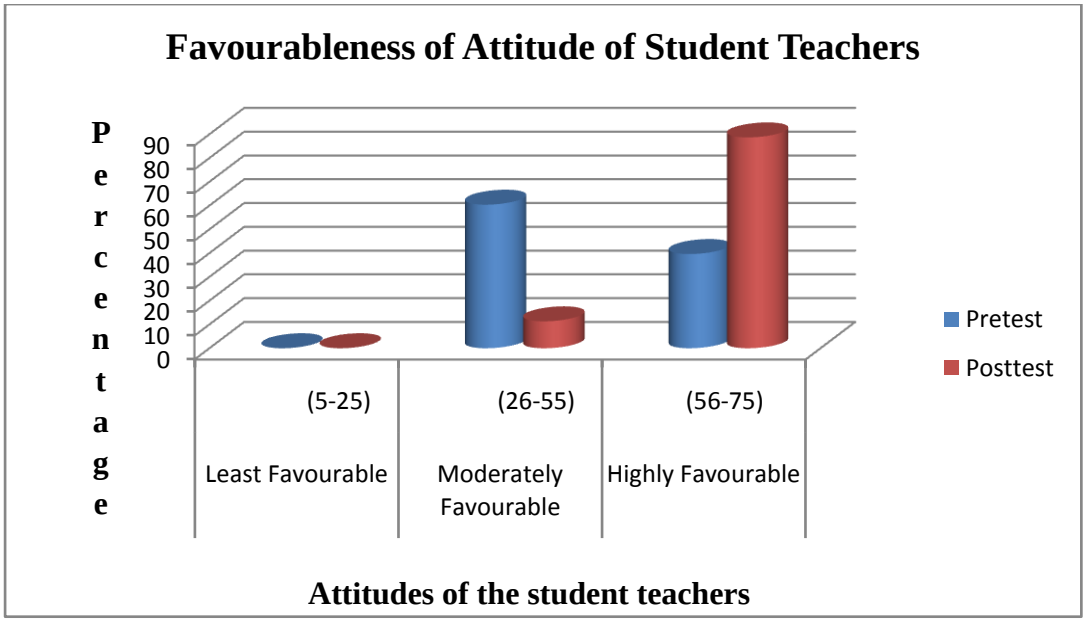
The computed t value that is $t_{(cal)}$ 6.67 is greater than that of the table $t_{(0.01)}$ level is 2.68 & $t_{(0.05)}$ levels is 2.01 for 52 degree of freedom(df).

Therefore, the Null Hypotheses (H_o) is rejected. It means that there is no significant difference between the mean scores of pre-test & post-test is rejected. Also, there is significant difference between the mean attitude scale scores of pre-test & post-test, which shows effectiveness of AIDS awareness programme for the student teachers to develop positive attitude. So, the treatment is found to be effective as evident through analyzed data.

Firstly, statement wise score was calculated for each student teacher then total score for each student was obtained by adding score on each statement. The total score of the student teachers were organized in ascending order. Then the score have been divided into three categories: namely *Least Favourable* (5-25), *Moderately Favourable* (26-55), and *Highly Favourable* (56-75). Student teachers who fall under each category were counted and converted into percentage.

Table- 4.3 Attitude of Student Teachers on AIDS Education

Attitude of the student teachers	Least Favourable (5-25)	Moderately Favourable (26-55)	Highly Favourable (56-75)	No. of students
Tests	Percentage (%)	Percentage (%)	Percentage (%)	53
Pre-test	-	60.38	39.62	
Post-test	-	11.32	88.68	



Graph 4.1: Favourableness of Attitude of Student Teachers

It is evident from the table and graph that all student teachers were having positive attitude as none of the student teachers fall under least favourable category. In the pre-test most of the student teachers were moderately favourable attitude, 60.38 % of student teachers were having moderately favourable attitude and 39.62 % of student teachers were having highly favourable attitude towards AIDS Education before the implementation of the programme. There is change in attitude of student teachers after the experience of AIDS Programme. The percentage of the student teachers in the category of highly favourable has increased and 88.08 % of student teachers were having highly favourable attitude towards the AIDS Education. Therefore, the AIDS awareness programme for student teachers was found effective to enhance the knowledge and attitude of the student teachers.

4.2 CONCLUSION

Thus, this chapter gives the detailed analysis of pre-test and post-test of the questionnaire and attitude scale prepared for the student teachers about AIDS awareness program. It is clear that AIDS Awareness Programme is helpful for improvement of concept and attitudes for AIDS awareness of student teachers.

The next chapter is about findings, implications and conclusion.

CHAPTER V

FINDINGS, IMPLICATIONS AND CONCLUSION

5.0 INTRODUCTION

The researcher had conducted the study on development of a programme on AIDS awareness for student teachers. The chapter includes major findings of the research and implications. Suggestions on few areas of researches have also been made. The researcher has made an attempt to increase the knowledge and attitude of the student teachers regarding AIDS awareness.

