CHAPTER –II

Review of Literature

It is a common understanding that any investigator who prepares to take-up a new study, should study all the previous literature, already in the field. This study with all seriousness, will equip the investigator with the previous knowledge and make him/her design new methods of study. Throws some light on the feasibility of the study and problems that may be encountered and the methodology, tools, the ways to improve the efficiency of data collection and obtain useful information on how to increase the effectiveness of data analysis.

The relevant literature regarding HIV/AIDS was reviewed from various published articles, magazines, text books, journals and Medline search.

The content of the review of literature is organized as follows

2.1 Historical aspects of HIV/AIDS.
2.2 Magnitude of HIV/AIDS at global level.
2.3 Magnitude of HIV/AIDS in India.
2.4 Preventive and control measures of HIV/AIDS.
2.5 Youth and HIV/AIDS.
2.6 Knowledge, attitude and behaviour studies related to HIV/AIDS.
2.7 Knowledge, attitude and behaviour studies on students related to HIV/AIDS.

2.8 Health professionals and prevention of HIV/AIDS.

2.9 Nurses and prevention of HIV/AIDS.

2.10 Studies related to structured teaching programme.

2.1 Historical aspects of HIV/AIDS.

While we talk about ‘AIDS being 25 years old’, in actuality it is believed that the syndrome has been around far longer. In 1959, a man residing in Africa died of a mysterious illness. Only decades later, after examining some blood samples taken from that man, it was confirmed that he actually died from complication related to an HIV infection.

The New York Times (1981) reported an outbreak of a rare form of cancer among gay men in New York and California. This “gay cancer” as it was called at the time was later identified as Kaposi’s sarcoma, the face of AIDS. About the same time, emergency rooms in New York City began to see a rash of young men presenting with fevers, flu-like symptoms, and a rare pneumonia called Pneumocystis. This was the beginning of what has become the biggest health care concern in modern history. Twenty-five years later the disease still plagues society.

When the centers for disease control reported the new outbreak they called it GRID stigmatizing the gay community as carriers of this deadly disease. However, cases started to be seen
in heterosexuals, drug addicts, people who received blood transfusions, proving the syndrome knew no boundaries.

A Canadian flight attendant, nicknamed “patient zero” died of AIDS because of his sexual contact with several of the first victims of AIDS. It is believed that, he is responsible for introducing the virus into the general population. By 1984 there were almost 8000 confirmed cases in the US, with 3700 confirmed deaths [CDC surveillance report, Dec-1984].

The world Health Organization estimates that 1,00,000 to 1,50,000 cases of HIV and AIDS existed worldwide (WHO,1987) during 1987. Politically, HIV and AIDS is a topic that most avoid to discuse in the public. But in response to public pressure, President Ronald Reagan finally acknowledge the HIV problem and for the first time used the term “AIDS” in a public speech. In just three years, the WHO estimate for people living with HIV and AIDS rose to 1 million [WHO,1990].

In 1998, 17 years after AIDS entered our culture, an African AIDS activist was beaten to death by neighbours after publicly admitting she was HIV infected.

The numbers have become sobering to say the least 4.9 million people were newly infected in 2005, with 40.3 million people worldwide living with HIV/AIDS. And as the numbers continue to climb, work on an HIV vaccine has for the most part has failed. Once thought to be “Just around the corner” it has
become obvious in 2005 that an HIV vaccine is still years away. Finally, 2005 saw a rise in HIV rates on college campuses and risky behaviour among those people already infected is still a problem. Positive preventive messages are becoming a priority.

In 2006 experts, have concluded that HIV had it origins in the jungles of Africa among wild chimps. Experts go on to report that evidence suggests that the similar form of HIV entered the human species and became HIV by way of monkey bites or ingesting monkey meat and brains. While the origins of HIV are more-clear now, the means to control or cure the HIV is yet unknown. So the epidemic continuing unbridled. Recently, India surpassed South Africa as the world’s largest HIV population, and in the United States, The infection rates of HIV are steady while STDs are on the rise. It is obvious that much work needs to be done in the coming years to finally put a halt to the HIV timeline.

2.2 Magnitude of HIV/AIDS at global level.

When AIDS first emerged, no-one could predict how the epidemic would spread across the world and how many millions of lives it would destroy. There was no real idea what caused it and consequently no idea how to protect against it.

AIDS caused by HIV creates a bitter experience which can devastate families, communities and whole continents. This epidemic knock down decades of countries’ national development, widening the gap between rich and poor nations and pushing the
already-stigmatized groups closer to the margins of society. We are living in an international society, and HIV has become the first truly ‘International’ epidemic, easily crossing oceans and borders.

Globally we have learned that if a country acts early enough, a national HIV crisis can be averted. It has also been noted that a country with a very high HIV prevalence rate will often see this rate eventually stabilise, and even decline. In some cases this indicates, that people are beginning to change risky behaviour patterns, because they have seen and known people who have been killed by AIDS. Fear is the worst and last way of changing people’s behaviours and by the time this happens it is usually too late to save a huge number of the country’s population.

Already, more than twenty-five million people around the world have died of AIDS-related diseases. In 2006, around 2.9 million men, women and children lost their lives. 39.5 million are now living with HIV, and most of these are likely to die over the next decade or so. The most recent (UNAIDS/WHO) estimates show that, in 2006 alone, 4.3 million people were newly infected with HIV.

It is Africa and in some of the poorest countries in the world, that the impact of the virus has been most severe. At the end of 2005, there were 10 countries in Africa where more than one tenth of the adult population aged 15-49 was infected with HIV. In four countries, all in the southern zone of the continent, at least one adult in five is living with the virus. In Botswana, a
shocking 24.1% of adults are now infected with HIV, while in South Africa, 18.8% are infected. South Africa has more people living with HIV than other.

The diversity of the AIDS epidemic is even greater in Asia than in Africa. The epidemic here appears to be of more recent origin, and many Asian countries lack accurate systems for monitoring the spread of HIV. Half of the world’s population lives in Asia, so even small differences in the infection rates can mean huge increase in the absolute number of people infected.

Around 9,60,000 Asians acquired HIV in 2006, bringing the number living with HIV to an estimated 8.5 million. A further 630,000 Asians are estimated to have died of AIDS in 2006.

Although the national adult HIV prevalence in India, is below 1% of the total population of some states have an estimated prevalence well above this level. India has around 5.7 million people living with HIV- more than any other country in the world, other large epidemics are China (650,000), Thailand (580,000) and mayamar (360,000).

In most Asian countries the epidemic is centered among particular high-risk group, particularly men who have sex with men, injecting drug users, sex workers and their partners. However the epidemic has already begun to spread beyond these groups into the general population.
The AIDS epidemic in Eastern Europe and Central Asia is rapidly increasing. In 2006, some 270,000 people were newly infected with HIV, bringing the total number of people living with the virus to around 1.7 million, compared to 1.4 million in 2004. AIDS claimed an estimated 84,000 lives during 2006, which is nearly twice as many as in 2004. Eastern Europe is home to the fastest growing arm of the global HIV epidemic.

In any country where many people inject drugs and share needles, a fresh outbreak of HIV is liable to occur at any time. This is especially true of the countries in Eastern Europe where the menace of drug is already rampant the HIV epidemics are still young and have so far spared some cities and sub-populations.

Worst affected are the Russian Federation, Ukraine, and the Baltic States (Estonia, Latvia, and Lithuania), but HIV continues to spread in Belarus, Moldova and Kazakhstan, and more recent epidemics are now evident in Kyrgyzstan and Uzbekistan. It is estimated that around 940,000 people were living with HIV in the Russian federation at the end of 2005.

HIV is ravaging the population of several Caribbean island states. In the most affected countries of the Caribbean, the spread of HIV infection is driven by unprotected sex between men and women, although infections associated with injecting drug use are common.
Haiti, where the spread of HIV may well have been fuelled by decades of poor governance and conflict, is the worst affected nation in the region. An estimated 3.8% of Haitian adults were living with HIV by the end of 2005, though rates vary considerably between regions. HIV transmission in Haiti is overwhelmingly high.

