CHAPTER – I
INTRODUCTION

Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome (HIV/AIDS) is a disease of the human immune system caused by the human immunodeficiency virus (HIV) (Sepkowitz K.A, 2001). During the initial infection a person may experience a brief period of influenza-like illness. This is typically followed by a prolonged period without symptoms. As the illness progresses it interferes more and more with the immune system, making people much more likely to get infections, including opportunistic infections, and tumors that do not usually affect people with working immune systems.

HIV is transmitted primarily via unprotected sexual intercourse, contaminated blood transfusions and hypodermic needles, and from mother to child during pregnancy, delivery, or breastfeeding. The most frequent mode of transmission of HIV is through sexual contact with an infected person. Worldwide, the majority of cases of transmission occur through heterosexual contacts (i.e. sexual contacts between people of the opposite sex). However, the pattern of transmission varies significantly between countries. In the United States, as of 2009, most sexual transmission occurred in men who have sex with men (Markowitz, 2007), with this population accounting for 64% of all new cases (Center for Disease Control and Prevention, 2012).

As regards unprotected heterosexual contacts, estimates of the risk of HIV transmission per sexual act appear to be four to ten times higher in low-income
countries than in high-income countries. In low-income countries, the risk of female-to-male transmission is estimated as 0.38% per act, and of male-to-female transmission as 0.30% per act; the equivalent estimates for high-income countries are 0.04% per act for female-to-male transmission, and 0.08% per act for male-to-female transmission. In settings involving commercial sex worldwide, risk of female-to-male transmission has been estimated as 2.4% per act and male-to-female transmission as 0.08% per act (Boily MC, et. al., 2009). The risk of transmission from anal intercourse is especially high, estimated as 1.4–1.7% per act in heterosexual as well as homosexual contacts (Beyrer, C. et. al. 2012). While the risk of transmission from oral sex is relatively low, it is still present (Yu M and Vajdy M, 2010). The risk from receiving oral sex has been described as "nearly nil" (Stürchler, Dieter A. 2006) however a few cases have been reported.

Risk of transmission increases in the presence of many sexually transmitted infections and genital ulcers. Genital ulcers appear to increase the risk approximately fivefold. Other sexually transmitted infections, such as gonorrhea, chlamydia, trichomoniasis, and bacterial vaginosis, are associated with somewhat smaller increases in risk of transmission (Dosekun O and Fox J, 2010). The viral load of an infected person is an important risk factor in sexual as well as mother-to-child transmission. During the first 2.5 months of an HIV infection a person's infectiousness is twelve times higher due to this high viral load. If the person is in the late stages of infection, rates of transmission are approximately eightfold greater.
Rough sex can be a factor associated with an increased risk of transmission. Sexual assault is also believed to carry an increased risk of HIV transmission as condoms are rarely worn, physical trauma to the vagina or rectum is likely, and there may be a greater risk of concurrent sexually transmitted infections (Draughon JE and Sheridan DJ 2012).

1.1 HIV/AIDS Intervention in Crisis

At the end of 2002, there were 42 million people worldwide living with HIV/AIDS. The long-term consequences of HIV/AIDS are often more devastating than the conflicts themselves: mortality from HIV/AIDS each year invariably exceeds mortality from conflicts. Most people are already living in precarious conditions and do not have sufficient access to basic health and social services.

During a crisis, the effects of poverty, powerlessness and social instability are intensified, increasing people’s vulnerability to HIV/AIDS. As the emergency and the epidemic simultaneously progress, fragmentation of families and communities occurs, threatening stable relationships. The social norms regulating behaviour are often weakened. In such circumstances, women and children are at increased risk of violence, and can be forced into having sex to gain access to basic needs such as food, water or even security. Displacement may bring populations, each with different HIV/AIDS prevalence levels, into contact. This is especially true in the case of populations migrating to urban areas to escape conflict or disaster in the rural areas.
As a consequence, the health infrastructure may be greatly stressed; inadequate supplies may hamper HIV/AIDS prevention efforts. During the acute phase of an emergency, this absence or inadequacy of services facilitates HIV/AIDS transmission through lack of universal precautions and unavailability of condoms. In war situations, there is evidence of increased risk of transmission of HIV/AIDS through transfusion of contaminated blood.

The presence of military forces, peacekeepers, or other armed groups is another factor contributing to increased transmission of HIV/AIDS. These groups need to be integrated in all HIV prevention activities.

Recent humanitarian crises reveal a complex interaction between the HIV/AIDS epidemic, food insecurity and weakened governance. The interplay of these forces must be borne in mind when responding to emergencies.

There is an urgent need to incorporate the HIV/AIDS response into the overall emergency response. If not addressed, the impacts of HIV/AIDS will persist and expand beyond the crisis event itself, influencing the outcome of the response and shaping future prospects for rehabilitation and recovery. Increasingly, it is certain that, unless the HIV/AIDS response is part of the wider response, all efforts to address a major humanitarian crisis in high prevalence areas will be insufficient.
Prevention

As there is no cure for AIDS, prevention of HIV infection becomes extremely important in controlling the disease. Efforts to prevent the spread of AIDS include:

- Restricting sexual activity to a single partner and practicing safer sex (i.e., always using a condom). Besides avoiding the risk of HIV infection, condoms are successful in reducing other sexually transmitted diseases and unwanted pregnancies. Before engaging in a sexual relationship with someone, getting tested for HIV infection is recommended.
- Avoiding needle sharing among intravenous drug users.
- Donating one's own blood before planned major surgery to prevent risk of infection from a blood transfusion, although blood supplies are extremely safe in the developed world.
- Practicing universal safety precautions when handling body fluids or needles. Healthcare professionals, first responders, and teachers, for example, are now trained in these precautions.
- Testing for HIV infection by anyone how suspects infection. If treated aggressively and early, the development of AIDS may be postponed. If HIV infection is confirmed, it is also vital to let past sexual partners know so that they can be tested and receive medical attention.
Vaccination

As of 2012 there is no effective vaccine for HIV or AIDS. A single trial of the vaccine RV 144 published in 2009 found a partial reduction in the risk of transmission of roughly 30%, stimulating some hope in the research community of developing a truly effective vaccine. Further trials of the RV 144 vaccine are ongoing Reynell L and Trkola A, 2012.

1.2 Theoretical Background

There has been a rapid growth in the population of India a part from the growth of urbanization and modernization. As a result, the illegal contacts between male and female are increasing day by day. In this connection people are facing socio cultural problems, among which prostitution is one. In olden days the extra marital relations were made by males with prostitutes in a customer way called Devadasi system and that has become a profession for livelihood in modern India. Today, the Government has banned this system throughout the country. So the illegal contacts are increased among people to satisfy their needs. This is the main source to spread the deadly disease HIV/AIDS. Therefore, woman is the main thing which causes in production of HIV/AIDS virus. A survey conducted on the occasion of the world conference of the U.N decade for women held in Copenhagen in 1980, it was revealed that women and girls constitute half of the world's population. They contribute to 2/3 of the world's work hours. They receive only a 10\textsuperscript{th} of the world's income and own less than 100\textsuperscript{rd} of the world's property (Kamala Gupta, 1956). In the world population, 72
percent of women are facing poverty. The literacy rate of women in our state is below forty percent. Being innocent and ignorant women are being led by these conditions to entertain illegal contacts with male (Bhagya Lakshmi, 2004).

