CHAPTER TWO

REVIEW OF LITERATURE

This chapter contains a review of literature on HIV/AIDS broadly reviewing the two main approaches to HIV/AIDS studies – epidemiological studies and Knowledge Attitude Behavior Practices (KABP) studies to understand the vulnerability factors.

Literature review is a crucial aspect of research as it enables the researcher to assimilate work already done in a given discipline and examine the areas that require further work thereby facilitating a more comprehensive understanding of the subject. The bodies of literature on HIV/AIDS have been steadily growing since the 1980s when the epidemic came to the forefront. Both quantitative and qualitative studies have contributed to a greater understanding of the epidemic, its epidemiological position, behavior aspects of human being in the context of socio-cultural milieu, risk perception and behavior modifications to curtail the epidemic. The literature review for the research study includes books, electronic databases of the peer reviewed journals (jstor, emerald, sage publications), AIDS data base reports, global HIV/AIDS websites and NACO websites.

In the 1980s, the study of HIV/AIDS was influenced predominantly by a biomedical approach to understand the epidemic and studies were conducted to gather information on the medical aspect of the disease, prevalence of the infection among certain population groups. The studies also brought out the trends in transmission and prevention and geographical spread of the infection. Certain groups were identified as ‘high risk’ groups
such as men who have sex with men (MSM), Female Sex workers (FSW), Injecting drug users (IDU) and attendees of STD clinics. Follow up studies showed a growing prevalence rate of the infection among the general population. The epidemiological approach bringing out the trends of the epidemic in a country highlights higher infection rates among certain sub population who were already recognized as marginalized position due to their low socio economic status namely commercial sex workers, homosexual men, injecting drug users. These groups have been labeled as ‘high risk groups or core groups”. A major critique of such an approach is that there is a heavy reliance on data collected in clinical settings along with a willingness to collaborate with studies of sexual behavior from pre AIDS era. Such an approach also black lists certain groups as people at risk of infection and therefore casts doubts on the grounds of morality and the rest of the population as those not at risk of the infection and viewed as virtuous on the same grounds of morality. Such a hegemonic stand increases stigmatization and discrimination of these groups who are in no position to defend themselves or break away from the vulnerabilities of the epidemic. Weeks Jeffrey (1988) [1] opines that AIDS ceases to be simply a devastating disease and becomes more like a battlefield for conflicting values and political values and ways of life. In the United States with its first identification in 1981, it has become associated strongly with marginalized, oppressed or feared groups – Haitians and subsequently black Americans, injecting drug users, prostitutes and male homosexuals. Weeks opines that AIDS has fed into wider anxieties and fears and this has resulted in a ‘moral panic’ rooted in a genuine fear of the disease, but seeking scapegoats in those who were chief sufferers from it. Irrationally but predictably the form the panic took was search for people to blame. He states “It is like watching a speeded up film about the post war period. Many of the major fears, imagined threats, genuine changes amid paranoias pass rapidly before our eyes: the ‘break up’ of
the family, the presence of ‘alien wedges’ that elusive phenomenon known as ‘permissiveness’ ... It is above all changes in sexual morals that have come to symbolize for many people and especially in the moral right, all the other changes that have taken place.”

Coxon (1986); Mc Manus and Mc Envoy (1985) raises doubts in general about the reliability of data gathered in such studies of sexual behavior. These studies rely on people’s willingness to report sexual behavior in order to make inferences. Very few studies attempt to triangulate upon ‘same’ sexual events to assess their reliability of information.

Gradually there arose a growing concern to understand the ‘why’ of the of the risk behaviors in the context of HIV/AIDS vulnerability. Studies were conducted to determine why certain individuals or groups are more vulnerable to risk of HIV/AIDS. Research on sexual behavior in 1990s using predominantly quantitative methods focused on finding patterns, contexts and condition under which premarital and extramarital sexual practices take place (Pelto, 2000). This is of particular importance while developing intervention strategies for the especially vulnerable population. Understanding people’s sexual behavior and the situations in which they occur is important. Constructing more effective intervention requires in depth studies of the context and the environment, of risky behavior in vulnerable population (Verma R et al., 2004). treatment efforts thus rendering these groups far more vulnerable.

The social scientist opined it is imperative to gain a contextual understanding of the behavior patterns and to bring out the ‘why’ of the risk behaviors. Thus the limitations of
the biomedical approach were appreciated and studies on the knowledge level, attitudes and perception towards the behavior patterns, misconceptions regarding the disease etc were conducted. Both quantitative and qualitative paradigms were used to in the research and the meanings attached to sexual expression and notions of sexual risk behavior within the socio cultural contexts were examined. Surveys measuring knowledge, attitudes, practices and behavior (KAPB) related to sexual behavior were carried out and social science approach gained more credence (Gillespie et al., 2007; Parker, 2001).

This was followed by a third phase of study where the social scientists going beyond the KABP studies are also looking at the different vulnerable contexts of individuals at risk of HIV/AIDS such as mobility factors, poverty, economic and social marginalization, weak social cohesion, gender dimensions to name a few. In India, from the period 1983 - 2009, a breakdown of published HIV research shows that 46 percent of the studies were biomedical/clinical studies, followed by 25 percent epidemiological studies, 15 percent social research and 14 percent others (Working draft prepared for the National Consultation on HIV Social Research Priorities by Actionaid, 2009). Numerous epidemiological studies have been undertaken in India since 1985-86. Epidemiological data is derived from annual sentinel surveillance, ongoing testing in antenatal clinics and blood banks, research studies.