On the Caribbean coast of South America, the states like Suriname and Guyana had adult HIV prevalence rates of 1.9% and 2.4% respectively by the end of 2005. There are only limited data on HIV in Guyana, but it appears that the country has a rapidly growing epidemic, which is becoming established within the general population. The heterosexual epidemics of HIV infection in the Caribbean are driven by the deadly combination of early sexual activity and frequent partner exchange by young people.

Around 1.7 million people were living with HIV in Latin America by the end of 2006. During that year, around 65,000 people died of AIDS and an estimated 140,000 were newly infected.

The Central American nations of Honduras and Belize have well-established epidemics, with adult HIV prevalence rates above 1%. AIDS is the leading cause of death among Honduran women and is believed to be the second-biggest cause of hospitalisation and death in the country. In these countries the virus has mainly spread through unprotected sex, particularly commercial sex and sex between men.
Brazil had an adult HIV prevalence rate 0.5% by the end of 2005, but, because of its large overall population, this country accounts for nearly half of all people living with HIV in Latin America.

In high-income nations, HIV infections have historically been concentrated mainly among injecting drug users and gay men. In the United States, more than a quarter of people diagnosed with HIV in 2004 were female, and more than three quarters of these women were probably infected as a result of heterosexual sex.

HIV has now finally been recognized as a global threat, killing many more millions than those who have already died. People are beginning to take action to prevent it. This action needs not only to continue but to be speeded up considerably. The HIV epidemic is growing, and efforts to fight it need to grow at an even greater rate if they are to be successful.

An ever-growing AIDS epidemic is not inevitable. However, unless action against the epidemic is scaled up drastically, the damage already done will seem minor compared with what lies ahead. This may sound dramatic, but it is hard to play down the effects of a disease that stands to kill more than half of the young adults in the countries where it has its firmest hold. Entire families, communities and countries will begin to collapse if this situation is allowed to continue.
2.3 Magnitude of HIV/AIDS in India.

At the beginning of 1986, despite over 20,000 reported AIDS cases worldwide, India had not reported cases of HIV or AIDS. There was recognition, though, that this would not be the case for long, and concerns were raised about how India would cope once HIV and AIDS cases started to emerge.

One report, published in a medical journal in January 1986, stated: “Unlike developed countries, India lacks the scientific laboratories, research facilities, equipment, and medical personnel to deal with the 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.”

Later in the same year, India’s first cases of HIV were diagnosed among sex workers in Chennai, Tamil Nadu. It was noted that contact with foreign visitors had played a role in initial infections among sex workers, and as HIV screening centers were set up across the country there were calls for visitors to be screened for HIV. Gradually, these calls subsided as more attention was paid to ensuring that HIV screening was carried out in blood banks.
In 1987 a National AIDS Control Programme was launched to co-ordinate national responses. Its activities covered surveillance, blood screening, and health education. By the end of 1987, out of 52,907 who had been tested, around 135 people were found to be HIV positive and 14 had AIDS. Most of these initial cases had occurred through heterosexual contact, but at the end of the 1990s a rapid spread of HIV was observed among injecting drug users in Manipur, Mizoram and Nagaland, three North-Eastern states of India bordering Myanmar.

At the beginning of the 1990s, as infection rates continued to rise, responses were strengthened. In 1992 the government set up NACO (National AIDS Control Organisation), 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. This plan established the administrative and technical basis for programme management and also set up State AIDS bodies in 25 states and 7 union territories. It was able to make a number of important improvements in HIV prevention such as improving blood safety.

A human daisy chain on World AIDS Day in India, December (2004) reports that by this stage, cases of HIV infection had been reported in every state of the country. Throughout the 1990s, it was clear that although individual states and cities had separate epidemics, HIV had spread to the general population. In 1990 there had been tens of thousands of people living with HIV in India; by 2000 this had risen to millions.
In 2006 UNAIDS estimated that there were 5.6 million people living with HIV in India, which indicated that there were more people with HIV in India than in any other country in the world. UNAIDS and NACO agreed on a new estimate between 2 million and 3.6 million people living with HIV. The figure was confirmed to be 2.4 million in 2008. This puts India behind South Africa and Nigeria in numbers living with HIV.

In terms of AIDS cases, estimate from August 2006, indicates that total number of AIDS cases reported to NACO was 124,995. Of this, 29% were women, and 36% were under the age of 30. These figures are not accurate reflections of the actual situation though as large number of AIDS cases go unreported.

Overall, around 0.3% of India’s population is living with HIV. While this may seem a low rate, India’s population is vast, so the actual number of people living with HIV is remarkably high. There are many people living in India that a mere 0.1% increase in HIV prevalence would increase the estimated number of people living with HIV by over half a million.

In India, as elsewhere, AIDS is often seen as “someone else’s problem” – something that affects people living on the margins of society, whose lifestyles are considered immoral. Even as it moves into the general population, the HIV epidemic is misunderstood and stigmatised among the Indian public. People living with HIV have faced violent attacks; been rejected by families, spouses and communities; been refused medical treatment; and even, in some reported cases, denied the last rites before they die.
Karnataka, a diverse state in the southwest of India, has a population of around 53 million. In Karnataka, the average HIV prevalence at antenatal clinics has exceeded 1% in recent years. Among the general population, 0.69% were found to be infected in 2005-2006. Districts with the highest prevalence tend to be located in and around Bangalore in the southern part of the state, or in northern Karnataka’s "devadasi belt". Devadasi women are a group of women who have historically been dedicated to the service of Gods. These days, this has evolved into sanctioned prostitution, and as a result, many women from this part of the country are supplied to the sex trade in big cities such as Mumbai. The average HIV prevalence among female sex workers in Karnataka was 8.64% in 2006, and 19.20% of men who have sex with men were found to be infected.

Keeping the promise in stopping HIV/AIDS, the National AIDS Control Organization (NACO), Govindasamy Agoramooorthy and Minna J. Hsu (June 2006), have reported a high prevalence (8.2%) of HIV positive cases among healthy blood donors in urban areas. Furthermore, research indicates that over 70% of the men who had indulged in sex with prostitutes in Pune were reported to continue sexual intercourse with their spouses without condoms even when they had active STDs. On the contrary, women apparently did not have adequate understanding or perception on risks of STD/HIV from their spouses. Therefore in order to check the AIDS from speeding, it is necessary that People should be educated thoroughly and warned of the dangerous consequences of AIDS through unsafe sex. The current AIDS educational programmes are often restricted to the spreading of information.
through posters, media, and display of safe-sex bill boards behind automobiles. More aggressive efforts are needed to reach out to all rural and urban communities to combat the disease. AIDS education must be integrated into the higher secondary, college and university curriculum.

**Col Rajvir Bhalwar, Brig J Jayaram (2003)** A community based, cross-sectional, analytical study was undertaken by the above cited researchers among children aged 13 to 19 years, who were currently studying in high school, intermediate or graduate classes, in a rural area of Maharashtra. A sample of 151 girls and 162 boys formed the material for this study. Data was collected by well qualified, centrally trained interviewers, using a pre-tested instrument, administered by personal interview technique. The study indicated that less than 50% knew correctly about the etiology of AIDS, or the difference between HIV and AIDS. Similarly, though a much lesser proportion had the knowledge about the role of improperly sterilised syringes and needles. Similarly, a general lack of awareness about other sexually transmitted diseases was noticed. Lacunae in knowledge also existed about high risk groups, like commercial sex workers (CSWs), intravenous drug users (IVDUs), truck drivers and professional blood donors. A very large majority of the subjects had a very positive and healthy attitude about sex, and did not accept pre or extra marital sex, as well as, were serious of obtaining AIDS education as a part of school / college curriculum.

**Sheela Godbole (April 2005)** verbalized that certain biological factors like age, STDs and circumcision have been
reported to be significant in sexual transmission of HIV. In a study of 1872 male STD patients seen during 1998-2007, risky sexual behaviour like early initiation of sex, premarital sex and bisexual orientation was common in younger men. Such evidence highlights the need for introducing targeted interventions among adolescents.