The question of sex has confounded man and engaged his attention and concern perhaps since early man. A mystery that it was to primitive man compared to his civilized counterpart, sex presented the problem of how to discipline and organize it so as to promote, at least to some extent, cultural harmony and well being. So, the institution of marriage with an attendant code of morality evolved into practice. When marriage becomes the rule, sex outside the matrimonial bonds come to be looked upon as sinful, immoral, illegal and so on. However, as marriage could not completely meet the sexual needs of human being, the illegal contacts arose in the society to satisfy the extraordinary sexual requirements of people. While marriage is the product of civilization, illegal contact is it's by-product. (Punekar and Rao, 1967).

The Vedas, earliest of the known Indian literature, abound in reference to extra marital affairs, the present day illegal contacts are established through many sources like pubs, clubs etc. This is continuing since the times of Vedas and Puranas.

Thus neither extra marital affairs nor the illegal contacts are new phenomenon. They are as old as the institution of marriage or, to say as old as, human history or civilization, in the sense that they have been in existence since society attempted, for societal gains, to regulate control sex relationships through the institution of marriage and family, though prostitution then did not have the
stigma attached to it now. When sex behavior was institutionalized through marriage, in certain sections of society usually in the middle and upper classes a woman’s chastity before marriage, and complete marital fidelity and strict confinement to the role of housekeeper and mother after marriage, were over emphasized and valued. Also, the non-adherence to these socio-cultural norms and conduct by a woman brought her not only severe socio-cultural disapproval but dire penal site and socio cultural ostracism. On the other hand, concession in sex was granted to men because of the prevalent double standards of sexual morality (Patai and Raphael, 1967, and Ranganayaki, 1958). This inversion of socio-cultural values depended on a strong sense of masculine superiority and on women’s oppression, which emphasized that wives are meant only for procreation and looking after the home and family while certain other women are meant for sexual pleasure. And these two almost contradictory moralities could be maintained only if men were provided with sexual objects outside their own class (Patai op. cit). This gave rise to a special class of women who are supposed to cater to sexual companion ship and even intellectual need and demands of men, such demands of whose could not be met with in marriage. This contradiction caused the middle upper classes to consider sexual relation (illegal contact) as an indispensable institution.

In contemporary industrial societies it is condemned mainly because the high degree of sexual promiscuity involved in it fulfils no publicly recognized societal goal. At the same time there is enough evidence to suggest that even while illegal contacts in ancient legitimate, it was not wide-spread and it was only
from a small section of aristocracy that its clients were drawn and that only the rich could afford the luxuries of a cultivated courtesan.

In India, the pure commercialization of prostitution was picked up speed by the beginning of the 17th century. When both parties exploited women sexually, whether individually by themselves or through someone else, for a purpose not socially acceptable, and having profit motive as the guiding principle of both parties, the one for pleasure and the other for money. From the late 19th century to 21st century, owing to the rapid urbanization and industrialization, development of tourism and other factors prostitution got impetus, and the number of brothels came into existence for the entertainment of foreigners. Most of the women were fallen through various causes like poverty, over sexuality, negligence by the family and society and certain social and cultural institutions like *Jogin* system in Karnataka and Andhra Pradesh. This kind of activities are the roots for creation and spread of HIV/AIDS in the society.

Illegal contact is sexual intercourse with a person for which getting satisfaction or payment is made either in kind or in cash (Joardar, 1986). It may be usually regarded as the act of a female who hires her body in exchange of cash payment or payment in kind or to mutual satisfaction with male partner. It may also be regarded as the act of sexual intercourse with either people of same sex or opposite sex. Or else it can be regarded as the sexual pleasure given to men by women in exchange of satisfaction. The term ‘sexual relation’ is not a simple one (Nag, 2001).
From behavioral point of view, illegal contact can be defined as the act or practice of person, female or male, who for some kind of reward monetary otherwise – engage in sexual relations with a number of persons, who may be of the opposite or same sex. Unless otherwise stated, in reality prostitution implies women providing sexual pleasure to men in exchange of cash or kind of satisfaction. ‘Sexual relations’ is not a very precise term. Ordinarily, it means sexual intercourse or more precisely, vaginal and anal intercourse. But other sexual relations may involve exchange of cash or kind- for example, oral sex, masturbation, petting, deep kissing and phone sex. Definition of prostitution in India common parlance is quite narrow. It is regarded as the act of a female who hires her body to a number of males for sexual intercourse in exchange of money.

The existence of sexual relations in a society depends upon: (1) The presence of some customary form(s) of marriage, particularly monogamous between a man and a woman, as well as socio cultural structures against marital infidelity of women and (ii) strict observance of pre-marital chastity of women. It might have taken thousands of years for human societies to develop varieties of marriage institutions. There is no evidence of any society in the contemporary world that does not practice any customary form of marriage and also does not have any control over sexual relationship between a man and a woman outside marriage. However, societies may vary considerably in strictures against or toleration of pre-marital and extra-marital sexual relations between men and women. In general, so-called tribal society in Africa and Pacific Islands in which
pre-marital sexual experience has been quite common place. Moreover, in some of these societies, women with such experience were preferred for marriage purpose. In these societies prostitution is reported to have developed only after sailors, traders and other outsiders started hiring native women to become their ‘temporary wives’.

1.3 Origin and Development of HIV

HIV was first identified in the United States in 1981 after a number of gay men started getting sick with a rare type of cancer. It took several years for scientists to develop a test for the virus, to understand how HIV was transmitted between humans, and to determine what people could do to protect themselves. During the early 1980s, as many as 150,000 people became infected with HIV each year. By the early 1990s, this rate had dropped to about 40,000 each year, where it remains today (HIV Care Link, 2011).

HIV is the virus that causes AIDS. HIV is different from most other viruses because it attacks the immune system. The immune system gives our bodies the ability to fight infections. HIV finds and destroys a type of white blood cell (T cells or CD4 cells) that the immune system must have to fight disease (Avert, 20001).
HIV allows itself to be "eaten" by the defense cells and this way it gets into the defense cells of the human body. At the same time the virus brings along the enzyme "reverse transcriptase" which transforms the genetic material of the virus itself (RNA) into the human genetic material (DNA). The genetic material of the virus is then built into the one of the host cell, where it can lie dormant for many years. When replicating, the virus tricks the defense cells in the same way. If the defense cell receives a command to replicate (for example to kill HIV or other viruses or bacteria), this triggers the replication of HIV. While replicating, the virus uses the host cell for its own purposes, exploiting its nutrients. Thousands of HIVs are immediately formed, destroying the defense cells (NIAID, 2001).

The origin of AIDS has presented numerous puzzles to scientists since the first recognized cases appeared in the early 1980s. Until 1984 its cause was the subject of fierce debate. Scientists, public health authorities and gay community leaders blamed everything from a promiscuous flight attendant to a suspect experiment involving the clotting factor given to hemophiliacs. There was a
possibility later proven to be the case that a handful of cases known in 1981 were the first of many, that an infectious agent was responsible. At that time, health experts had no idea how rapidly the disease was spreading. It so happened that the new syndrome exceeded their worst fears. That report produced a crescendo of activity by researchers. And in the search for the cause of AIDS, two labs and the titanic egos of the men that ran them took center stage. Dr. Luc Montagnier of the Pasteur Institute in Paris and Dr. Anthony Gallo of the National Cancer Institute in Washington both raced to find the cause of the disease (Robert E. Willner, 1994).