**Epidemiological studies**

Epidemiologists are concerned with the origin, occurrence and prevalence in population, surveillance, transmission and modeling of the disease (Kaslow and Francis 1989). Identifying and understanding the risk factors associated with the disease, its
transmission, its progression, and treatment are important aspects to curb the epidemic. At the start of the epidemic, it was deemed important to identify biological and clinical aspects of the disease, infection rates, identify sub groups of population affected by the disease. With the growing number of AIDS cases, the western countries saw a tremendous increase in number of research studies on the medical aspect of HIV/AIDS. Information on the typologies of virus, stages of infection, clinical manifestations, provides a base for understanding and planning interventions by the health workers in the field. Research in Asian counties including India started with the advent of the epidemic as in mid 1980s.

It is important to emphasize that the review of literature shows that AIDS narrative in India borrows extensively from the Western literature and the initial period of HIV/AIDS discourse saw the United States and western countries continues to act as reference point for any examination of AIDS. Karnik N (2001) [2] strongly points out that the initial stages of AIDS in India are characterized by a total dependence on the West for information. A major critique of such an approach that little attention is paid to the validity of Western studies in the Indian context. He gives an example of term homosexual as used in U.S contains very little meaning for research and survey designed in India asexual relation in are a highly variable complex with existence of categories such as eunuch, among other groups. In the Third World it is overwhelmingly a disease amongst the heterosexuals. In India, the disease has been strongly linked to commercial sex workers, injecting drug users, truck drivers and other highly mobile sub groups. These classes of victims are easy targets from both a moral and investigatory direction. Based on the prevailing international standards, Indian researchers initially focused on the group of commercial sex workers for evidence of the disease and thus found their
theses proven when any evidence was found. The other group of vulnerable people such as blood transfusion patients is never examined so closely. Karnik opines that other groups are simply left out of the analytical frame and the focus shifts to the other ‘at risk’ groups of prostitutes and truck drivers whom he calls as ‘prerequisite categories’ to enter international discussions on HIV/AIDS. Similar arguments are presented by Farmer (1996) and he states that “although many would agree that forces such as poverty and gender inequality are the strongest enhancers of risk for exposure to HIV, this subject has been neglected in both the biomedical and social science literature on HIV infection.”

A moralistic stand on the epidemic further pushes these already marginalized groups into a vicious cycle of stigma and discrimination from which they are unable to come out. Kumari et al. (1986) in article “Screening of Seroprevalence of HTLV-III/HIV Infections in High Risk Groups in Delhi” follows a similar line of discourse states “a constant vigil of such high risk individuals and those presenting with ambiguous opportunistic infections is thus warranted, not only to quantify the magnitude of the problem, if any, but also, to alleviate the “AIDS-phobia” in the masses. The study includes patients from STD clinic based on the notion that people who attend STD clinics are likely to have multiple partners such as prostitutes. Thus categorizing certain group of people as risk groups who needs to be tracked scientifically.

epidemic differs in the developing and developed countries. Up to 95 percent of new infections occur in developing countries which are least equipped to respond effectively. The vast population density combined with other factors such as poverty, parallel diseases such as Tuberculosis, malaria etc, the low socio economic indicators create vulnerability in these areas. Jha et al. (2002) reports that less than 20 percent of those at risk of HIV infection have access to basic prevention services. The epidemic affects developed and developing countries differently. In United States and other industrialized countries the mortality and infection rates have declined substantially due to availability of antiretroviral medications while in developing countries, AIDS is destroying nations and communities. The disease is widening the gap between the haves and the have-nots, between rich and poor nations, thereby creating a new ethical and human rights dilemma.

In 1990s there was tremendous increase in the research studies conducted in Asian countries to understand the trends. The estimated global total of adults and children afflicted by HIV/AIDS was 34.3 million in 1999, approximately 5.6 million were from South and South East Asian countries – the region with half of the world’s population (UNAIDS 2000). While AIDS came much later to Asia, it is spreading rapidly and the epidemic is in a fairly advanced stage in many countries (Myo, T 1994; Phoolcharoen, 1998; WHO 1997). In most countries in Asia, the majority of HIV transmission among adults is through heterosexual transmission and sharing of injecting equipment among the injecting drug users. However contrary to the popular notion that MSM and blood transfusion will not play an important role in driving the epidemic, a substantial amount of transmission is reported to have been caused by male to male sex and by transfusion of HIV infected blood/blood products (Mastro et al., 1998).
In the early 1990s global agencies predicted rise of the epidemic in Asian countries as the preconditions for the disease to thrive were in abundance in the developing countries. Mann J (1992) in a global report of the epidemic opined that the pandemic has a high velocity in South East Asia and state “the global lesson is that HIV will reach most, if not all, human communities: geography may delay, but it will not protect against, the introduction and spread of HIV.”