2.4 Preventive and control measures of HIV/AIDS.

**Kaur H & Kaur HK (1998)** conducted a study on Risk assessment for STD and HIV/AIDS prevalence among auto rickshaw drivers in Delhi. More than 93% of the Auto rickshaw drivers interviewed in Delhi were aware of HIV/AIDS. The pre-marital sexual behaviour is found to be as high as 28.57% against 8.7% in general population. Condom usage is reported by 34.1% against 41.26% in general population. The Auto rickshaw drivers in Delhi do exhibit high risk behaviour towards STD and HIV/AIDS because of their being mobile throughout the day till late night.

**Pedhambkar R, et al. (2001)**, have conducted study on men who were having sex with men (MSM). In a cross-sectional population based random sample survey among 25,774 randomly selected residents of 30 slums in Chennai were interviewed for behavioural risk factors and 46(5.9%) of them reported sex with other men. MSM were 8 times more likely to be sero positive for HIV and over twice more likely to have a history of STD than non-MSM. Risk behaviour assessment of 10,785 men attending three STD clinics in Pune from 1993 to 2002 indicated that 708 (6.6%)
were MSM. Hence specific interventions targeting MSM should also be included in the control of HIV and STD.

Clik D et al (2002) States that Entertainment–education approaches to health promotion and disease prevention are a popular method for many interventions that target adolescents and young adults. This article documents, how this approach is used to educate and influence young people about HIV/AIDS, sexually transmitted diseases (STDs) and other health issues in the United States. A review of the literature is followed by a two-phase descriptive study of American youth performing arts entertainment education programs. First, a quantitative survey was conducted among youth performing arts participants who were attending a national conference on the subject. This was followed by a qualitative survey among adult and youth conference attendees from established HIV/AIDS prevention youth performing arts programs. These two approaches provided detailed insight into the characteristics, approaches, and frameworks used to create, implement and evaluate these entertainment-education efforts. Nine domains that define the effect and effectiveness of youth HIV prevention entertainment-education interventions are identified and described including those related to performances, intervention, management, and audiences. Given the importance of evaluation for the success and effectiveness of intervention programs these domains are used to construct a framework for entertainment-education research and evaluation efforts.
**Ebreo A. et al (2002)** compare in their study several outcomes experienced by peer educators involved in a school-based HIV prevention programme with those of their classmates to determine areas in which involvement in the curriculum had an effect on peer educators. Analyses revealed few differences between peer educators that could be attributed to the implementation of the intervention. The findings are discussed in terms of their implementation for prevention programs targeting adolescent population, and suggestions are made concerning the importance of future research on the selection, training, and integration of peer educators into school-based programs.

**Poindexter CC, et al (2002)** Describes and recommends a participatory method of developing, implementing, and evaluating a learner-driven community-based continuing education effort for HIV workers and supervisors. A formative evaluation led to adaptations of the curriculum in few months of the project. Most supervisors and direct care workers reported that the workshops were highly relevant to their work and they were able to incorporate their learning into proactive process suggesting that the empowerment approach has utility.

**Shepherd1, Raman R. (2003)** studied to identify key policy intervention points to increase health equity, on HIV Infection among men attending STD Clinics in Pune, India. Systematic disparities in rates of HIV incidence by socioeconomic status were assessed among men attending three sexually transmitted disease (STD) clinics in Pune, India, include measures of socioeconomic status covering levels of education, family income, and
occupation. The study provides evidence that, by enhancing access to treatment and interventions that include counseling, education, and provision of condoms for prevention of STDs, especially genital ulcer disease, among disadvantaged men, the disparity in rates of HIV incidence could be lessened considerably.

**Maneesriwongul W et al (2004)** reports that, in response to the increasing demand for home care, a qualitative study using focus group methodology was conducted to learn more about the need for education and support for family caregivers of PLWA in Thailand. 18 family caregivers and 18 nurses caring for PLWA participated in four focus group discussions. The major themes identified were fear, stigma, sorrow, empathy, hopelessness. In addition, participants voiced a need for education to improve the knowledge and skills related to care of PLWA. These findings will be used to guide the development of a training programme for family caregivers.

**Amirkhanian et al (2004)** states that HIV incidence is rising more rapidly in some areas of central and eastern Europe than anywhere else in the world. Carrying out effective HIV prevention programs requires the presence of “bridges” that can reach community population, most vulnerable to the disease. Nongovernmental organizations (NGOs) play a natural role to conduct HIV prevention programs. NGO programs most often targeted injection drug users (IDUs); other stigmatized groups were less frequently served by NGOs in the sample. It is observed that the most common types of prevention activities were, to avoid needle exchange; HIV prevention peer education and delivering
AIDS presentations and distributing educational materials. Among the major barriers that hampered effective conduct of HIV prevention programs were a shortage of available financial resources, governmental indifference or opposition and AIDS–related stigma. Study conclude that NGOs need immediate support so that they can carry out their community-based activities on larger scale, for the effective preventive measures.

Morisky DE et al (2004) conducted three years, a longitudinal, Quasi-Experimental study on AIDS for a period of three years, using participatory action research (PAR) to determine the feasibility and efficiency of an extended sexually transmitted infection (STI) HIV/AIDS. The study was conducted on the methods of preventive programme among diverse high risk male heterosexual population in the southern Philippines. The results of the study revealed that, changes differed significantly between the intervention and control group at post-test and follow up (p<0.01). These findings illustrate the appropriateness of using PAR methodology in promoting and sustaining positive behaviour change.

McKee N, J.T. Bertrand (2005) provides a state of the art synthesis to the contribution of the communication programs of the global fight against AIDS. The researcher stated that, AIDS was a fatal disease associated with blood and sex that in turn led to denial, persecution, stigma and panic; in the absence of a cure or vaccine, behavioural change was propelled forward as the only possible strategy. They recommended that Hitherto marginalized and neglected in public health systems, increased prominence
should be given to health education alongside variants including Information Education and Communication (IEC), social marketing and behavioural change.

**Mathews et al (2006)** investigated the factors influencing the effectiveness of the high school teachers in implementing HIV/AIDS education. They conducted a postal survey of 579 teachers responsible for AIDS education in all 193 public high schools in Cape Town. Questionnaires were completed and returned by 324 teachers (56% response rate). Many teachers (70%) had implemented HIV/AIDS education during 2003 and female teachers were more likely to have implemented than males (74% vs. 58%). The teacher characteristics associated with teaching HIV/AIDS were previous training, self-efficacy, student-centeredness, beliefs about controllability and the outcome of HIV/AIDS education and their responsibility. The existence of a school HIV/AIDS policy, a climate of equity and fairness, and good school policy formulation, along with the value of teacher training and school policy formulation. The study also demonstrated the value and importance of intervention that go beyond a sexual health agenda, focusing on broader school development to improve school functioning and school climate.

**Lombardo AP, Lefer YA (2007)** states that the special marketing HIV/AIDS prevention campaign- “Think Again”- (adapted from an American effort), encourages gay men to rethink their assumptions about their partners. It warns them about the risks of unsafe sex with their gay partners, so that they can improve their future efforts. It states that, existing HIV/AIDS prevention initiatives require critical reflection say that they use
the campaign as a social marketing case study to illustrate its strengths and weaknesses, as a learning tool for other campaigns. After describing the campaign, and its key results, they assessed how it utilized central tenets of the social marketing process, such as formative research and the marketing mix. They emphasized importance of theoretical influence in campaign design and the need to account for social-contextual factors in Safer Sex Decision-making.

**Mahmood SA (2007)** explores the susceptibility of the people of Bangladesh to HIV/AIDS. The prevalence of HIV/AIDS in the neighbouring countries may have reasonable proportions of impact in our country. According to the data provided by a Bangladesh university, the number of detected people living with HIV/AIDS reached 567 as of December -2005. The Importance of appropriate education on safe sex, related to, HIV/AIDS at all levels of society, including counseling and advocacy, is emphasized and recommends governmental policy and research for prevention of HIV/AIDS.