On January 23, 1983, Montagnier found a suspect virus he called LAV (Lymphadenopathy Associated Virus). Montagnier published his findings in May 1983 so that other researchers could test his results, a standard procedure. In July, the Pasteur Institute sent a sample of LAV to Gallo. Another sample of LAV was sent in September, and by December, Gallo’s lab was successfully cultivating LAV. But Gallo had his own theory of what caused AIDS. A few years earlier, in his search for the cause of cancer, Gallo had discovered two retroviruses that looked similar, which he called HTLV-1 and HTLV-2 (Human T-cell Leukemia Virus). In December 1983, he submitted a paper for publication proposing the theory that an HTLV-type retrovirus was the cause of AIDS. Then, on April 23, 1984, Margaret Heckler, the secretary of health and human services, announced that Gallo had isolated the virus which caused AIDS, that it was named HTLV-III, and that there would soon be a commercially available test able to detect the virus with essentially 100 percent certainty (Lisa Rainey, 2006)
Dr. Gallo stood before the press conference at the National Cancer Institute to announce that he had discovered the virus. What he neglected to mention was that Montagnier had also identified what turned out to be the same virus. The two institutes had previously shared samples; they agreed to publish together and even make a joint announcement. But when the press got wind of the news, the NCI felt compelled to proceed without the French.

At the press conference, Gallo showed pictures of HTLV-III. But it didn’t look anything like HTLV-1 or HTLV-2, and it was hard to see how they could be of the same family. As it turned out, the picture of HTLV-3 was actually a picture of the LAV virus sent to Gallo by Montagnier. The cause of AIDS had been discovered by Gallo. The French didn’t think so. The picture of Gallo’s HTLV-3 was indisputably a picture of Montagnier’s LAV virus. On the same day Gallo announced that he had found the cause of AIDS, he filed a U.S. patent application for a blood test that would detect signs of the virus in people. By May 17, private companies were already applying for licences to develop a commercial test that would detect evidence of the virus in blood. In addition to its usefulness for patients, a test was wanted to screen the nation’s supply of donated blood (a bid.).

In 1985, a blood test, ELISA, became available that measures antibodies to HIV, which thereby detects the body’s immune response to HIV. This blood test remains the primary method for diagnosing HIV infection. But there was also considerable and often acrimonious controversy, including accusations that Gallo
improperly used a sample of HIV produced at the Pasteur Institute. And so began a three-year, high-level diplomatic negotiation between the U.S. and France. The controversy which would embroil the American scientist’s career for almost the next decade began when the United States government denied the French scientists a patent for the AIDS test and awarded one to Gallo’s team instead. The patent would be worth about $100 million a year in sales and $100,000 personally to Gallo. The Pasteur Institute challenged the patent in court. Gallo did not deny that Montagnier had preceded him in isolating the virus, but he argued that it was proof of the causal relationship and the development of the blood test which were most important, and he maintained that these advances had been accomplished using a virus which had been independently isolated in his laboratory Charles (L. Geshekter, Sam Mhlongo, 2000).

This first stage of the controversy ended in a legal settlement that was highly unusual for the scientific community: Gallo and Montagnier agreed out of court to share equal credit for their discovery. This settlement followed a review of records from Gallo’s laboratory and rested on the assumption that the virus Gallo had discovered was different from the one Montagnier had sent him. The two scientists continued to dispute each other’s claims until 1987, when they finally agreed to share credit for the discovery of HIV after the president of the United States and the prime minister of France announced a joint agreement on the issue the first time a medical research question had reached this level of political negotiation. More important, the identification of HIV provided a specific target for blood-screening tests and for scientists around the world conducting
research to defeat AIDS. In November 1990, the Office of Scientific Integrity at the National Institutes of Health commissioned a group at Roche to analyze archival samples established at the Pasteur Institute and the National Cancer Institute between 1983 and 1985. They concluded that the origin of the HIV isolate discovered by Gallo was the same as that discovered by Montagnier (Lisa Rainey, 2006).

Today it is generally agreed that Montagnier’s group was the first to identify HIV, although Gallo’s group insists it contributed significantly to demonstrating that it causes AIDS. Furthermore, Gallo’s group claims they were the first to grow the virus in an immortalized cell line, leading to the development of blood tests for HIV and the ability to screen donated blood for this virus. Also, Gallo insisted the work of Montagnier who relied on a technique previously developed by Gallo for growing T cells in the laboratory (L. Geshekter, Sam Mhlongo, 2000). Gallo has often been criticized for being extremely competitive and has been accused of stealing discoveries from others.

In 2002 Gallo and Montagnier together announced their partnership in a global research endeavor designed to speed the discovery of AIDS vaccines believed by scientist worldwide to be our greatest hope in halting the HIV/AIDS epidemic worldwide. Created under the World Foundation for AIDS Research and Prevention working under the auspices of UNESCO, the Program for International Viral Collaboration will be co-directed by the two pioneering scientists, both universally recognized for their contributions to AIDS research
over the last two decades. “HIV/AIDS is worse. It is a chronic disease with no known cure and, like the common flu, continues to present new strains, making it difficult to treat, prevent, understand or anticipate,” Dr. Gallo said. Dr. Montagnier echoes this sentiment. “HIV/AIDS is presently the greatest of threats to mankind and, unlike the Plague, it will not go away. This will occur only when medical science develops a treatment accessible to all and a successful vaccine to prevent infection” (University of Maryland Medical System, 2002).

Researchers have worked to pinpoint the origin of the virus. In 1999, an international team of researchers reported that they discovered the origins of HIV-1, the predominant strain of HIV in the developed world. A subspecies of chimpanzees native to west equatorial Africa was identified as the original source of the virus. The researchers believe that HIV was introduced into the human population when hunters became exposed to infected blood. HIV transmission is driven by changes in migration, housing, travel, sexual practices, drug use, war, and economics that affect both Africa and the entire world. Scientists identified a type of chimpanzee in West Africa as the source of HIV infection in humans. The virus most likely jumped to humans when humans hunted these chimpanzees for meat and came into contact with their infected blood. Over several years, the virus slowly spread across Africa and later into other parts of the world. AIDS cases began to fall dramatically in 1996, when new drugs became available. Today, more people than ever before are living with HIV/AIDS. CDC estimates that about 1 million people in the United States are living with HIV or AIDS. About
one quarter of these people do not know that they are infected: not knowing puts them and others at risk.

1.4 The Current Global Prevalence

Globally, there were an estimated 2 million [1.8 million– 2.4 million] adolescents aged 10–19 living with HIV in 2009. An estimated 1.5 million [1.4 million–1.7 million] of these adolescents were in sub-Saharan Africa, and 1.2 million [1.0 million–1.4 million] were in Eastern and Southern Africa alone. The highest numbers of adolescent boys and girls living with HIV are found in South Africa and Nigeria, as well as in India, Kenya, Malawi, Mozambique, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe.