UNAIDS (2002) reports that the cost of treatment and care over several years when HIV/AIDS is present in a household drains the family of savings and assets to a larger degree than in cases of accidental deaths or deaths due to diseases within a shorter time span. Eventually the household will dissolve as patients die and orphaned children are sent to relatives for care and upbringing. A study in India shows that families affected by HIV/AIDS spent an average of 49 percent of the household income on medical treatment. In low income families this percentage increased to 82 percent (Duraisamy, 2003). Study by Verma et al. (2002) in Maharashtra state report that households affected by a HIV/AIDS related death had been forced to sell their means of production to cover for the economic burden of the high treatment and other costs of the disease. Compared to households not affected by HIV/AIDS, fewer HIV/AIDS death households owned means of production, land and animals. He concludes that the disease is likely to be a factor that fuels the process whereby poor families lose their means of production or land. Nielsen J and Milgaard B (2004) summarize that economic impact is significant for affected rural households in Asia because the epidemic drains savings for medical expenditure and reduces income opportunities. Impact on private business and health sector is visible but less substantial.
After detection of HIV cases among the Female Sex Workers (FSW) in Chennai in 1986, India like many other countries went through a phase of ‘denial’ before accepting the HIV infection as a major public health concern (Panda S, 2002). [4] India fall within the pattern III type of HIV infection with regard to the mode of transmission. – sexual mode of transmission, primarily heterosexual and through infected needles. The primary drivers of HV epidemics are the unprotected paid sex/commercial female sex work, unprotected sex between men and injecting drug use. This trend was confirmed by NACO 2009-10 report that states there are 12.6 lakh FSW, 3.5 lakh Men having sex with men (MSM) with high risk and 1.9 lakh IDU in India.

Reports such as Sentinel surveillance reports, Behavior surveillance survey by National AIDS Control Organization (NACO) has brought out vital statistical data regarding the trends of the infection in India. Since 1986 AIDS cases have been reported from all parts of the country. By the end of July 2003, 54,061 AIDS cases have been reported (NACO, 2003). Epidemiological analysis of data shows that the highest number of HIV infections have been reported in Maharashtra and Tamil Nadu and the highest rates among the injecting drug users (IDUs) in the north eastern states of Manipur (NACO, 2001; Sarkar et al., 2003; WHO regional Offices for South East Asia and Western Pacific, 2001).

Data from various sentinel sites and other studies in Maharashtra show that over the years HIV infection has increased sharply among the FSW, rapidly progressing among STI clinic attendees and is steadily spreading to low risk population (Broonkmeyer et al., 1995; Gangakhedkar et al., 1997; Mehendale et al., 1996). Sex work continues to act as most important source of HIV infection due to the large size of clients that get infected from sex workers. Among the clients of FSW, long distance truck drivers, male migrants constitute a significant proportion. Injecting drug use is the principal driver in North
Eastern states. Based on the sentinel surveillance data from 2002, HIV prevalence in adult population can be classified into three groups –

i. Group I includes states such as Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh, Manipur, Nagaland where HIV infection is above 5 percent in population groups observing high risk behavior and 1 percent or more in antenatal women.

ii. Group II includes Gujarat, Goa, Pondicherry, West Bengal, Delhi, Kerala, Mizoram where HIV infection has crossed five percent among people observing high risk behavior but the infection is below 1 percent in antenatal women.

iii. Group III includes the remaining states, where HIV prevalence in any of the population observing high risk behavior is still less than 5 percent and less than 1 percent of antenatal women are infected with HIV.

The epidemiological data shows that 60 percent of HIV burden is in the high prevalence states. Among IDUs Chandigarh, Punjab, Delhi, Mumbai, Manipur has shown high levels of HIV prevalence. Andhra Pradesh, Karnataka, Maharashtra and Manipur have shown high prevalence among MSM and FSW (NACO Annual Report, 2009-10).

A major cause of concern is that the disease is mainly affecting people in the sexually active age group. A majority of the patients (85 percent) are in the age group of 15 to 44 years, thereby making a considerable economic impact to the country (Anand et al., 1999). Findings of Bhushan et al. 1994; De et al. 1990; Sengupta et al. 1992; Singh et al. 1991 who reported that transmission of HIV in pediatric population India occurred in the early phase of the epidemic and mostly through transfusion of infected blood and blood products. Kumar et al. (1995) has documented mother to child transmission of HIV.
Kumar et al. (1995) in a study of the tribal women in Uttar Pradesh report an overall vertical transmission rate of 48 percent. Studies in Manipur by Panda and Nabachandra et al. (1994) also show increasing vertical transmission.

In Mumbai, the rate of HIV among sex workers increased drastically from 1 percent in 1986 to 18 percent in 1990, and to 51 percent in 1996 (Larson and Narain, 2001). A baseline survey conducted by All India Institute of Hygiene & Public Health in collaboration with local NGOs in 1992 report that 85 percent of sex workers were between 15-29 years, literacy rate were very low, alcohol abuse was common. Poverty was cited as the reason for entering into the sex trade. Of the 450 sex workers interviewed, only 2.7 percent used condoms always or often, 69 percent had knowledge of STDs and 31 percent had heard of AIDS (Jana et al. 1998). Intense and rapid spread of HIV was also reported among injecting drug users from parts of north east India and the ‘golden triangle’ (where borders of China, Myanmar and Thailand meet). In Manipur, HIV infections among the IDUs shoot up from 1 percent in 1988 to 56 percent in 1995. Myanmar also experienced similar increase among the IDUs from 17 percent in 1989 to 59 percent in 1990 and to 74 percent in 1992 (Narain, 2004).

The general notion that injecting drug use related HIV would pose a problem in only North East borders proved wrong. The spread of injecting drug use was observed in major metropolitan cities such as Kolkata, Delhi and Chennai during the mid and late 1990s and HIV also made inroads in IDUs in these places (Dorabjee et al. 1996, Kumar et al. 1997, Panda et al., 1997). Similarly the spread of HIV through heterosexual route did not remain restricted to the states of Tamil Nadu and Maharashtra. STD clinics in Vasco da Gama Goa recorded a growth of HIV prevalence from 1 percent in 1987 to 27 percent in 1993 (NACO, 1995).
It is established that the presence of sexually transmitted infections (STIs) increase the risk of HIV transmission by three to ten times. Persons with histories of STD are at increased risk of acquiring HIV, while HIV infected persons are likely to have greater susceptibility to infections with other STDs and if co infected, may experience them in a severe and protracted course. (Berezin N, 1992). Studies by Salunke et al. (1998) show that estimated annual incidence of STD in India may be as high as 5 percent of population with over 40 million new infections per year. According to Mehendale (1998) in a study in Pune city, the data showed that one in every five males and one in every two sex workers coming to the STD clinic were found to be HIV positive. These studies show that the HIV epidemic has become a reality to many in the country and would impact the resource utilization and deprivation at the level of institutions, communities and households.