**Youth and HIV/AIDS**

**Bhatt SD Dhoundiyal NC (1998)** reports that AIDS education for young people between the age group of 10-24 years requires special attention, given the prevalence of high-risk social and sexual behaviours in this age group. Schools represent neglected agents of behavioural change and vehicles for the dissemination of AIDS-related information. Sex education has been shown to lead to more responsible behaviour in young
people and reduces the exposure to HIV risk by delaying the initiation of sexual activity or increasing condom use. Although programme goals may vary from school to school; like to reduce the risk of infection by imparting accurate information about HIV/AIDS, correct myths and misinformation, create an appropriate degree of concern and motivation for behavioural change, build skills needed to avoid high-risk situations and eliminate fear and prejudiced attitudes toward people with AIDS. A clearly formulated policy that takes account of the moral, cultural, religious, and philosophical issues related to HIV/AIDS is essential to the success of school-based AIDS prevention. It is also important that it ensures support from teachers, parents, and the community for its effective implementation.

**Schlapman N, Cass PS. (2000)** this study states that both the Indian and national statistics suggest that HIV-AIDS cases continue to rise in the adolescent population. This is because of environmental factors, adolescents may be at a greater risk of exposure to HIV/AIDS educational programmes, projects, may be an important step in imparting the knowledge on HIV-AIDS. An educational project consisting of four peer-based, interactive sessions was developed for adolescents in a north central Indian juvenile center. Project objectives were based on the AIDS risk Reduction Model (ARRM) and were measured by a 40-item tool. 91 educational sessions were conducted, reaching a total of 196 trainees. Following comparisons of the pre-project and post-project questionnaires, trainees demonstrated an increase in their ability to appropriately recognize and label risky behaviours, but
they evidenced no significant commitment to change their behaviours.

**Schonfeld DJ (2000)** this researcher advocated that AIDS education initiatives need to begin early, within the elementary grades, to be effective. We should no longer underestimate the capacity of young children to understand and benefit from this instruction. In addition, it is also warned that we should not overestimate the impact of brief intervention, and should plan for continued AIDS prevention instruction throughout the school years involving sequential, developmentally appropriate curricula that respond to the preadolescent’s and adolescent’s changing cognitive capabilities, social skills, and expanding exposure to sexual experiences. We should require that the new approaches and methodologies for AIDS prevention education be developed and evaluated rigorously for efficacy of the programme. It is also required that new drugs are developed and that they should be evaluated to combat this illness on the biologic front. Although attempts are being made to address the social network of children through such efforts as peer education, we cannot ignore the broader social contest. For example, efforts to promote increased condom usage will be effective when we learn why significant numbers of adolescents practice unprotected sex. We are unlikely to affect behavioural change unless we understand fully the motivation for such behaviour. There is a need for further research on the development of attitudes, fears, stigma and the methods of coping with in children, as well as means of promoting the development of healthy sexual relationship.
**Duma O. (2000)** studies the increasing incidence of AIDS among young people involves the need for effective HIV/AIDS prevention programmes. The evaluation of such a programmes, using pre-test, information and post-test, was performed in a high-school in Iasi City, on a sample of 169 pupils. They answered a semi-structured questionnaire, concerning false and real HIV ways of transmission, attitudes and pre-conceptions about HIV infected people. The findings of this study showed that the cognitive level increases with age at 17-19 years old pupils and the receptivity is higher at 15-16 years old pupils.

**Oxley GM (2001)** This researcher conducted a study on a convenience sample of 39 ethnically diverse adolescents, aged 14-18, who had participated in a pilot study designed to assess HIV/AIDS knowledge and to build self-esteem. Adolescents selected from two centers in California completed the Coopersmith Self-Esteem inventory and the student Health questionnaire (SHQ) before and after completing a program of six 2-hour educational sessions. These sessions focused on HIV/AIDS knowledge and building self-esteem on HIV/AIDS prevention and transmission increased from pretest to post-test. The Practitioners addressing the needs of adolescents, should focus on in-depth information regarding HIV/AIDS, especially in the area of prevention strategies and cultural factors influencing levels of self esteem.

**Barros T, et al (2001)** These researchers report that an STD/HIV/AIDS primary prevention model was applied with adolescent school children between 12 to 15 years old. In this
study two groups with similar characteristics were formed: the experimental group, with 358 students and the control group, with 288 students. Schools were selected according to inclusion criteria, and adolescents in each school were chosen at random. A discussion guide was applied with 16 focus groups, and the resulting information was used to prepare a KAP survey. After being validated, the KAP survey was applied to the experimental group and the control group. A preventive education programmes geared to students and teachers was implemented with the experimental group. Eight months later a second KAP survey was done with both the experimental group and the control group. The differences in the two KAPs before and after the intervention were evaluated using the chi-square test. There were no statistically significant differences between the two groups before the intervention, but afterwards the differences were statistically significant (P=0.012), with an increase in the knowledge of sexuality and STDs/AIDS in the experimental group, even though the long-term behavioural changes had not been evaluated.

**Ebreo A. et al (2002)** The present study compares several outcomes experienced by peer educators involved in a school-based HIV prevention programme with those of their classmates to determine areas in which involvement in the curriculum had an effect on peer educators. Its Analyses revealed a few differences between peer educators that could be attributed to the implementation of the intervention. The findings are discussed in terms of their implications for prevention programme targeting adolescent populations, and suggestions are made concerning the
importance of future research on the selection, training, and integration of peer educators into school-based programmes.

**Thomas Kishore M, and Anupam Thakur (2004)** studied the knowledge about AIDS and the need for Sex Education on 220 adolescent Students where the finding emphasized the need for more comprehensive sex education that addresses medical knowledge as well as myths about AIDS.

**Spizzichino et al (2005)** describes a pilot project carried out with the aim to take a group of adolescents and provide them with a grounding both in HIV/AIDS infection and social communication and with the instruments necessary to develop an informative campaign other adolescents as the target group. The project was divided into three phases: some sessions for raising levels of HIV/AIDS information and awareness involving 702 secondary school students; workshop to provide 120 selected students with communication and advertising to know-how to develop an HIV/AIDS infection information campaign targeted at their peers; a final event for the presentation of the students’ findings. Prevention was the focus of the adolescents with particular attention to condoms as means of protection. The target population was judged as best influenced by channels such as posters and television advertisements and the resulting messages were cartoon based, both ironic and funny yet accompanied by strong and direct statements designed to shock the viewer. The methods used in the project turned out to be particularly suitable for giving importance to the input of the participants who went from being publicity targets to developers.
Ratna Majumdar et al (2005) conducted a study among adolescent girls which was carried out in SNDT Arts College of Pune, Maharashtra. Out of 243 girls studied, the findings show that majority of them (120) (49.4%) belonged to the lower middle social class; 154 (63.4%) belonged to nuclear families, almost equal number of girls were vegetarian and they liked fast foods like pizza, potato chips, pav bhaji, chocolates, etc.; puberty reported between 12 and 16 years of age with a mean age of 14 years; a higher proportion of girls, 166 (68.3%) experienced pre-menstrual symptoms; out of 230 girls checked, 105 were found anaemic; majority of them, 197 (86.7%) knew that breast milk is ideal for infants; knowledge of sex and reproduction was poor among them; only 47 (19.34%) had some knowledge of contraception; and most of them, 208 (85.60%) knew about the modes of transmission of HIV/AIDS.

Fongkaew W et al (2006) reports that the aim of the present study was to describe the development and evaluation of a programme designed to prevent HIV/AIDS. A Participatory Action Research (PAR) approach was used in collaboration with ten schools in Thailand, to develop a Youth-Adult Partnership with Schools (YAPS) model. The YAPS model included curricula using participatory learning experiences, entertainment approaches, and skills building strategies. In that programme the Youth leaders were made to undertake activities on their own, initiate creativity and share knowledge on sex education and HIV prevention messages with students in schools.
Yazdi CA et al (2006) states that adolescents form a particularly important target group for primary prevention of HIV/AIDS. An anonymous questionnaire derived from standard surveys such as the safer choices questionnaire and the 2001 Youth Risk Behaviour Survey, was administered to 1227 Iranian students attending 19 randomly selected high schools in Hashtgred in 2002. students reported that television (84%) and schools teachers (66%) were the best sources of HIV/AIDS information, while parents (27%) and school books (15%) were least informative. Most students knew that heterosexual intercourse (90%) and shared intravenous needles (94%) can cause HIV infection; however salient misconceptions were revealed, only 53% were aware that condoms protect them against the infection through sexual intercourse. The study concluded with the finding and suggestion that more effective school based HIV/AIDS education is needed in Iran.