According to estimates from the Joint United Nations Programme on HIV/AIDS, 47 million people will be expected to live with HIV/AIDS at the end of the 2010 (UNAIDS, 2010). All over the world, people with HIV/AIDS in 2009 are about 39.5 million out of which, women constitute about 17.7 million. In the past one year 3 million deaths occurred globally, from HIV/AIDS despite anti retroviral therapy, which reduced Acquired Immune Deficiency Syndrome and its related deaths in the richer countries. Deaths among those already infected, will continue to increase for some years even if prevention programmes manage to cut the number of new infections to zero. However, with HIV positive population still expanding the annual number of AIDS deaths can be expected to increase for many years. The overwhelming majority of people with HIV, 95 percent of the globe, live in the developing world. The proportion is set to expand further as
infection rates continue to rise in countries, where poverty, poor health care systems and limited resources for prevention led to the spread of virus. The national adult HIV prevalence in India is below one percent although in five states an estimated prevalence of over one percent among adults is reported. The increasing warning signals that serious HIV/AIDS outbreaks occur threatening several countries. Injecting drug use and sex work is so pervasive in some areas that even countries with currently low infection levels could see epidemics surging suddenly. Statistics prove that both the spread and impact of HIV/AIDS is not random, it disproportionately affects women and adolescent girls who are socially-culturally, biologically and economically more vulnerable. The alarming figures show 18.5 million adults (aged 15-49) living with HIV/AIDS are women. In North Africa and Middle East 54 percent of the HIV positive adults are women; in the Caribbean land, the proportion has reached 52 percent. Globally the incidence of HIV/AIDS among women has risen at shocking rate. In the year 1997, 41 percent of the HIV infected adults were women and this figure rose to 49.8 percent in 2001 (UNAIDS, 2002). Women’s empowerment is one of the only AIDS vaccines that are available today, which can fight against HIV/AIDS. Moreover, gender shapes the opportunistic infections that one is offered in life, the roles that one may play and the kinds of relationships that one may have- social norms strongly influence the spread of HIV/AIDS.

In all developing regions except South Asia and Latin America and the Caribbean, the data clearly show the profound vulnerability of adolescent girls to HIV infection. By the age of 19, the combined impact of many factors – biology,
low HIV knowledge and risk perception, such behaviors as early sexual debut and low condom use, structural barriers to access to services and protection, and social norms that perpetuate gender inequality – has already had an effect on adolescent girls, with consequences that will cut short the lives of millions of them or may severely inhibit their ability to achieve their full potential. (UNICEF, 2011).

1.5 The Current Indian Situation

According to the 2010 UNAIDS country report, India’s epidemic is concentrated within Most-At-Risk Populations (MARPs), with prevalence substantially higher among these populations than in the general population. Prevalence also varies dramatically by district, state, and region, with numerous isolated pockets of high prevalence. Approximately 60 percent of people living with HIV/AIDS (PLWHA) live in the six high-prevalence states, although prevalence in the general adult population of these states has recently experienced an overall decline. Even in states with low prevalence, there are pockets of high prevalence, and some are seeing an increase in new infections. Rising trends among Antenatal Care (ANC) clinic attendees have been observed in the low- and moderate prevalence states of Gujarat, Rajasthan, Orissa, Uttar Pradesh, Bihar, and West Bengal. At the national level, trends among ANC clinic attendees and female sex workers (FSWs) appear to be on the decline, although in some parts of southern India, up to 15 percent of FSWs are HIV positive. Trends among injecting drug users (IDUs) vary, with considerable differences
between regions. Trends of increasing HIV prevalence among men who have sex with men (MSM) are generating concern, with estimates from the 2008–2009 National HIV Sentinel Surveillance at 7.3 percent in New Delhi, up from 6.4 percent in 2006. Particularly high HIV prevalence among MSM has been reported in parts of southern India (between 7 and 18 percent) and in rural areas of Tamil Nadu state (9 percent). (UNAIDS/India, 2010).

The Joint United Nations Program on HIV/AIDS (UNAIDS) 2010 report sexual intercourse is the primary mode of HIV transmission in India, accounting for about 90 percent of new HIV infections. More than 90 percent of infected women acquired the virus from their husbands or intimate partners. In most cases, women are at an increased risk not due to their own sexual behavior, but because their partner is an IDU or also has FSWs or MSM as other sex partners. Injecting drug use is the main mode of transmission in the northeastern states, although sexual transmission is increasing. Prevalence rates among IDUs are on the rise in many states, with new regions, such as southern India, also showing upward trends in this group (UNAIDS/India, 2010).

There are various interventions to prevent the HIV/AIDS. Choosing the right mix of interventions is very important in a setting with limited resources and implementation capacity. The researcher had experience in crisis intervention and solving problems from the working experience with people living with HIV/AIDS (Johns Hopkins, 2009). However, it is not clear that which intervention can yield the results they are supposed to yield, especially in the National AIDS
Control Organisation work with all the states including Andhra Pradesh State AIDS Control Society, of A.P maintained that there were no statistics or feedback regarding the effect of these intervention programmes on knowledge, attitudes, and behaviour related to HIV/AIDS issues. An appropriate balance among prevention, treatment, care and mitigation should be based on:

- specific epidemiology of HIV/AIDS, including those who are at risk
- cost-effectiveness of intervention programmes
- implementation capacity
- level of public resources available
- extent to which intervention is a "public good"

In all cases, the most important interventions are: behavior change promotion, condoms, STI management, blood safety, VCT, and harm minimization among IDUs. Care, treatment, support and MTCT prevention will have least impact in countries of low prevalence (less than 5% in any high-risk group), be more relevant where the epidemic is concentrated (prevalence over 5% in a high-risk group, but less than 1% in the general population) and become increasingly important in countries with generalized epidemic (population prevalence over 1%) (World Bank, 2010)

As per the HIV Estimations 2010, India is estimated to have 23.9 lakh people infected with HIV in 2009 at an estimated adult HIV prevalence of 0.31%. Adult HIV prevalence among men is 0.36%, while among women, it is 0.25%.
<table>
<thead>
<tr>
<th>State</th>
<th>Estimated Adult HIV Prevalence</th>
<th>Male (%)</th>
<th>Female (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andaman &amp; Nicobar Islands</td>
<td></td>
<td>0.29</td>
<td>0.15</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td></td>
<td>1.07</td>
<td>0.73</td>
</tr>
<tr>
<td>Arunachal Pradesh</td>
<td></td>
<td>0.2</td>
<td>0.12</td>
</tr>
<tr>
<td>Assam</td>
<td></td>
<td>0.1</td>
<td>0.06</td>
</tr>
<tr>
<td>Bihar</td>
<td></td>
<td>0.26</td>
<td>0.17</td>
</tr>
<tr>
<td>Chandigarh</td>
<td></td>
<td>0.46</td>
<td>0.29</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td></td>
<td>0.34</td>
<td>0.22</td>
</tr>
<tr>
<td>Dadra Nagar Haveli</td>
<td></td>
<td>0.17</td>
<td>0.12</td>
</tr>
<tr>
<td>Daman &amp; Diu</td>
<td></td>
<td>0.18</td>
<td>0.13</td>
</tr>
<tr>
<td>Delhi</td>
<td></td>
<td>0.35</td>
<td>0.23</td>
</tr>
<tr>
<td>Goa</td>
<td></td>
<td>0.58</td>
<td>0.4</td>
</tr>
<tr>
<td>Gujarat</td>
<td></td>
<td>0.44</td>
<td>0.3</td>
</tr>
<tr>
<td>Haryana</td>
<td></td>
<td>0.17</td>
<td>0.07</td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td></td>
<td>0.23</td>
<td>0.16</td>
</tr>
<tr>
<td>Jammu &amp; Kashmir</td>
<td></td>
<td>0.09</td>
<td>0.06</td>
</tr>
<tr>
<td>Jharkhand</td>
<td></td>
<td>0.16</td>
<td>0.1</td>
</tr>
<tr>
<td>Karnataka</td>
<td></td>
<td>0.75</td>
<td>0.51</td>
</tr>
<tr>
<td>Kerala</td>
<td></td>
<td>0.23</td>
<td>0.15</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td></td>
<td>0.23</td>
<td>0.16</td>
</tr>
<tr>
<td>Maharashtra</td>
<td></td>
<td>0.64</td>
<td>0.45</td>
</tr>
<tr>
<td>Manipur</td>
<td></td>
<td>1.89</td>
<td>0.9</td>
</tr>
<tr>
<td>Meghalaya</td>
<td></td>
<td>0.1</td>
<td>0.07</td>
</tr>
<tr>
<td>Mizoram</td>
<td></td>
<td>0.97</td>
<td>0.64</td>
</tr>
<tr>
<td>Nagaland</td>
<td></td>
<td>0.94</td>
<td>0.61</td>
</tr>
<tr>
<td>Orissa</td>
<td></td>
<td>0.35</td>
<td>0.23</td>
</tr>
<tr>
<td>Puducherry</td>
<td></td>
<td>0.33</td>
<td>0.22</td>
</tr>
<tr>
<td>Punjab</td>
<td></td>
<td>0.37</td>
<td>0.26</td>
</tr>
<tr>
<td>Rajasthan</td>
<td></td>
<td>0.22</td>
<td>0.15</td>
</tr>
<tr>
<td>Sikkim</td>
<td></td>
<td>0.07</td>
<td>0.05</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td></td>
<td>0.39</td>
<td>0.27</td>
</tr>
<tr>
<td>Tripura</td>
<td></td>
<td>0.18</td>
<td>0.12</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td></td>
<td>0.11</td>
<td>0.07</td>
</tr>
<tr>
<td>Uttarakhand</td>
<td></td>
<td>0.12</td>
<td>0.08</td>
</tr>
<tr>
<td>West Bengal</td>
<td></td>
<td>0.34</td>
<td>0.23</td>
</tr>
<tr>
<td><strong>INDIA</strong></td>
<td></td>
<td><strong>0.36</strong></td>
<td><strong>0.25</strong></td>
</tr>
</tbody>
</table>