Since the epidemic strikes the most productive section of the society, it is imperative to look at the epidemic in terms of the socio-economic implications of the epidemic. The review shows that till date only a handful of studies in India examine the socio-economic well-being of the households affected by HIV/AIDS (Basu et al. 1997; Gupta 1998; Bharat and Aggleton 1999). The studies show that severe constraints are faced by the affected households mainly due to reduced income and increased health expenditures. This finding is reaffirmed by other scholars. In South and South East Asian countries, it is the household and affected individuals who bear the major brunt of the epidemic and its losses (Bloom David & Godwin Peter, 1997). Bloom and Mahal (1997) predict that economic costs of AIDS will be felt not by nations but rather communities and households. Household savings, decrease in consumption patterns, selling of household assets, borrowing from informal sources and money lenders are some of the coping
mechanisms exhibited by the households. Private health insurance and employer health benefit does not include AIDS related coverage. Gupta (1998) states that between 10 to 30 percent of the annual income of an individual maybe spent on treatment of illness. Bloom and Glied (1993) and Thant (1993) opine that in HIV/AIDS epidemic the poor are at risk and the epidemic falls disproportionately on them. Limited roles of formal institution means increased burden on individuals and households. Such findings emphasize the need of a multi-sectoral approach to the epidemic in terms of poverty alleviation health and sanitation reforms to name a few.

Article by Pandey A (2009) [5] talks about improved estimates of the epidemic in India following NFHS -3. Improved data were available from multiple sources such as ANC women from each state, additional sites for high risk groups were included. A very interesting finding is the urban rural ratio of HIV prevalence among women in moderate and low HIV prevalence states was taken as constant at 3.1:1. National adult HIV prevalence was estimated 0.36 percent and estimated number of people living with HIV as 2.47 million in 2006. An interesting observation made in the article was that that an accurate prevalence of HIV among HRGs, IDU and trucker population should take into account that HIV epidemic in India is concentrated and household surveys are expected to underestimate the true prevalence as some groups with high risk behavior may reside in institutions and not households. Secondly the mobile population is likely to be missed out in population based surveys. The article points out that India would continue to be the third largest contributor to global HIV burden after South Africa and Nigeria.
Women and HIV

Over the past decade women have come to occupy a central place in the HIV epidemic. In 2001, India reported a total of 20,304 cases of AIDS where 15,563 were males and 4,741 were females (NACO, 2000-2001). Although the major transmission route is heterosexual, more opportunities for men to access health care facilities could probably explain this difference in reported number of cases across gender. Also younger women married to older men in different states of India have contracted HIV infection from their husbands (many of whom are in advanced stage of HIV disease during marriage) and would reach the stage of AIDS later than their husbands as it is known from the natural history of HIV disease that a younger age of acquiring the infection is inversely related to the progression to AIDS (Panda, 2002).

The WHO estimates that by the end of the century over 13 million women will have been infected by HIV. Currently less than one fifth of the women have developed AIDS, thus there are large numbers of women who are infected but still in the asymptomatic phase and are likely to become pregnant or contemplate pregnancy. In studies which have included have included HIV negative controls there is no difference in the frequency of termination among the HIV positive and HIV negative women. Thus it appears that HIV infections have not been strongly associated with the decision to continue or terminate pregnancy. Further the studies show that having had one termination, some women may go to have further pregnancy and continue with the pregnancy (Johnson and Studd, 1996). Issues of reproductive rights of women living with HIV and informed consent to carry forward or terminate pregnancy are pertinent in this context.
Study by Gangakhedkar et al. 1997 show that women have little or no control over decisions relating to their sexuality, over the sexual behavior of their male partners or use of condoms for prevention of pregnancy or STD/AIDS. 21 percent of all HIV infection is now estimated to be among women and the number of those infected is on the rise with an accompanying increase in vertical transmission and pediatric AIDS.

Besides emotional stress and burden of care giving women in India face difficulties in maintaining their share of matrimonial or joint family property. Studies by Ghosh 2001; Johari and Divan 2001; Johari and Parmar (2001) report that after their husband’s death, most Indian women were denied shelter in their own home by their in – laws and were also not welcomed in their maternal home. Impact of the epidemic on children also places them in a vulnerable position. A WHO study on individual and household response to HIV/AIDS in Mumbai found that some of the immediate impact of the infection included withdrawal of children from school and early entry of children into the labor market (Bharat, 1996). Early deaths of parents or guardians rob the children of emotional and physical support and this situation is likely to worsen in poorer household. In a study conducted by Pradhan and Sundar (2006) on “Gender Impact of HIV and AIDS in India” is based on a survey of 8,292 household spread over rural and urban areas of six states i.e. Andhra Pradesh, Tamil Nadu, Karnataka, Nagaland and Manipur. The findings report that besides increased work load at home, women are required to take up to supplement lost earnings due to illness or death of the primary earning member of the family. Thus economic situation of women living with PLWHA is very fragile. The burden of caregiver also falls on the women irrespective of whether they themselves are HIV positive or not. In comparison to men, nearly double the cases of illness of women living
with PLWHA are left untreated. Girl child is more likely to be withdrawn from school to cope with the household chores including caring for the ill members.