Omoigherate AI et al (2006) the study was cross-sectional and carried out at the university of Benine Teaching Hospital, Benin city, Nigeria, between January and December-2006. The knowledge and attitude of youths (15-25 years) on HIV/AIDS and to routine HIV screening was assessed using anonymous questionnaires, among 9500 respondents, 4950 males and 4550 females, 5750 respondents were from the University of Benin with a population of 20,000 students while 3750 were from some of the secondary schools (post primary schools) randomly selected. About 56% of subjects indicated that they have heard about HIV/AIDS and (44%) had no knowledge of HIV/AIDS at all, (41%) had some knowledge; (29.9%) had adequate knowledge and only
(28.0%) had sufficient knowledge, (65%) did not believe it exists and as a result they are not bothered by it, of the secondary school students had multiple sexual partners. Majority of them had single partner. It was found out that, some of them had no partner at all. While among the university students, (52%) had multiple sexual partners, while others had between one and two sexual partners, only (38%) believe it is really a killer disease and they are frightened about it and are already changing their sexual behaviours; (20%) believe it is a western propaganda to enslave the developing world.

2.6 Knowledge, attitude and behaviour studies related HIV/AIDS.

Raza MI et al (1998) reports that the study was conducted to assess the knowledge, attitude and behaviour regarding AIDS among educated young people in Lahore, Pakistan. An anonymous survey of 733 males and 355 females were carried out using structured questionnaire among educated youth, selected randomly from non-medical educational institution and work places. The study revealed that 698 (95.2%) out of males and 273 (76.9%) females, only 189 (25.7%) males and 76 (21.4%) females knew its cause. Knowledge of the different modes of transmission of AIDS/HIV was good, however 59%, 48%, 68% and 43% males; 28%, 45% 59 and 35% females believed that it could be transmitted through sharing of utensils, kissing, contact and mosquito bite, respectively. 91% males and 86% females believed
that AIDS sufferers should be isolated. Extra Marital Sex was experienced by 6% subjects and only 5% used condoms. Generally, males had better knowledge than females except in attitudes towards monogamy and having sex with someone known. The study revealed gaps in the knowledge of females regarding AIDS and its transmission. The results indicates an urgent need to include health education syllabi emphasizing AIDS and other sexually transmitted diseases in the curriculum of schools/colleges to convey the message adequately to the youth.

**Stefanelli MC et al (1999)** A participative study was carried out with clients of a health center. To the development of the programme, a educative game was used. It had 30 cards with verbal and non-verbal messages about the topic. The discussion about those messages were observed and recorded. The evaluation of the programme by the participants show attainment to its objectives. The game was considered excellent to start with the discussion about the topic on HIV/AIDS in which knowledge raises freely from the encounter of scientific and common sense perspectives.

**Martini JG S Bandeira (2003)** Carried out a study in a school in the city of canoes on 121 students, with age between 12-19. According to the interviews 22.3% said that their sexual life starts at the age between 12 and 16. students knowledge regarding the transmission of STDs is evident, since 79% of the students pointed out that the those diseases are transmitted through sexual contact as there is no use of condoms. However some myths and stereotypes related to HIV disease were also
identified 16.3% of the adolescents believe that contamination can occur in bathrooms and swimming pools.

**Ball DE and Mazarirwi (2003)** conducted the study to examine the knowledge of HIV/AIDS amongst pharmacist in Zimbabwe by cross sectional survey. From 250 pharmacists and 47 pharmacy student with 126 completed questionnaires returned (42.4%). The questionnaire asked for demographic details of the respondent sources of knowledge about HIV/AIDS and measured knowledge (KW), fear contagion (FC), negative emotions (NE) and professional resistance (RS) using a liket scale of 1 to 5 computed scores of KW, FC, NE and PR and reported sources of knowledge on HIV/AIDS. All pharmacists scored highly on Kw (men [SEM]= 4.0(0.0) with academics scoring the highest (4.2 [0.5]; n=7) and private hospital pharmacists the lowest (3.7 [0.2]; n=5). Medical books/journals and professional colleagues were the most important sources of information. Scores for FC (2.7 [0.1], PR (2.4 [0.1] and NE (2.1 [0.1] were low. Government hospital pharmacists tended to have a higher KW score than those in private hospital. However, they saw the role of pharmacists in the prevention and management of HIV/AIDS but felt there were important time constraints pharmacists can play an important part in the framing strategy to manage the national HIV/AIDS epidemic, but negative attitude towards HIV/AIDS sufferers may adversely affect efficiency of the pharmacists.

**Avranci (2005)** conducted the study to investigate and present some pertinent comments concerning Acquired Immuno Deficiency Syndrome (AIDS) knowledge, attitudes and
misconceptions among the general population in a city of west Turkey. Using a multistage sampling methods, a random sample of individuals aged 11-83 years, living in 65 different quarters in the city of Eskisehir, Turkey during September, October and November 2004 were interviewed. In all, 1048 respondents completed the survey, in most items, respondents displayed a fairly good to excellent degree of knowledge about HIV/AIDS. Individuals with higher degrees indicated more correct responses in all items relating to knowledge of HIV/AIDS. In general, the respondents’ attitudes towards AIDS and people with AIDS were found to be tolerate and positive, with answer choice showing that the majority of the respondents agreed with the statement that those with HIV/AIDS must be supported, treated and helped (90.7%). Moreover, the proportion of the respondents’ misconception were found to be significantly low for all the items. However, nearly one fourth of the respondents agreed with misconception that AIDS is a punishment by God and that One is not infected with HIV/AIDS if engaged in sport and well nourished. In general HIV/AIDS related knowledge was high and people showed positive attitudes. However, people continued to hold misconceptions about AIDS and these needed to be addressed by health education programmes targeting those at higher risk of infection.

Hovey JD et al (2007) carried out a study to evaluate the impact of the informate adolescent the theater programme on HIV/AIDS knowledge and attitudes among farm worker audience members of various ages. Audience from seven migrant farm worker camps completed a self-administered questionnaire before
and after they observed the informat performance. Paired-sample t-tests and McNemar tests indicated an increase in knowledge in “modes of HIV transmission,” “body fluids that can transmit HIV,” and items assessing HIV/AIDS “myths,” in addition, a greater percentage of farm workers at posttest reported that they believed that condom should always be used during sex. The overall findings from this study suggested that theater can be an effective medium for increasing HIV/AIDS-related knowledge among migrant farm workers.

2.7 Knowledge, attitude and behaviour studies on students related HIV/AIDS.

Deshmukh and et al (1998) Conducted a study on university students to assess the basic level of knowledge regarding AIDS. Mean score obtained by the science students related to various aspects of AIDS was significantly higher as compared to Arts and Commerce students. This study has identified considerable extent of knowledge and positive attitude amongst Science students, but Arts and Commerce students had inadequate and poor knowledge. The results of this study indicates that there is a need of effective Health education campaign for risk group of Individuals.

Sachdev. P & et al (1998) Reports that a structured questionnaire of 40 different statements concerning basic knowledge of the human immunodeficiency virus (HIV), its modes of transmission, diagnosis, risk behaviours, prevention, treatment, beliefs as well as attitudes towards AIDS patients were
distributed to 200 students (109 females and 91 males) most of the students (44%) were aware that HIV is a life-long infection and 93% think that it is preventable. 46% of students or colleagues with HIV infection attending the same classroom and working place were accepted by 55% of medical and 53% of non-medical students. However most students (65.4%) did hesitate to take care of an AIDS patient. Although most students showed reasonable knowledge regarding transmission, risk behaviours and prevention. Misconceptions regarding the attitude reflects a false perception of the disease among those students. This calls for well-structured health education programmes stressing on such misconception.