1.6 Conceptual Definition of HIV/AIDS

AIDS is a serious illness that slowly attacks and destroys the body’s immune system. The result is that the body becomes vulnerable to infections (Opportunistic Infections). And concerns, which are not so common in the population. AIDS, i.e. Acquired Immuno Deficiency Syndrome, is not hereditary and is characterized by a number of symptoms occurring to gather. The term syndrome is therefore used for defining AIDS. It is the HIV, that is the Human Immuno Deficiency virus, that finally to a AIDS. All body its presence is particularly high in blood, semen of man, cerebrospinal fluid, and vaginal and cervical secretions of the woman. A person infected with the virus becomes a carrier of HIV and can infect others.

The greatest number of new infections in a single year since AIDS was first officially recognized as a disease in 1981 (Gottlieb et. al., 1981). The search for the identification and nomen-cloture of the agent went on till in 1986 (Coffin, et.al., 1986) the international committee on Taxmony of viruses recommended the name a Human Immuno Deficiency Virus" (HIV) to LAV agent identified and named such by Mont gainer and Coworkers (1983) and HTLVIII isolated and identified by Dr. Robert Gallo and associates (1984) and named as such (Gallo, et.al.,1984). So, it was in 1984-83 that the causative virus was isolated from patients of AIDS and was named HIV in 1986.
Definition

Acquired immune deficiency syndrome (AIDS) is an infectious disease caused by the human immunodeficiency virus (HIV). There are two variants of the HIV virus, HIV-1 and HIV-2, both of which ultimately cause AIDS.

Description

AIDS was first recognized in the United States 1981 in homosexual men. Today is seen in both homosexual and heterosexual men and women. AIDS is the advanced form of infection with HIV virus. This virus may not cause recognizable symptoms for a long period after the initial exposure (latent period). As of early 2009, no vaccine was available to prevent HIV infection. Until such a vaccine is developed, all forms of HIV/AIDS therapy are focused on improving the quality and length of life for people who are infected by slowing or halting the replication of the virus and treating or preventing infections and cancers that often develop in people with AIDS.

AIDS is one of the most devastating worldwide public health problems in recent history. The United States Centers for Disease Control and Prevention (CDC) estimated that in 2006 944,000 people in the United States had been diagnosed with AIDS since the disease was identified in 1981. In 2006, an additional 1-1.2 million Americans were diagnosed as infected with HIV but not yet showing symptoms (HIV positive). However, in early 2009, the CDC issued a statement that they now thought that earlier the HIV-positive estimates were too low, as many more people than were originally estimated are living with unreported or undiagnosed HIV infection.
According to the August 2008 report issued by the Joint United Nations Programme on HIV/AIDS (UNAIDS), as of 2007, approximately 33 million people worldwide are HIV positive. Over half of the 33 million are women and this statistic has remained stable for several years. The highest number of cases is found in sub-Saharan Africa and Southeast Asia.

More than 70% of HIV infections are transmitted through sexual contact. Traditionally in the United States, the majority of cases were found in homosexual or bisexual men. In 2007, about half of new HIV cases were acquired by men having sex with other men. Fewer than 20% of HIV-positive Americans were women. However, this is not the case worldwide, where transmission by heterosexual individuals is common.

Risk Factors

AIDS can be transmitted in several ways. The risk factors for HIV transmission vary according to the method of transmission.

- Sexual contact. People at greatest risk are those who do not practice safer sex by always using a condom, those who have multiple sexual partners, those who participate in anal intercourse, and those who have sex with a partner who has HIV infection and/or other sexually transmitted diseases (STDs). In the United States and Europe, most cases of sexually transmitted HIV infection result from homosexual contact, whereas in Africa, the disease is spread primarily through sexual intercourse among
heterosexuals. Most people with AIDS in the United States are between 25 and 44 years of age.

- Transmission in pregnancy. High-risk mothers include women sexually active with bisexual men, intravenous drug users, and women living in neighborhoods with a high rate of HIV infection among heterosexuals. The chances of transmitting the disease to the child are higher in women in advanced stages of the disease. Breast feeding increases the risk of HIV transmission as HIV passes into breast milk. The rate of pediatric HIV transmission in the United States had decreased substantially because of HIV testing and improved drug treatment for infected mothers, so fewer than 1% of AIDS cases now occur in children under age 15. In the developing world, mother to infant transmission remains epidemic. In 2006, AIDS was the single most common cause of death in children under age 5 in South Africa, while worldwide children account for about 10% of all AIDS cases.

- Exposure to contaminated blood. Risk of HIV transmission among intravenous drug users increases with the frequency and duration of intravenous use, frequency of needle sharing, number of people sharing a needle, and the rate of HIV infection in the local population. In 2006, about 19% of men with AIDS and 25% of women with AIDS contracted the disease through sharing needles during intravenous drug injection. With the introduction of new blood product screening in the mid-1980s, HIV transmission through blood transfusions became rare in the developed
world. However, contaminated blood is still a significant source of infection in the developing world.

- Needle sticks or body fluid splashes among health care professionals. Transmission through these sources accounts for fewer than 0.3% of all HIV infections in the United States. This rate reflects the emphasis on universal safety precautions (e.g., use of gloves, face shields, proper disposal of needles) among health care professionals and first responders.

HIV is not transmitted by handshakes or other casual non-sexual contact, coughing or sneezing, or by bloodsucking insects such as mosquitoes. Therefore, it is clear that sex is one of the main reasons which causes HIV among people.

HIV/AIDS is one of the top 20 causes of death of all men in the world, and among the top 10 killers for certain groups. Especially in United States, the Black men and men who have sex with men have been hit particularly hard. In one recent study, one out of every five men who have sex with men has HIV — and nearly half of them don’t know they have it. But the good news is that anybody can take steps to protect themselves and their loved ones from HIV.