**Knowledge, Attitude, Practices studies (KAP studies)**

The limited amount of studies on sexual behavior in contemporary India has concentrated on the diagnosis and treatment of sexual illness or pathology from psychiatric, psychological or physiological perspectives or from a combination of these. This is true of other counties also (Mundiga, 1992) but some countries such as England, France, USA have conducted national surveys to understand patterns of sexual behavior in the context of the HIV epidemic. In India governmental and nongovernmental organizations have initiated studies in both rural and urban areas. The Government initiated National Family Health Survey (NFHS –III) that does incorporate questions on the HIV awareness and behavior aspects among the general population.

With no sighting of a possible vaccine or cure for the HIV infection, behavior changes were recognized as the best option to curb the epidemic. An early lesson learnt in the HIV epidemic was that prevention would not be possible without advocating attitudinal and behavioral change (Cleleand and Ferry, 1995). There is an increasing recognition within the international community that improving the health of poor people across the world depends upon adequate understanding of the socio-cultural and economic aspects of the context in which public health programmes are implemented. Such information has typically been gathered through various types of cross sectional surveys, the most popular and widely used being the knowledge, attitude and practice survey also called the knowledge, attitude, behavior and practices (KABP) survey.
Research on the behavioral dimensions of reproductive health is not entirely new in India (Bharat, 2003). In India, some of the earliest KAP studies were conducted in the area of family planning to understand people’s attitudes towards contraceptives, condom use patterns, decision making and constraints in contraception adoption. Besides these studies, there have been studies examining attitudes of general population, especially the student population, towards love or arranged marriage, towards pre-marital sex and abortion, and seeking to understand adolescent sexual behavior and knowledge-levels and onset of sexual activity, attitudes and choices of sexual partners, knowledge about condoms and contraception (Nag 1996; Jeejeebhoy 2000). Nag, M (1994) [6] in article “Sexual Behavior and AIDS IN INDIA: State –Of-the-Art” presents a review of sexual behavior in India. A brief review of the findings from the pre AIDS period on adolescent and young males aged 15 – 24 years suggest that about one in four males engage in some level of premarital sexual activity; model age of sexual debut is 17-18 years, between 15-25 percent young males pay to have sex; two in three sexually active males have multiple partners and condom use among young unmarried males is rare and inconsistent. Fewer studies exist on young females and those available reveal lower level of sexual activity among urban upper class unmarried college educated women, higher age of sexual debut compared to males and comparatively higher degree of sexual activity among married tribal girls (Jeejeebhoy, 2000). Study carried out by Sex Education Counselling Research Therapy Training (SECRT) division of the Family Planning Association of India (FPAI, 1990) in 1989 using survey questionnaire among married and unmarried men and women of the age group 15-29 years in selected urban areas in India showed that only 23 percent men and 30 percent women held the concept of the traditional premarital sex as sin. There was a more permissive attitude towards premarital sex among men than among
women contradicting the stereotypical commonly held notions by large section of Indian population regarding attitudes towards premarital sexual relations.

Regarding the practice of premarital relation, while anthropological literature on the tribal societies of India refers to a wide prevalence of premarital sex in many of them (Elwin 1939; 1947) but there is dearth of reliable information on the practices among mainstream population. But there are a few recent studies which indicate that the practice is not so uncommon in both educated and uneducated in both rural and urban areas. Finding from a survey conducted in early 1980s among male and female students in few colleges of Madras city regarding sexual behavior and attitude reported 61 percent of male students and 48 percent of female students stated their first sexual experience before they attained 25 years of age (Reddy et al. 1983). This finding is consistent with the findings of recent study in Delhi among the boys (Sehgal et al. 1992) in which 25 percent reported having sexual exposure. Another study conducted by the Indian Market Research Bureau in 1993 among middle and upper class women revealed 23 percent of respondents had premarital relations.

Fidelity within marriage is the predominant norm for both men and women among all section of Indian population bit in general sanctions against extra marital relations and sexual relations are more severe against women than men. The Hindu concept of pativrata – the ideal for being loyal to husband under all circumstances has no counterpart for men (Nag, 1994). In a study of dalit caste of Maharashtra, it was found that women viewed their husband’s extramarital relations as a “male” characteristic which, if accepted or ignored, provides them with extra “power” and enables them to stay with their husbands (Bhave 1990; cited in Mane and Maitra 1992, Nag 1994). Solman et
al. 1998; Bentley et al. 1998; George (1997); Sethi 2002) opine that in India the single most frequently cited social obstacle to the control of HIV transmission and promotion of sexual health is a reluctance to talk explicitly, including between spouses about sex and sexual behavior. The social mores that constraint women from communicating explicitly about matters associated with sex has been noted by various scholars. Sethi (2002) reports that attempts to introduce sex education in school and colleges in the wake of HIV epidemic has met with considerable resistance from concerned parents and religious and politically conservative organizations. From the perspective of HIV epidemic, social scientists recognized the need to understand those particular forms of sexual behaviors and activities that can pose the highest risk of acquiring HIV infections, such as unprotected sexual relation with multiple partners, and needle sharing behavior.