**Seleh MA & et al (1999)** Intended to assess knowledge on AIDS in students of secondary schools in Buraidah City and to measure the effect of a health education programme on their knowledge about AIDS in general, mode of HIV transmission and the degree of their misperception about the transmission of the disease through casual contact. A well-designed health education programme using personal communication and visual media techniques was conducted for 483 secondary school students in Buraidah secondary schools. Pre-and post-test were done to examine their knowledge about AIDS. The results of this study pointed out that a health education programme on AIDS for students of secondary schools greatly and significantly improved their scores on general knowledge on AIDS, views on its transmission and misperceptions of AIDS (p<0.01).
Brook U (1999) Compared AIDS knowledge, attitude and sources of information of 1724 students in three different high schools (academic, vocational and religious) in Holon. 42% of the students are anxious concerning the possibility of AIDS contamination; they expressed a willingness to be tested for HIV and AIDS. Pupils attending the academic school proved to have the highest knowledge concerning AIDS topics, those in the vocational school placed second and those in the religious school came last. The knowledge increased with age (p<0.001). Results indicated that misconceptions were still found in a second decade of that epidemic concerning the following areas: etiology, ways of exposure, symptomatology, and prognosis. Their intolerant attitudes reflect social anxiety and vulnerability to AIDS. The sources of pupils information primarily included, the media-TV (92.3%) newspapers (87.6%); and school (66.1%) occupied the third place. It is remarkable that physicians and nurses at school and outside clinics were placed in the seventh (and last) place, as only 25.3% mentioned them at all. Only one third of the pupils agreed to participate as volunteers in medical and rehabilitation centers which help AIDS patients.

Maswanya E et al (2000) This study assesses the knowledge and attitude of the individuals with AIDS among 383 female students attending colleges in Nagasaki, Japan. A structured questionnaire containing questions concerning knowledge about AIDS, sources of information, beliefs and attitudes toward people with HIV/AIDS was administered during sessions set for that purpose. Students demonstrated a high level of knowledge concerning AIDS and HIV, but has considerable
misconception and prejudices about people having HIV/AIDS. So the results suggest that a more appropriate education programme in colleges need to be implemented.

**Bhattacharya et al (2000)** Examined the extent and specificity of knowledge about HIV/AIDS. The most used sources of information and the usefulness of these sources among Asian-Indian adolescents who were born in the USA and whose parents emigrated from India. Although 86% knew that having unsafe sex with a person infected with HIV could transmit HIV, 47% did not know that sex with a person infected with HIV-positive person could do so, and a significant proportion believed that donating blood (27%) and taking blood tests (41%) could transmit HIV. Television was the most used source of information on HIV/AIDS. The results indicated that to be effective, HIV/AIDS prevention programme must assess the gap in scientific knowledge and beliefs, and clarify misconceptions, reinforce school programmes to present clear messages about the transmission of HIV/AIDS and utilize television to teach adolescents.

**Harvey B, stuart J, T. (2000).** A community intervention trial was undertaken to evaluate the effectiveness of a high school drama-in-education programme. Seven pairs of secondary schools were randomized to receive either written information about HIV/AIDS or the drama programme. Questionnaire surveys of knowledge, attitude and behaviour were compared before and 6 months after the interventions. 1080 students participated in the first survey and 699 in the second. Improvements in knowledge (P=0.0002) and attitudes (P<0.00001) about HIV/AIDS were
demonstrated in pupils at schools receiving the drama programme when compared to pupils receiving written information. These changes were independent of age, gender, school and previous sexual experience. In schools receiving the drama programme, sexually active pupils reported an increase in condom use (P<0.01). It is important to provide resources to sustain such programme and to obtain stronger evidence of effect on behaviour by measuring changes in HIV incidence.

**Ganguli SK and et al (2002)** in this study a total of 313 undergraduate students, 132 males and 181 females of the colleges of Nashik and Talegaon of Maharahtra were surveyed with regard to awareness about AIDS. They were aware that people indulging in sexually promiscuous relations are at risk of AIDS. But the fact that, it is transmitted by infected blood and from infected mother to child was not widely known, particularly among Arts students. Some misconceptions regarding modes of transmission were observed among few students, like social kissing, sharing utensils/personal items, using common swimming pools and insect bite spreads the infection. Attitude towards HIV infected AIDS patients were not sympathetic. Overall knowledge of Science students were better compared to Commerce and Arts students. Confusion about mode of transmission and prevention of the disease existed. The need for health education for these students was well felt.

**Farid R and Choudhry AJ (2003)** conducted the study to determine the level of awareness about HIV/AIDS infection among female college students of Lahore by cross-sectional survey. In
this study, a total of 600 students were interviewed with the help of anonymous semi-structured questionnaire from September 1999 to November 1999. 95% students had heard about HIV/AIDS and its presence in Pakistan, 61.7% students knew that HIV/AIDS is caused by germs and 91.2% knew about its transmissibility. Over 70% of students knew that HIV can be transmitted through sexual contact, infected blood transfusion, and re-use of infected injection needles. Moreover, only 19.2% mentioned ear/nose piercing with infected needles while 46.8% mentioned breast feeding as sources of transmission of HIV/AIDS, however 57% were of the view that second hand clothing cannot spread AIDS. Individuals having multiple sexual partners (78.2%), drug addicts (38.8%), homosexuals (39.2%) commercial sex workers (52.2%) and health care workers (16.2%) were identified as high risk groups. Regarding prevention of AIDS 61.0% mentioned avoiding promiscuous sex, 49.3% knew use of condoms and 60.2% were aware that AIDS can be prevented by avoiding homosexuality. 68% and 70.2% students respectively held the view that avoiding used needles for injection in hospitals and laboratories for screening blood or blood products can prevent AIDS, while 78.2% and 55.8% respectively knew that there is no cure or vaccine available for AIDS. Majority of the students (71.5%) have discussed AIDS with their friends while discussion with siblings, parents and teachers was not common.

Tavoori et al (2004) states that young people are of particular importance in state policies against Acquired immunodeficiency syndrome (AIDS). The study intended to assess the knowledge and attitude of high school students regarding
AIDS in Iran. Through a cluster-sampling, 4641 students from 52 high schools in Tehran were assessed by anonymous questionnaires in February 2002. The students have identified television as their most important source of information about AIDS. Only a few students answered all the knowledge questions correctly, and there were many misconception about the routes of transmission. Mosquito bite (33%) public swimming pools (21%) and pubic toilets (20%) were incorrectly identified as routes of transmission. 46% believed that human Immunodeficiency Virus positive (HIV positive) students should not attend ordinary schools. Most of the students wanted to know more about AIDS. In this study the knowledge level was associated with students’ attitudes and discipline (p<0.001). Although the knowledge level seems to be moderately high, misconceptions about the routes of transmission were common. There was a substantial intolerant attitude towards AIDS and HIV positive patients. The researchers recommend that strategies for AIDS risk reduction in adolescents be developed in Iranian high schools.

**Chernoff RA Davison GC (2005)** reports that the study evaluated the ability of a 20-minute self-administered intervention to increase HIV/AIDS risk reduction among sexually active college students. The intervention presented normative data on the relatively low prevalence of HIV risk behaviours among college students for the purpose of conveying the idea that risk reduction was the prevailing social norm among their same age group. The intervention also invited students to select specific risk reduction goals to be implemented over a 30 day follow-up period. Participants (N=155) were assigned in alternating order to receive
either the intervention or a control condition that entailed reading a general AIDS information pamphlet. Results were partially moderated by gender. Compared with men in the intervention group reported significantly higher condom use, whereas women in the intervention group reported significantly fewer sexual partners.

**Tourse et al (2005)** Conducted a descriptive transversal survey with a single data collection phase in 13 schools in Abidjan Ivory Coast. The purpose of the study was to evaluate the awareness, attitudes and practices of teenagers with regard to HIV/AIDS. Most respondents (66.5%) were female. Mean age was 16.32 years (range, 13 to 19 years) most respondents stated that they had heard about AIDS and demonstrated good factual knowledge. The most frequently mentioned method of prevention was condom use (89.2%) a total of 338 (56.1%) had already experienced sexual intercourse. However most sexually active respondents stated that they did not always use condom.

**Chatterjee et al (2001)** A study in which the higher secondary school students and their teachers assessed. Their knowledge about AIDS and attitude towards AIDS patients also assessed. Regarding AIDS-its general aspects, transmission and prevention, girls had higher and clear knowledge than boys and 20.3% of teachers had positive attitude towards nursing an AIDS case. It is suggested that schools have to device ways to open up more effective communication with students in relation to education on sex and AIDS training. Teachers should be
emphasized on AIDS, who in turn teach the students in a correct way.