Women exposed to HIV infection through heterosexual contact are the most rapidly growing risk group in the United States. The percentage of AIDS cases diagnosed in American women has risen from 7% in 1985 to about 25% in 2006. According to the CDC, in 2006 approximately 278,400 women in the
United States were living with HIV/AIDS. The rate was highest among black women and lowest among white women. About 75% of these women contracted HIV through high-risk heterosexual activity; almost all of the remainder acquired the infection through needle sharing.

The prevalence of women with HIV in the United States is low compared to the rate in many countries in the developing world. Worldwide about half the people living with HIV are women. According to the United Nations, in 2005 about 59% of women living in sub-Saharan Africa are infected with HIV. The vast majority of them were infected through sex with an infected male partner.

Since AIDS can be transmitted from an infected mother to a fetus during pregnancy or to an infant during the birth process or through breastfeeding, all infants born to HIV-positive mothers are considered a high-risk group. However, prenatal drug treatment of HIV-positive mothers in developed countries has reduced the number of children born infected with HIV. In the developing world, drug treatment is either not available or not affordable. According to the United Nations Children's Fund (UNICEF) worldwide 2.3 million children under age 13 were living with HIV in 2006. The previous year, about 380,000 children died of AIDS and more than half a million children were newly infected. UNICEF estimates that at least 15 million children have lost at least one parent to AIDS.

AIDS is the leading causes of death in children under age five many parts of Africa and Southeast Asia. The interval between exposure to HIV and the development of AIDS is shorter in children than in adults. Infants infected with HIV have a high chance of developing AIDS within one year and dying before
age three. In the remainder, AIDS progresses more slowly; the average child patient survives to about seven years of age. Some survive into early adolescence.

1.7 Causes and Symptoms of HIV/AIDS

AIDS is a disease that can damage any of the body's major organ systems because HIV destroys immune system cells. HIV attacks the body through three disease processes: immunodeficiency, autoimmunity, and nervous system dysfunction.

Immunodeficiency describes the condition in which the body's immune response is damaged, weakened, or is not functioning properly. In AIDS, immunodeficiency results from the way that the virus binds to a protein called CD4, which is primarily found on the surface of certain subtypes of white blood cells. After the virus has attached to the cell's CD4 receptor, the virus-CD4 complex refolds to uncover another receptor called a chemokine receptor that helps mediate entry of the virus into the cell. One chemokine receptor in particular, CCR5, has been the focus of recent research after studies showed that defects in its structure (caused by genetic mutations) result in a slowing or stopping of the progression of AIDS. Scientists hope that this discovery will lead to the development of drugs that trigger an artificial mutation of the CCR5 gene or target the CCR5 receptor.

Once HIV has entered the cell, it can replicate intracellular and kill the cell in ways that are still not completely understood. In addition to killing some lymphocytes directly, the AIDS virus disrupts the functioning of the remaining immune system cells. Because the immune system cells are destroyed, a wide
variety of infections and cancers can take advantage of a person's weakened immune system (opportunistic infections/diseases).

1.8 Signs of HIV/AIDS

When a person has been infected with HIV/AIDS he/she will carry the virus many years before any symptoms develop. A person who is already sick (e.g. With T.B) or weak (e.g. during pregnancy) will develop AIDS faster than somebody who is strong and healthy.

The following are the important preliminary signs of HIV/AIDS

- Heavy loss in weight without any good reason.
- Frequent attacks of fever, diarrhea
- Swelling of glands (especially of throat)
- Sweating at night and body ache.
- Wounds or white patches in the mouth and food pipe.

These signs are common in many other diseases too. HIV/AIDS should be suspected when a person has several of them at the same time and they persist for a long time (Manjit Singh, 1991).

1.9 Modes of Transmission

HIV/AIDS though an infectious disease is not easily transmitted through the environment, e.g., from air, water, food etc. Thus it is not a communicable disease like common cold, influenza, measles or polio virus and other infectious diseases. Only body fluids with a high concentration of virus cause infections. These fluids are blood, semen, and vaginal secretions. There are no well-documented cases where saliva, urine, tears, or nursing HIV/AIDS infected
mothers can also pass HIV/AIDS to their children through breast milk (Rubenson, 1987). The virus enters the body in three major modes of transmission namely sexual intercourse, blood transfusion and infections with infected syringe and needles and during pregnancy and child birth.

Worldwide, sexual intercourse is the least efficient, but most frequent, mode of transmission from man to woman, woman to man, woman to woman. Penetrative vaginal, oral and anal intercourses are the most frequent means of transmission. Risk of male- to- female transmission may be higher than that of female-to-male, but the degrees of risk are not established yet.

Sexual transmission of HIV/AIDS appears to be more efficient when co-factors, assaults on the body that increases susceptibility to HIV/AIDS or stimulates disease which sexually transmitted are present. Although HIV/AIDS is transmitted in the absence of other sexually transmitted diseases, the possibility of sexually transmitted disease that causes genital ulcer is the risk factor for increased infections or increased susceptibility to HIV/AIDS infection. Anal-rectal ulcers also have been implicated in sexual transmission.

The second most frequent means of spreading HIV/AIDS infection-transmission through exchange of infected blood or blood products is the most efficient. The risk of HIV/AIDS infection through blood appears to be related to size of the inoculums. A recipient of a single unit of HIV/AIDS-infected blood has virtually a 100 percent probability of acquiring the infection. HIV/AIDS is transmitted whenever the blood of an HIV/AIDS-infected person enters the system of another person, through transfusion of contaminated blood or use of contaminated syringes and needles as in case of intravenous drug users or accidental inoculation or other skin piercing instruments. HIV/AIDS can be transmitted through the blood products used by persons with hemophilia.
Transmission of infection from mother to fetus during pregnancy is estimated to have an efficient rate, ranging between 30 and 60 percent. Evidence suggests that 25 to 50 percent of all offspring of infected mothers will be infected. The risk of transmission depends on a variety of factors that include the timing of maternal infection (Carballo, 1998). Infection also may accrue from the infant’s exposure to maternal blood during delivery. During birth, infection may also develop from the genital secretion and from mother’s milk after birth. HIV/AIDS will not be spread through casual contact, such as sneezing, touching or sharing utensils or food, or by the use of toilets or swimming pools. People in social contact with persons who have AIDS or infected with HIV are not at risk.
HIV positive cases detected, mother to child transmission accounts for 5.0%, Infected Syringe and Needle 1.7%, Homosexual 1.5% and contaminated blood and blood products account for 1.0% of HIV infections detected during 2011-12.

Source: http://www.medindia.net/health_statistics/general/aidsindia.asp
1.10 HIV/AIDS Treatment

In the early 1980s when the HIV/AIDS epidemic began, people with AIDS were not likely to live longer than a few years. But today, there are 31 antiretroviral drugs (ARVs) approved by the Food and Drug Administration to treat HIV infection. These treatments do not cure people of HIV or AIDS. Rather, they suppress the virus, even to undetectable levels, but they do not completely eliminate HIV from the body. By suppressing the amount of virus in the body, people infected with HIV can now lead longer and healthier lives. However, they can still transmit the virus and must continuously take antiretroviral drugs in order to maintain their health quality.

At present it is evident that there are three major classes of anti-HIV drugs (NIAID, 2002). These drugs are protease inhibitors, Nucleoside analog Reverse Transcriptase Inhibitors (NRTIs) and Non-Nucleoside analog Reverse Transcriptase Inhibitors (NNRTIs). “Protease inhibitors work by preventing HIV/AIDS virus from being successfully assembled by and released from infected CD4+ cells. NRTIs act by incorporating themselves into the genetic material of the virus, thereby halting the viral building process (Richman, 2001) NNRTs stop HIV/AIDS virus production by binding directly onto reverse transcriptase and preventing the duplication of viral genetic materials” (NIAID, 2002).