Since sex is a basic need for both pleasure and reproduction for most people, an effective way of preventing AIDS is to have a better understanding of what aspects of sexual behavior are particularly risky for HIV transmission in India and to make people aware of them (Nag, 1994). The threat of AIDS brought out this subject matter which is usually not a matter of overt discussion in India. The ambivalence and inhibitions regarding sex in the minds of educated Indian are illustrated by the fact that Kama Sutra was kept in Delhi University library at least up to the late 1980s in a locked backstage room and even a faculty member has to take special permission to borrow it (Ganguli, 1988). Taboos on talking about sex and sexuality, a counterproductive attitude of discrimination and stigma associated with HIV contributes to the problem. In India, the single most frequently cited obstacle to the control of HIV transmission and promotion of sexual health is a reluctance to talk explicitly, including between spouses, about sex and sexual behavior (Solomon et al., 1998; Bentley et al., 1998; George, 1997; Sethi, 2002). Various scholars including
Das (1988); George (1994) have noted the social norms that constrain women from communicating explicitly about sexual matters. In this hegemonic discourse, sex is understood as a private act that occurs appropriately only within a legitimate marital relationship.

A survey of students (18-24 years, undergraduate) in cities of Bombay (now known as Mumbai), New Bombay (now known as Navi Mumbai), Sholapur in 1992 (Chitale et al. 1992) indicate that 10 percent of students in Bombay, 23 percent in New Bombay and 34 percent in Sholapur were not aware of AIDS. Only 5 percent in Bombay and Solapur and 0 percent in New Bombay stated that AIDS can be transmitted through infected blood. Only 11 percent in Bombay, 4 percent in New Bombay and 0 percent in Sholapur mentioned sexual relations with FSWs could be a mode of transmission. 19 percent in Bombay, 28 percent in New Bombay and 13 percent in Sholapur thought that AIDS was a curable disease. 95 percent in Bombay, 50 percent in New Bombay and 48 percent in Sholapur knew that it was an infectious disease.

A survey of rural population of men and women near Delhi and Haryana (Chuttani et al. 1990; cited in Mane and Maitra 1992) reveal that 50 percent of men and 12 percent of females are aware of AIDS. Among those who were aware a fairly large percent knew about transmission through sexual route. A fairly large number of men knew about transmission through infected needles and blood; some men mentioned homosexuality, less than 50 percent of respondents knew about the fatal nature of AIDS, only a small percent had some knowledge of the symptoms of AIDS, 92 percent of men and only 29 percent of women stated that Sexual relations with FSWs should be avoided to prevent transmission. Only one man mentioned condom use.
It is commonly believed that because of women’s subordinate role and glorification of women’s modesty in Indian tradition, Indian women cannot be realistically expected to take an active role in a sexual relationship and in condom usage (Mane and Maitra, 1992). This is more true of FSWs, who due to severe competition and economic pressure, are left with almost no option to enforce or ensure condom use (Sundararaman et al., 1992). This is further supported by a survey of 450 FSWs in a red light district of Calcutta in 1992, where only 4 percent reported regular use of condoms, although 50 percent were using oral pills (Jana 1992). Clinical tests revealed 59 percent of them positive for venereal diseases and 1 percent positive for HIV (Chakraborthy, 1992). The survey was followed by intervention project using IEC (information, education and communication) methodology and provision of diagnosis and treatment of STDs. This lead to an awareness of condom use and subsequent behavior change regarding condom use which increased to 60 percent in May 1993 (Indian Express 1992; cited Nag 1994). A similar success in increasing condom use among FSWs through intervention work of Population Services International (PSI), an Indian voluntary organization (Gopalakrishnan, 1992) reported behavior change through using person to person communication with FSWs, providing medical services for general health and STD and referral services, using IEC materials and melas for mass awareness.

Behavior Surveillance Survey (BSS) conducted among general population in April – September 2001, 76 percent of the respondents had heard of HIV/AIDS; low awareness was reported among the rural women in Bihar, Gujarat, Uttar Pradesh, Madhya Pradesh and West Bengal (NACO 2001). From these studies it appears that awareness about HIV and AIDS was superficial and alarmingly incomplete in these different sections of populations. The BSS survey shows that the epidemic is slowly making inroads into the
rural areas as well as in women representing general population in India. Studies also report cultural sensitivity regarding condoms is higher and buying them from a pharmacy or a store or getting it from a clinic is still a matter of great embarrassment for most people. Providing better education and counseling to people and making it more easily available is feasible through programmatic interventions and cultural sensitivity towards condoms can be mitigated.

Limited studies conducted of the truck drivers, who as a group are vulnerable to STDs indicate sparse use of condoms. In a study in Assam among the truck drivers, although 82 percent reported regular contact with FSWs along the highways and 36 percent report having STD treatment, none of the respondents report condom use (Ahmed, 1992). Eighty nine out of 100 truck drivers in Bangalore in 1993 surveyed reported they never use condoms because condoms are considered by them as obstacles to pleasure and as a device for birth control (Mani 1993). A survey of 200 truck drivers in Delhi in 1988 showed a higher use of condoms. 78 percent reported being heterosexually promiscuous and 28 percent of them reported condom use regularly and 72 percent only sometimes (Singh et al., 1992). Truck drivers in India are known to have multiple sexual relationships not only with female sex workers but also with other men, particularly with young boys who accompany them in long highway drives as helpers. In a questionnaire survey of 506 drivers entering north-eastern states of India through Assan, 15 percent of respondents reported previous homosexual experience (Ahmed, 1992). None of them used condoms. In another questionnaire survey of 200 truck drivers in Delhi, 5 percent reported themselves as bisexual (Singh et al., 1992).
A survey of truck drivers near Bangalore in 1993 (Miani, 1993) revealed that 80 percent admitted to having sexual relations with FSWs and 89 percent never used condoms. The findings reveal that the drivers felt that since nothing serious had happened to them so far, nothing could happen in the future as well. A quantitative survey of 5709 long distance truck drivers passing through a check post on National Highway at Andhra Orissa border by Rao, Pillai and Rao A S and Chalam, (1994) [7] reported that 87 percent of respondents were promiscuous and only 11 percent reported condom use with commercial sex workers. The proportion of respondents using condoms decreased with increasing age.