**Squassi A et al (2003)** conducted a study with an aim to evaluate the knowledge, behaviour and attitudes through the survey, by 12,000 university students going in for compulsory medical check-up at the health and social welfare office. 2000 cases were selected by simple randomized sampling and statistically analyzed. 87.2% of the population understudy was between 18 and 27 years old, the students knowledge of the subject was acceptable, percentage of respondents who reported of having sexual intercourse with more than one person decreased as the number of sexual partners in a year increased less than 1.5% explicitly stated being homosexual or bisexual 53.9% of the men and 46.7% of the women claimed they always used condoms, analysis of the perception of their own risk showed that 75% considered they were not at risk between 95.8% and 98% were in favour of developing educational-preventive activities and 64.2% thought that compulsory AIDS screening for job applications or for the candidates for educational courses, was discrimination.

**Ergene T et al (2005)** in a study have assessed impact of peer education and single-session educational lectures on HIV/AIDS knowledge and attitude change among university students (157 male, 230 female; mean age = 20) on the campuses of two metropolitan state universities in Ankara, Turkey. The students were randomly selected to participate in peer education (n=204), single-session lecture (n=74) or wait-list control (n=109) groups. Statistical analyses revealed significant differences in
knowledge and attitude, personal behaviour, and awareness of HIV/AIDS. Both the peer education and HIV/AIDS lecture strategies were more effective in eliciting change in students knowledge and attitudes than the control condition (p>.05). Male and female students in both experimental group showed higher attitude scores compared with students in the control group.

**Lkeehebelu Udigwe GO and Lkeehebelu N Imoh LC (2006).** The objective of this study was to determine the level of knowledge, attitude and practice of voluntary counseling and testing (VCT) for HIV/AIDS among undergraduates in a Nigerian tertiary institution. This was a cross sectional study using a multistage sampling method to enroll students from different levels of the national diploma programme into the study. A structured questionnaire was administered to 260 students with response rate of 70% only, 115 (63.2%) of the students were aware of VCT with 68 (59.1%) having heard of it at least one year prior. The mass media was the highest source of information on VCT. Most of the students did not know where VCT services could be obtained and knowledge of what VCT entails was also low. However 127 (69.8%) students approved the necessity of counseling prior to testing and 117 (64.3%) were ready to take a positive result in goodfate. At least one of every four students (54 of 182) had been sexually active within three months preceding the study, only 48 (26.4%) students had taken an HIV test at one time or the other before the study. Majority (62.5%) of those who had been tested went for the screening just to know their HIV status premarital testing (18.8%) was the second commonest reason for taking an HIV test. Majority of the respondents (74%)
were willing to go for VCT. Among those who were not willing to go for VCT, the commonest reason given was that they were certain that they were not infected. This study highlights the need to step up efforts to increase the students’ awareness of VCT deepen their knowledge and create the right attitude towards the mass media and religious bodies teaching on HIV/AIDS and VCT should also be incorporated into the school curriculum.

**Jodati AR et al (2007)** conducted the study with the aim to assess the impact of an educational course on knowledge and attitude of students regarding HIV/AIDS prevention in Tabriz Iraan. The study was conducted by self-assessment technique among the university students before and after an educational training programme. The findings showed that the knowledge of students increased significantly (P<0.05), the attitude to the problem improved positively in the subjects (P<0.05). It is concluded that short-term training course and continued education should be provided to young students through the course materials in the universities and schools promoting the awareness and attitude to this ever-increasing health problem.

**2.8 Health professionals and HIV/AIDS.**

**Moore AR and Williamson DA (2003)** conducted the study to explore the impact of cultural, institutional and socio-economic factors in fighting against HIV/AIDS. 13 health professional and 17 non-health professionals who work with people living with HIV/AIDS were interviewed in June and July 2002 in Lome, Togo. The study found that, in Togo there were some cultural, socio-economic and institutional practices that put Togolese at risk of
contracting HIV and complicate the care of those who become infected. People with HIV/AIDS face socio-economic, emotional and psychological battles as they attempt to deal with their physical health and the social reactions to such stigmatizing disease. In order to control the spread of HIV/AIDS, people living with HIV/AIDS, family caregivers, traditional healers as well as the public must be educated about the importance of preventing the disease and how each group can help achieve success in its control.

**Onighogi and Micttola E.L. (2006)** Reports that 162 volunteer medical students at the University of Kuopio in the 2\(^{nd}\) and 5\(^{th}\) years of training filled self-administered questionnaires. The overall response rate among the 2\(^{nd}\) year students was 77\% and among the 5\(^{th}\) year students 70\%, knowledge was scored on a percentage scale. The mean score on general knowledge about HIV among 2\(^{nd}\) year students was 75.6 (SD=0.23) while in the 5\(^{th}\) year it was 87.8 (SD 0.18). 54 students (77\%) from the 5\(^{th}\) year and 66 (72\%) from the 2\(^{nd}\) year indicated their willingness to participate (WTP) in AIDS vaccine trials (p=0.09). Medical curricula should be constantly revised to keep medical students up-to-date about recent advances in HIV/AIDS.

**Araujo MF et al (2000)** reports that, the development of educational resources to mediate action in health education and AIDS prevention has been a challenge to health educators. The data was collected from a group of students (180), aged 13 to 19 years, from the period of 1995 to 1997. During four workshops, according to a predefined scheme the results dealing with the
meaning of the game, place of action and social environment were obtained from the teenagers while they were engaged in the games and further analysed by them, resulting in the formulation of (30) educative games. The authors conclude that the proposal is favourable participatory action, encouraging during its entire process the development of intellectual and creative skills, by way of mobilizing human capacities and exercising associations related to the AIDS epidemic. Due to its clarity, the authors considered the proposal scientifically acceptable as a methodological guideline for the elaboration of educative games.

**Basavavya et al (2005)** conducted a cross-sectional study among 145 fresh entrants of medical education. It revealed that 99% of boys and 98% of girls were aware of AIDS by its definition and its causation. 96% of girls, compared to 91% of boys were aware that, HIV spreads by blood. Very few, 5% of girls and 2.5% of boys thought that HIV may be transmitted through health personnel on examination of HIV patient. About 80% of boys and 90% of girls opine that HIV is transmitted through pregnancy.

**Al-Mazrou YY et al (2005)** conducted a study to assess the impact of health education on the knowledge and attitudes of paramedical students in Saudi Arabia toward HIV/AIDS. The intervention shows a positive effect on student’s knowledge regarding means of transmission of HIV and means of protection from HIV/AIDS. Furthermore, it has a positive impact on student’s attitude towards accepting discussion of AIDS topics with others, acceptance of home care for HIV infected individual’s right at work. Health education intervention has a positive impact
on student’s knowledge and attitudes towards HIV/AIDS. The study recommend a nationwide health education programme on HIV/AIDS.

**Shaikh FD et al (2007)** conducted cross-sectional study, assessed the knowledge level of 357 medical students on knowledge and their attitudes about AIDS and HIV enrolled in a medical college in Karachi, Pakistan. Only 6% of the students had complete knowledge on symptoms of HIV/AIDS and 7% of the students had complete knowledge on the modes of transmission of HIV. Statistical analysis of demographic factors affecting knowledge was done. Linear regression and Maentel-Haenszel tests showed that older and clinical students were more knowledgeable regarding symptoms and modes of transmission of HIV/AIDS. The attitude was correlated with knowledge and none of these showed an association. These results on knowledge indicate that, education about HIV/AIDS should be incorporated in the curriculum and interventions must be taken by public health professionals to avoid poor treatment outcomes.

### 2.9 Nurses and prevention of HIV/AIDS.

**Madumo MM and Peu MD (2006)** conducted a qualitative, exploratory and descriptive study for exploring and describing the views of undergraduate nursing students on caring for HIV/AIDS patients. The study population consisted of III B.Sc. Nursing students studying at the Medical University of Southern Africa. Participants were purposively selected. Focus group interviews were used as a data collection instrument. Guided by a group moderator and responding to a central research question,
participants shared their views about caring for HIV/AIDS patients evoked emotions such as fear, anger and frustration among undergraduate nursing students. Students expressed needs such as the acquisition of knowledge and a reduction in the stigmatisation of patients with HIV/AIDS. Curriculum innovation was recommended to improve students knowledge of HIV/AIDS and to ensure the provision of quality care for these patients.