The National Institute of Allergy and Infectious Diseases (NIAID) conducts and supports basic and applied research to better understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases. For more than
60 years, NIAID research has led to new therapies, vaccines, diagnostic tests, and other technologies that have improved the health of millions of people in the United States and around the world.

NIAID is one of the 27 Institutes and Centers of the National Institutes of Health (NIH). NIH, like the Centers for Disease Control and Prevention (CDC), is part of the U. S. Department of Health and Human Services (HHS). NIH is the primary federal agency for conducting and supporting basic, clinical, and translational medical research, and it investigates the causes, treatments, and cures for both common and rare diseases.

NIAID is focused on finding new and more effective therapies, drug classes, and antiretroviral drug combinations that can extend and improve the quality of life for people living with HIV/AIDS. NIAID supports research that advances our understanding of HIV and how it causes disease, thereby unlocking new targets for drug development. Promising medicines are then tested in human clinical trials to determine whether they are safe and effective. This process usually takes several years to complete before a new therapy is available to the public.
<table>
<thead>
<tr>
<th>Indicator</th>
<th>2010-11</th>
<th>2011-12</th>
<th>2011-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Targeted Interventions established</td>
<td>140</td>
<td>188</td>
<td>170</td>
</tr>
<tr>
<td>STI/RTI patients managed as per national protocol</td>
<td>100 lakh</td>
<td>100.1 lakh</td>
<td>120 lakh</td>
</tr>
<tr>
<td>New Blood Component Separation Units established</td>
<td>12</td>
<td>26</td>
<td>7</td>
</tr>
<tr>
<td>New District Level Blood Banks set up</td>
<td>6</td>
<td>7</td>
<td>22</td>
</tr>
<tr>
<td>Districts covered under Link Worker Scheme</td>
<td>186</td>
<td>179</td>
<td>219</td>
</tr>
<tr>
<td>Clients tested for HIV</td>
<td>111.71 lakh</td>
<td>95.45 lakh</td>
<td>120 lakh</td>
</tr>
<tr>
<td>Pregnant Women tested for HIV</td>
<td>86.49 lakh</td>
<td>66.38 lakh</td>
<td>90 lakh</td>
</tr>
<tr>
<td>HIV+ Pregnant Women &amp; Babies receiving ARV prophylaxis</td>
<td>11,350</td>
<td>11,962</td>
<td>17,500</td>
</tr>
<tr>
<td>HIV-TB Cross Referrals</td>
<td>8.5 lakh</td>
<td>10.48 lakh</td>
<td>9.5 lakh</td>
</tr>
<tr>
<td>ART Centres established (Cumulative)</td>
<td>332</td>
<td>300</td>
<td>340</td>
</tr>
<tr>
<td>PLHV on ART</td>
<td>4,08,815</td>
<td>4,07,361</td>
<td>4,50,000</td>
</tr>
<tr>
<td>Opportunistic Infections treated</td>
<td>2.7 lakh</td>
<td>4.97 lakh</td>
<td>3.1 lakh</td>
</tr>
<tr>
<td>Campaigns released on Mass Media – TV/ Radio</td>
<td>6</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>New Red Ribbon Clubs formed in Colleges</td>
<td>1,200</td>
<td>5,190</td>
<td>1,000</td>
</tr>
<tr>
<td>Persons trained under Mainstreaming training programmes</td>
<td>2,50,000</td>
<td>5,22,337</td>
<td>1,50,000</td>
</tr>
<tr>
<td>Proportion of blood units collected through Voluntary blood donation in NACO supported Blood Banks</td>
<td>80%</td>
<td>79.5%</td>
<td>90%</td>
</tr>
<tr>
<td>Social Marketing of condom by NACO contracted Social Marketing Organisations</td>
<td>22.46 crore pieces</td>
<td>44.72 crore pieces</td>
<td>34.9 crore pieces</td>
</tr>
</tbody>
</table>

**Source:** Avert statistics- 'Annual Report 2010-2011 & NACO Fact Sheet-2012.
1.11 Situation in Andhra Pradesh

While Andhra Pradesh still tops with maximum number of people living with HIV in India, the latest data released by National Aids Control Organisation (NACO) shows HIV dominance in the state has dipped from 0.90% in 2009 to 0.75% in 2011. The National AIDS Control Organisation (NACO), established in 1992, is a division of India's Ministry of Health and Family Welfare that provides leadership to HIV/AIDS control programme in India through 35 HIV/AIDS Prevention and Control Societies, and is "the nodal organisation for formulation of policy and implementation of programs for prevention and control of HIV/AIDS in India" (Nirmala George (2006)).

NACO

The first case of HIV disease was reported in India in 1986. Later that year, the Government of India established a National AIDS Control Committee under the Ministry of health and Family Welfare to formulate a strategy for responding to HIV and AIDS in the country and launched a National AIDS control Programme by 1987.
**NACO** in India established in 1992 by the ministry with a major support from the world Bank is implementing National AIDS Programme. NACO has facilitated the development of 38 state AIDS Control Societies (SACS), which operates in all states and Union Territories and in three cities.

**Phase-wise Implementation by NACO**

**Phase-I** of the programme was from 1992 to 1999. The programs objectives were strengthening the management capacity for HIV control, building Surveillance and clinical management capacity, promoting public awareness of HIV and AIDS and community support, improving blood safety and controlling the spread of sexually transmitted diseases.

**Phase-II** of the programs was from 1999 to 2006. The major objectives were to reduce the spread of HIV and strengthening the country’s response to the
epidemic. The specific objectives were to sift the focus from increasing awareness to changing behaviour through targeted interventions, especially among high risk groups Commercial Sex Workers (CSW’s) truckers, injecting drug users (IDUs) men having sex with men (MSM) and street children. Support decentralization of services to the States encourage, Voluntary Counseling and testing. Support evidence-based reviews and encourage management reforms, such as better managed state AIDS Control Societies.

**Phase-III** of the programme has been launched on 07 July 2007. Its objectives were to strengthen prevention efforts, care and support services, District and State capacities and strategic information management systems.

**NACP III** has a four-pronged approach to halt and reverse the epidemic by 2012. This includes preventing new infections among the high risk groups and the general population through interventions targeted to high risk groups, interventions for bridge populations such as truckers, prison inmates and migrants, integrated counseling and testing centres, improved blood safety, condom promotion, communication, advocacy and social mobilization. Providing care and support to a large number of people living with HIV and AIDS through ART, pediatric ART, centres of Excellence, community care centres and impact mitigation strengthening systems, the infrastructure and human resources for prevention, care and support at the district, state and national level through straitening support and capacity, training, managing programme implementation mainstreaming private sector partnerships, strengthening the strategic
information management system through monitoring and evaluation surveillance and research (Governments of India, 2007).

Andhra Pradesh is also one of the country’s sixth high HIV prevalence states in the country. Based on Sentinel Surveillance data, it is estimated by National AIDS Control Organization that (up to April 2010) so far over 4, 50,000 infections are reported in Andhra Pradesh. Female sex workers are quite high in the State. Coastal districts like Krishna, East and West Godavari, and Guntur registered strong presence of female sex workers and commercial sex trade is quite high in State. Presence of large number of bridge groups (Migrant laborers, Truckers, Construction workers and Street children) are noticed in all these districts and tobacco grading women workers in Prakasam and Guntur. Factors underlying for vulnerability of HIV/AIDS in Andhra Pradesh are high prevalence of paid sex, trafficking of girls and women, vast network of national high ways (4472 km) passing through the state and wide road net work (179980 km) proportionately more number of non-regular sex partners, high incidence of sexually transmitted diseases both among men and women, proportionately lower rates of consistent condom use and high proportion of migrant population.