In a study of 5,722 male truck drivers in Assam 82 percent reported regular sex with FSW along the national highways and none of the men used condoms regularly; 15 percent reported history of sex with men; 36 percent had been treated with STDs; 40 percent used cannabis and 2.4 percent had injected heroin (Verma K.P and Roy K T, 2002). [8] Verma goes on to report that though there have been varied reports of changes in risky sexual behavior among the trucker population, over all it appears that large number of truckers are now aware of the risk of HIV infection and there is a gradual increase in condom use among them. Agha, S (2002) [9] in a study of truck drivers in Pakistan brought out the high risk factor among this occupational group in the Asian context. In India, long distance drivers are an important ‘high risk’ group (Singh et al. 1993; Singh and Malaviya 1994; Rao et al. 1994). A study on truck drivers in Delhi in 1992 by Singh showed that prevalence of HIV has reached 1 percent. Similar studies in other states such as Chennai also showed similar trends. In Chennai, there was an increased prevalence among the truck drivers from 2 percent in 1995 to 8 percent in 1996. In a separate study Singh and Malaviya 1994 found that 78 percent of truck drivers
report multiple partners including sex workers and 5 percent had homosexual encounters. The drivers also had minimal knowledge regarding condom use. These findings are further corroborated by Saini et al. (1998) who, in a survey of truck drivers on the Indo-Pakistan border, found that the drivers lacked basic knowledge about AIDS and recognized that truckers constitute a major focus for future HIV education and prevention interventions.

Migration/mobility of at risk individuals, particularly the relocation of individuals or frequent visits to other areas for economic opportunity has been viewed as a strong cofactor in rising HIV prevalence in India. Available studies on migration in India though sparse show migrants are vulnerable to HIV and migration is a major risk factor underlying the growing prevalence of HIV in the country. Migrants are poorly informed about reproductive and sexual health including HIV and many practice risky behavior at their place of destination and origin and misperceptions about the transmission of HIV are common.

A study of the young men in rural Jharkhand looks at sexual practices among unmarried migrant and non migrants shows that youth irrespective of their migrant status are poorly informed about HIV but do engage in risky sexual practices. The migrants’ sexual experiences occur in their areas of origin – both before and especially during regular visits home mainly with girlfriends and relatives and not sex workers as often hypothesized. Greater material resources at the place of destination afforded by migration appears to enable migrant’s greater sexual access to girlfriends and relatives when they return to their place of origin as compared to the non migrants youth (Dhapola, Sharan and Shah 2007).[10]
Chirwas (1997) opines that transaction of material gifts for sex in non commercial settings could mean that migrant men may engage in such multi partner sexual life as a symbol of economic and social success and as a form of entertainment. Similarly other studies also show that enhanced status of migrants enable them to seek and receive sexual favors from women in their place of origin more successfully than non migrants (Poudel et al., 2004).

A study of knowledge and sexual risk behavior among migrants in Rajasthan indicated that 33 percent believed that a person could get infected through mosquito bites. 4.1 percent of married men reported a sexual partner other than their regular partner; 22 percent had sexual encounter in the last 12 months and 9 percent reported sexual relations with a female sex worker at the place of destination. While awareness about condoms was high less than 8 percent of married men and 5 percent of unmarried men reported condom use for the last sexual act. 12 percent reported having an STI and 29 percent had used a local remedy for treatment (Singh et al., 2004).

Study using ethnographic and survey methods to understand the patterns of mobility of male migrant workers in Maharashtra was conducted by Tata Institute of Social Sciences, Mumbai and Population Council, New Delhi in 2008 among factory workers, construction workers, daily wage labor, stone cutters and hamali labor. The male migrants predominantly come from Uttar Pradesh (38 percent), Bihar (15 percent), Madhya Pradesh (13 percent), Chattisgarh (6 percent) and Karnataka (3 percent). Inter district migration made up for 12 percent of the total in migration. A majority of respondents (94 percent) moved to two places in the last two years. Better work opportunities (80 percent) and subsequently higher income (59 percent) were the major
pull factors and the major push factors reported were low wages (44 percent), unemployment and debt (29 percent) and poverty (23 percent) at the native place. The study shows that migrants married or otherwise retain strong connectivity to their native villages and there is a high level of sexual activity among the migrants. The male migrants perceive their risk to HIV as low and their knowledge about HIV transmission and prevention is exceptionally low. Their lack of knowledge can also be seen from the large extend of inconsistent condom use among men who engage in high risk activities. Reported sexual activity among currently married migrants was lower than among unmarried migrants both with sex workers (7 percent) and non sex workers (5 percent). Lower levels of income do not prevent migrants from seeking sexual activity. 39 percent reported STI like symptoms yet only 19 percent said they perceive themselves at moderate/high risk for HIV. Migrants moving to three or more places reported higher rate of STI like symptoms (68 percent) and a higher proportion (39 percent) perceived themselves at high/moderate risk for HIV. Homosexual activities are reported in factories where work is carried out in both day and night shifts, both at place of work and residence though the quantitative data reported low levels of homosexual activity (15 percent).