**Mohsen AN (1998)** Conducted a study to assess and upgrade the level of knowledge and attitudes towards AIDS among nurses. The study used pre-test & post-test with no control group design. 434 nurses and 244 Under Graduates were subjected to baseline questionnaire and health education lecture. Mean score of knowledge and attitude were significantly improved pre to post-lecture among both groups (p=0.0001). there were no significant differences in the level of knowledge and attitude pre and post-lecture between the two studied groups (p>0.05). There were statistically significant differences between married and single participants with high level among married (p=0.003).

**Jaafari P (2006)** conducted a study on the knowledge of nurses with regard to HIV infection and their attitude towards patients with AIDS in Iran. A questionnaire-based cross-sectional study was conducted. Study included 1098 nursing staff (registered nurses, registered midwives, and auxiliary nurses) from eight university teaching hospitals affiliated with the Shiraz University of Medical Sciences. Registered nurses and midwives had a significantly higher level of knowledge about HIV infection than did auxiliary nurses. With regard to the causative agent of
AIDS, nurses holding a Bachelor of Science in Nursing or a Master of Science in Nursing had a significantly higher level of knowledge than did Auxiliary nurses.

**Sunitha Singh (2001)** conducted a study on knowledge, attitude and practice on HIV/AIDS among nursing graduates. A study was conducted in a selected hospital of Ludhiana. A descriptive comparative survey approach was used to determine knowledge, attitude and universal precaution practice score about HIV/AIDS among nursing graduates. Purposive random sampling was used for sample and totally 30 nursing graduates participated in the study. A structured knowledge questionnaire comprised 52 items was administered to determine knowledge and attitude. The main findings of study were B. Sc.(N) graduates had significantly higher knowledge than G.N.M. graduates and both the groups of nurses had positive attitude towards HIV/AIDS.

**Indrani Dhasaradhan (2001)** conducted a study to assess the knowledge and attitude of nurses towards HIV/AIDS patient in Employee State Insurance Hospital, Chennai. Samples of 100 were selected. A multiple-choice questionnaire of 35 question related to AIDS was asked. For attitude a five point likert type scale was used. The study shows that knowledge and attitude of nurses in relation to the care of AIDS patients is moderately adequate.

**2.10 Studies related to effectiveness of teaching.**
Sumana (1996) conducted a among married Muslim women to measure the effectiveness of structured teaching programme on HIV/AIDS. The sample consisted of 60 adult women. 30 in experimental group and 30 in control group. A questionnaire was used to collect data. The study revealed that the ‘t’ test computed on the difference between the post test and the pre-test regarding knowledge and attitude (11-24 and 27.5 respectively) in experimental group was statistically significant that the structured teaching programme was effective in increasing the knowledge and attitude of adult women.

Daniel B.C. (1997) conducted an experimental study to evaluate the effectiveness of a planned teaching programme for commercial sex workers regarding prevention and control of HIV/AIDS in a selected district of Maharashtra. The study included randomly selected 60 female sex workers selected from a red light area. Interview schedule was used to collect data. The study revealed that the mean post-test knowledge scores of the experimental group was significantly higher than their mean pre-test knowledge scores t [58]=74.24, p<0.01. Indicating that PTP is an effective method to increase the knowledge and attitude of sex workers on prevention and control of HIV/AIDS.

Ergent et al (2005) conducted a study on preventive effects of peer education single session lecture on HIV/AIDS knowledge and attitude among university student in Turkey. The goal of this was to assess the impact of peer education and single session lecture on HIV/AIDS. The strategies were more effective in eliciting change in student's knowledge and attitude than the
controlled condition (p>.05). Male and female students in both experimental groups showed higher attitude scores compared with all students in control group.

**Jyothi (2000)** conducted a study to assess the effectiveness of a structured teaching programme on knowledge on AIDS and it’s prevention among pre-university students. The sample consists of pre-university students, the tool developed and used for data collection was self-administered knowledge questionnaire. The finding suggests that the pre-university student had inadequate knowledge on AIDS & STP is an effective means in improving knowledge.

**Arunjyothi Baruah and Dr. Pradip Sharma (2004)** carried out a study to determine the effectiveness of planned teaching sessions on HIV/AIDS among late adolescent students in a District of Assam. The mean post-test knowledge score was found to be significantly higher than their pre-test knowledge scores \( t(59)=15.92 \). Further reported that education for adolescent was effective in preventing HIV/AIDS by increased use of contraception and enhanced awareness.

The review of literature consisted on various aspects of “AIDS and its prevention” which was organized into ten different categories. This review has provided an understanding and broadened the investigator’s outlook necessary for the study.

**Conceptual framework**
Conceptual framework facilitates communication and provides for a systematic approach to nursing research, Education, administration and practice (Fawcett, 1995).

The present study is aimed at developing and evaluating the effectiveness of structured teaching programme on Knowledge, Attitude and behaviour regarding AIDS and its prevention for pre-university students at selected colleges.

The conceptual framework selected for the study was based on modified integrated General systems theory by Bertalanfly and Roberta Straessele Abruzzese (RSA) evaluation model. According to Bertalanfly, general system theory is a science of wholeness and its purpose is to unite scientific thing across disciplines and which provides a framework for analyzing the whole in any given system. RSA evaluation Model, consists of four steps namely Content evaluation, Process evaluation, Outcome evaluation and an Impact.

The system acts as a whole. A dysfunction of a part, cause a system disturbance rather than loss of single function. The system activity can be resolved into an aggregation of feedback circuits such as input, through put and output. The feedback circuit helps in the maintenance of an intact system. The investigator found that, it was appropriate concept for the present study.

**Content evaluation (Input):**
This is the first level of evaluation, which measures learner’s satisfaction with the learning experiences: it specifies resources, strategies and design to meet program goal and objectives. In the present study content evaluation refers to:

- Development of the teaching plan
- Development of the structured knowledge questionnaire, attitude scale, behavioural checklist.
- Validation of tool and the teaching plan.
- Seeking permission and consent.

**Process evaluation (through put)**

Process evaluation measures the degree of learners having learned the information imparted during the learning experience. It involved implementing decisions, identifying limitation, recording activities and event intervention. In this study, process evaluation refers to:

- Knowledge, attitude and behaviour assessment before and after structured teaching programme.
- Administering the structured teaching programme on AIDS and its prevention by implementing lecture cum group discussion method and using appropriate A.V. aids.

**Outcome evaluation (out Put)**

This is the end result of the process. It measures the changes that persist after the learning experience. In this study, outcome evaluation refers to:
- Positive outcome-improvement in knowledge, attitude and behaviour scores in post-test.

- Negative outcome-No improvement in knowledge, attitude and behaviour scores in post test.

In this study, the outcome is assessed by using structured knowledge questionnaire, attitude scale and behavioural checklist.

**Impact (Out Put)**

If the outcome is a positive value it indicates improvement in the knowledge, attitude and behaviour scores of Pre-university students in prevention of AIDS. If the outcome is negative value, it indicates that there is no improvement in knowledge, attitude and behaviour scores and feedback is necessary and the system continues. In the present study feedback is not included.

This chapter has dealt with review of literature and the conceptual framework adopted for the study.
Fig 3: Schematic representation of conceptual framework based on general systems theory and RSA evaluation model.

**Input**
1. Development of the teaching plan
2. Development of the structured knowledge questionnaire, attitude scale, and behavioral checklist
3. Validation of tool and the teaching plan
4. Seeking permission and consent

**Throughput**
1. Knowledge, attitude, and behavior assessment before and after the structured teaching program
2. Administering the teaching program by implementing lecture, case discussion, and using appropriate A.V. aids.

**Output**
- **Positive Outcome**: Improvement in knowledge, attitude, and behavior scores in post-test
  - Impact of AIDS and its prevention in pre-university students
- **Negative Outcome**: No improvement in knowledge, attitude, and behavior scores in post-test
  - No impact of AIDS and its prevention in pre-university students

**Key:** Not included in the study