5.1 MAJOR FINDINGS

Based on the analysis of the data collected major findings has been derived by the researcher. The major findings of the study are presented are as follows:

- It was observed that the program was successful in removing the hesitation of student teachers about AIDS awareness.
- Significant difference in mean attitude score of pre-test and post-test which shows that the programme helped the student teachers in developing AIDS awareness.
- Significant difference in mean score of pre-test and post-test which shows that the programme helped student teachers in developing AIDS awareness.
- TeachAIDS programme used in the session has been designed to make it more appropriate to the local culture of Indian sub-continent.
- The active participation of the student teachers reflected that they had enjoyed the activities given by the researcher.
- From the data analysis, it is evident that 60.38 % have moderately favourable attitude which was increased to 88.68 % in the post-test. This shows that the program was effective in increasing attitude.
- Most of the student teachers have scored higher in the post-test. This shows that they have understood the concept of AIDS awareness better after implementation of the programme.

- A variety of teaching techniques keeps the participants involved in the session. Student teachers enjoyed working in groups that enhances cooperative learning.
- Most of the student teachers have participated in the activity given by the researcher after few sessions as they became more confident in expressing their views about the issues of AIDS awareness.
- The programme helped the student teachers to enhance their thinking and modify their attitude as they have to reflect in each session and discus various points within the group.

5.2 IMPLICATIONS OF THE STUDY

On the basis of the findings of the study, few implications of the study are given as follows:

- **For the Educational Administrator**
  1. To educate and create positive attitude of the student teachers towards AIDS education, in pre-service teacher education programme, AIDS Education has to be introduced.
  2. For AIDS Education, appropriate emphasis has to be given in the pre-service teacher education programme.
  3. To create AIDS Awareness among the school teacher in-service training has to be provided to them.
  4. For providing AIDS Education, teacher modules for teacher educators have to be developed.
  5. Before introducing AIDS Education in pre-service teacher education programme, proper in-service training to teacher educator should be provided to them.
- **For Teacher Educators**
  1. The teacher educators have to adopt adequate teaching technique for AIDS Education.
  2. The teacher educators have to motivate student teachers for imparting AIDS Education in school education.

3. Developing counseling and support skills for teacher educatorsas well as student teachers, including how to work with students, colleagues and other teachers affected by HIV.
4. Providing guidance on and practice interactive and participatory methodologies for teacher education.
5. Supply learning materials to teacher educators for AIDS Education.

5.3 SUGGESTIONS FOR FUTURE RESEARCH

- A comparative study of attitude of male and female towards AIDS awareness of different age groups can be developed.
- Development of modules for teacher educators for AIDS Education in Pre-service Teacher Education Programme.
- A study of AIDS Awareness among rural and urban population can be estimated.
- AIDS Education using life skills should be encouraged in college level also.
- AIDS awareness among different zones of India can be studied.
- Instead of providing bulk of input to student teachers, the emphasis given on polishing the skills which learners has within them. It gives knowledge about the particular field which they need to know.

5.4 CONCLUSION

The prognosis in regard to the future shape of HIV / AIDS is uncertain. It is feasible to set up an integrated system for proper screening, early detection, self care and timely investigation and referral. In the matter of disease burden as a whole, it is feasible to attempt to reach standards. Education on AIDS Awareness and its extension to both rural and urban areas would be moderated to the extent substantial provision of discussion on precautions of HIV/AIDS available in textbooks, concentrating on its sensible and effective regulation.

Programmes on student teachers education would be available for the bulk of the employed population of teachers in schools and colleges and there would be models of replicable community based information on awareness available for the unorganized sector. Student teachers have concern for social issues and their relevance to social, cultural, familial, and personal ideals. A sense of care and support

for those in the community or nation who need assistance is advocated by empathy. Use critical and problem solving skills to identify a range of decisions and their consequences in relation to AIDS health issues that are experienced by people living with AIDS.

Such awareness programmes on HIV/AIDS will play a leading role in inducting quality into the indigenous methods and practices. By training student teachers, it may be possible in the course of few decades to settle the role of education system in bringing awareness among population. For this purpose, more experiments and programmes are to be carried out for promoting AIDS awareness, focusing on the issue of how to erect on the basis of shared outcome as the key basis for erasing the footprints of AIDS from the map of the world.

A sensible mixture of activities and knowledge about AIDS is device in the consultation with the profession to ensure competence, quality and accountability. The future of plural systems in understanding and evaluation of comparative levels of competence and reliability in different systems - a task in which, the separate department for education system, government and nongovernmental organizations will play a leading role in inducting quality life to the people. Teachers are the people who can drive change and influence people.