Bailey, A and Hutter, I (2006) [12] in a study to examine HIV/AIDS risk assessment among migrant men and among truckers and fishermen (mobile population) in Goa, India using a mixed method of both quantitative and qualitative methodology made some interesting findings about perceptions regarding sexual partner. Quantitative method found that 18.2 percent of migrant men reported extra marital relations and 80.2 percent never used a condom. Among mobile population 27.8 percent reported extra marital relations and nearly 78 percent never used a condom. Men reported using physical
markers to assess whether a sex worker was healthy or not. Example – appearances of face and body since men believed that a person who has IDS has hollow cheeks and less body fat. According to the cultural norms men categorized the women into ‘normal’ women and ‘other’ women where the first category refers to their spouses and the next category refers to FSW. The male respondents also reported a third category of partners where there is no commercial transaction, nor was there any ritual contract that could be termed as marriage. Among 1249 respondents interviewed, 106 men reported the third type of partner who could be neighbor or co worker. The men revealed that they prefer these partners to FSW as they felt that the risk of HIV infection would be lower. Trust was reported to be a major determinant in choosing these partners and lower condom use.

The respondent group of migrant men also reported an interesting finding. They believed that because they know about the social behavior of their wives, they can be sure that there is no risk of HIV from them.

**Homosexuality and HIV/AIDS**

The review includes a section on homosexuality and HIV/AIDS as this aspect of disease remains a taboo subject particularly in Asian countries. The initial spread of HIV epidemic in the USA and a few other western countries was first identified among men who had sex with men (Turner et al., 1989). The clustering of AIDS cases among homosexuals projected this group into the limelight. Homosexuality was recognized in ancient India (Burton and Arbuthnot, 1993). The representation of the Hindu god Siva as *ardha-narishwara* (half female and half-male) in ancient Hindu texts and the Vaishnic notion that a male body contains Radha or female element (Dimock 1966) can be interpreted as a recognition of the modern concept of sexual dualism, that is, the universal
presence of a homosexual component which varies quantitatively in different individuals (Jung 1958 ; cited in Nag 1994).

Studies among relatively small samples of homosexual / men who have sex with men (MSM) in Mumbai in early 1990s reported that the levels of HIV infection may vary from 3 to 15 percent (Nag, 1996). However since homosexuality is socially unacceptable in India, many of these men are married or have regular female partners. In 1993 a study conducted in Mumbai (then Bombay) revealed that homosexual transmission is not uncommon in a metropolitan city like Bomaby (Nandi et al. 1994). Recent studies further corroborate this finding and strongly suggest that MSM activities almost certainly play an important role in the spread of the epidemic (Asthana and Oostvogels 2001; Kumta et al. 2002; Verma and Collumbien 2003). Most of the MSMs are married and conceal their same sex activities, so that any cases of HIV among them are likely to be categorized as being caused by heterosexual transmission (Verma et al. 2004). While here is a growing acceptance that homosexual behavior was prevalent in India, it was still believed to be restricted to major cities and particularly Mumbai (Devi 1997; Arvind 1991; Row Kavi 1991). Very few men in India openly express themselves as ‘gay’. This section of population remains invisible. McKenna (1996) opines that legal, cultural, social, religious sanctions increase the invisibility of homosexual roles and ideologies.

Kala (1993) reports that the fear and shame of being detected by family and society often leads many men and women, who feel sexually attracted towards persons of their same sex, to keep their sexual identity to themselves and eventually marry or are married to persons of opposite sex with unhappy consequences for both partners. These rudimentary finding of few studies indicate that homosexuality does exist in contemporary India.
There appears to be a paradox where on one hand though literature acknowledges existence of homosexuality in ancient India, it has never attained social approval in any section of Indian population and is a taboo subject until the panic regarding AIDS.

At the conclusion of the literature review, it can be summarized that the epidemic in India consists of several sub epidemics and is gradually spreading beyond the group with high risk behavior to general population. Despite a growing shift in the epidemic towards younger and rural population, and towards women and despite migration and mobility being identified as significant socio-demographic processes, in explaining the spread of the epidemic (UNAIDS 2002), studies on adolescent population, women in general community, wives of HIV positive men and migrant population are few. There is lot of coverage on female sex workers and truck driver community. The majority of the studies are small scale local studies providing useful micro level data. The paucity of research on migrant and mobile groups is particularly striking considering that mobility particularly interstate is quite common in modern India. In terms of geographic settings, majority of the behavioral studies are urban based, with rural based research studies continuing to lag behind despite evidence that the epidemic is increasingly acquiring a rural character (NACO 2001). There is a need to carry studies on the risk perception and uncover the attitudes and perceptions towards the epidemic. This would enable to unearth rich data that can contribute to both academic study and perhaps significantly shape programmatic interventions.

The research study aims to bring out the awareness and knowledge regarding HIV/AIDS among two vulnerable populations who have moved from their place of origin to a place of destination for reasons of employment i.e. truck drivers and mathadi workers. The
The study has broadened its scope to look beyond awareness on the HIV infection to bring out risk factors among these two sub groups and explore the concept of risk perception towards HIV/AIDS. The above literature review informs that it is important to equip people with information and awareness on the epidemic. But it is also significant to look into the behavior practices of the populations sub groups and their perception regarding their vulnerability to the epidemic. A comparative study would bring out similarities and differences among the two sub groups in terms of their awareness levels, behavior practices and risk perception of HIV/AIDS. The place of destination has been the centre point of numerous intervention initiatives in the past few years and the findings from the research study would contribute to further programmatic interventions specific to these sub groups as well as add to the academic literature on mobile population.

References


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