1.12 Gender and HIV/AIDS

Rather than leaving it as a matter of individual choice and individual blame, it is to be understood in this multi cornered content at the macro, meso and micro-levels that men’s behaviour transmits the virus. The increasing need of the processes of socialization, the existing socio-economic pressures on them
and the re-socialization that changes the condition and the media are to be understood (PANOS&UNAIDS, 2001).

Ignoring the fact that the ratio of infected men versus women 3:1 (71% of those infected are men and 29% are women: NACO, 2005), most of the literature in India is biased towards women. Though most of the HIV/AIDS infected women are monogamous, they got the infection from their non-monogamous husbands. It is obvious in HIV/AIDS literature of ‘women as innocent victims’ versus ‘men to blame’. It is essential to study in a holistic manner, the gender sensitive approach towards both men and women. As a large group of HIV/AIDS infection includes monogamous women, marriage became a threat for men. The rates of infection are dramatically higher for the female sex workers (32-60%), for women in STD clinics (10%) as compared to women in ante-natal clinics (3%) that identify marriage as the determinant of HIV/AIDS transmission is clearly not valid. The correlation between the proportion of adult men and women who are in monogamous relationship in any society and the levels of HIV/AIDS infection is not examined. In spite of the various levels of its breach comparative data across societies emphasis on the lower risk in societies with higher marriage rates and a greater practice of monogamy (Priya, 2001). The extent and the meaning of life-long monogamous relationships in a society are identified by the macro cultural context. The anthropological and sociological insights of marriage and family patterns are suggestible and can descend into these relationships better (Ritu Priya and Sunita Reddy, 2005).
Interventions

Intervention, knowledge, attitude, and behaviour have their origin from certain theoretical background as illustrated by many researches and psychologists in the behavioural sciences.

According to Matsakis (2005) an intervention is a deliberate process by which change is introduced into people’s thoughts, feelings, and behaviors. It can be seen as the underlying "process outcomes" the consultant is seeking in an intervention (valid and useful information, free choice, and internal commitment). When designing or choosing an intervention, theory can show what factors should be targeted and where to focus interventions? Theories can help define the expected outcome of an intervention for evaluation purposes (Gandelman & Freedman, 2002).

Matsakis (2005) maintains that there are generally four basic orientations in interventions: simple, crisis, classical, and family system interventions. Simple intervention takes place when just a simple request from someone who matters can change the person. Simple intervention asks the person to do or not to do a particular thing. When members of the community are told not to have unprotected sex, simple intervention is involved. A crisis intervention is the polar opposite of the simple intervention and it occur in dangerous situation involving reckless driving, weapons, hospital emergency rooms, violence or threats of violence. In the classical intervention, the immediate goal is for the individual to enter treatment, hopefully soon. People are encouraged to do voluntary
counseling and testing (VCT) to know their HIV/AIDS status so that early interventions to them can be undertaken. A family systems intervention focuses on the family. The goal is for everyone in the family to change their ways, at least with regards to the self-destructive behavior, knowing that this changed behavior will have a tremendous influence on the family member.

1.13 Significance of the Study

From the academic point of view the researcher seeks to examine the effectiveness of crisis innervations and coping skills need to address the practical issues faced by people living with HIV/AIDS. But there are No treatment education materials are available for PLWHA and there are no Government programmes that explicitly focus on treatment education. The target interventions are to ensure delivery of quality HIV prevention interventions to need clients. First-line drugs are now provided primarily through hospitals attached to medical colleges; many people thus must travel long distances and people who are traveling from one state to another often have difficulty getting these services, because proof of local residence is required by many national counseling with ART rollout centres. Many centres close at 2 p.m., forcing PLWHA coming from other districts to stay overnight. At many treatment centres, CD4 testing is only done on certain days.

Therefore, there is need of crisis intervention and coping skills among the patients of HIV/AIDS to increase their knowledge and motivate them change present unsafe behavioural practices and reduce their vulnerability care facilities
for STI infections, condoms, and counselling efforts to build an enabling environment and advocacy among the important influencers in their lives.

The study is carried out in Andhra Pradesh specifically in Visakhapatnam city due to patient interaction with doctors and counselors is usually very limited because there are a large number of patients and limited human resources. This situation limits the ability of health professionals to fully discuss treatment adherence. One of the eligibility criteria for enrolling PLWHA into the national ART programme is that the “patient understands the implications of the ARV therapy. It is confined to a specific area of the study. It may not necessarily portray the views and ideas of all PLWHA in the country. Such views and ideas expressed by the PLWHA from Visakhapatnam city, Andhra Pradesh might differ from other PLWHA women from the rest of the country.

a) Socio-economic and cultural variables like caste, education, age of the participant of PLWHA were not exhaustively considered.

b) While collecting primary data in the course of fieldwork for the study, the respondent’s biases might be moved unnoticed.

The present study is an attempt to draw better understanding of the implications and experience of literature of the experience from intervention Therapy and the new experiential psychotherapies clearly indicates that exposure to another person’s deep emotional material tends to shatter psychological defenses and to activate corresponding areas in the unconscious of the persons assisting and witnessing the process, unless they have confronted
and worked through these levels in themselves. Since traditional psychotherapies are limited to work on biographical material, even a professional with full training in analysis is inadequately prepared to deal with powerful experiences of a prenatal and transpersonal nature. The prevailing tendency to put all such experiences into the category of schizophrenia and suppress them in every way reflects not only a lack of understanding, but also a convenient self-defense against the helpers’ own unconscious material. Since the study is a part of expanding learning process, the area covered in the study is adequate enough to understand the current conditions of the sample households and based on limited sample size too, which forms a major limitation of the study taken from 300 PLWHA.

Furthermore, a comprehensive and similar empirical study is essential for confirming the results. The study can be extended by adopting more scientific sampling like stratified sampling and also by including a group of non-participants of PLWHA, will further help to improve the effectiveness of the study. Best efforts have been made to get the most realistic picture on the role of PLWHA empowerment, with in the constraints of time and resources.

1.14 Designing of the Study

The study consists with seven chapters, where Chapter-1 is introduction and it deals with discusses about theoretical background of HIV/AIDS, causes and remedies were discussed. In this chapter the present situation of HIV/AIDS in the world, in India and in Andhra Pradesh was discussed. The conceptual
framework and significances of the study also discussed in this chapter. In the Chapter-II the literature review has been discussed. In this chapter the related studies pertaining to the current study have been analysed and presented. The research methodology of the study has been presented in the Chapter-III. In this chapter the need for the study, statement of the problem, objectives, hypothesis, conceptual definitions, tool, method of data collection, sampling, area of the study, statistical treatment and limitations of the study along with profile of study area have been presented. The Chapter-IV is ‘Data analysis and interpretation’. In this chapter the collected data from the sample respondents has presented in the form of tables. The analysis and discussion on the response of the respondents followed by the tables and graphs were drawn wherever necessary. The testing of hypothesis are also presented in this chapter in the form of tables, and the results are also discussed with the help of coefficients derived by the statistical tests. The last chapter is ‘summary conclusion and suggestions’. It contains the summary of this study, how the hypotheses lead to the conclusion, some recommendation derived from the findings, and statistical analysis. The chapter also suggests on future studies that can broaden this research, and it also gives the limitations that may have hampered this study.