CHAPTER: II

REVIEW OF RELATED LITERATURE

The investigations carried out by the pioneers in the concerned area and in the related areas advance the scholarship of the researcher and also shed guiding light in the progress of the present research. Reviewing the related studies helped the researcher to adopt methods appropriate to the topic, provided theoretical base for the study and located comparative data useful in the interpretation of research. The review for the present study falls into the following sections:

- Review on the concept of Health Behaviour
- Life Skills and Family Life Education
- Review on appraisal of Health Behaviour
- Emergence of HIV/AIDS as a social and health problem
- Assessment of the risk factors and vulnerability to AIDS
- Responses to HIV/AIDS; strategies adopted for containing the infection of HIV:
  - Response in Kerala
  - Response by government of India
  - NACO strategy
  - Overseas strategies

- Review on School AIDS Educational Programme (SAEP)
- Synthesis of the review
- Conclusion
2.1 HEALTH BEHAVIOUR - A CONCEPTUAL BACKDROP

This part of the review draws out the theoretical and empirical development of the concept of Health Behaviour.

Infectious agents are the main cause of new or recurring epidemics. Today world faces a double threat of newly emerging diseases, such as HIV and Ebola, as well as the re-emergence of pathogens like tuberculosis and cholera, which were long considered under control in some regions. More than 90 percent of the deaths from infectious diseases worldwide are caused by only a handful of diseases. These diseases are- lower respiratory infections, HIV/AIDS, diarrhoea, tuberculosis, malaria and measles. (GHC, 2006)

Despite the medical advances which have produced hundreds of safe and effective drugs against bacteria, viruses, fungi and parasites, infectious diseases are still a major cause of death, disability and social and economic upheaval for millions around the world. It becomes evident that drugs alone are not enough to fight these diseases. By 20th century it came to light that the cause of disease is mainly the lifestyle or health behaviour of the people (Susan, 2004). Behavioural factors, particularly tobacco use, diet and activity patterns, alcohol consumption, sexual behaviour, and avoidable injuries are among the most prominent contributors to mortality (McGinnis and Foege, 1993). The resurgence of infectious diseases, including food borne illness and tuberculosis, and the emergence of new infectious diseases such as antibiotic resistant infections, HIV/AIDS, Hepatitis C, and human papilloma virus (HPV) are also largely affected by human behaviours (Lederberg, Shope, and Oakes, 1992; Glanz and Yang, 1996).

The data linking individual’s behaviours to increased risk of morbidity and mortality has resulted in a dramatic increase in public,
private, and professional interest in preventing disability and death through changes in lifestyle and participation in screening programmes. Hence, Health Psychology which emphasizes the concept of individual’s behaviour and lifestyle having influence on the health has emerged and it is the rapidly expanding field of psychology now. Health Psychology is concerned with precaution & treatment of individual’s health system.

Health involves taking responsibility for adopting and maintaining habits that we know make a difference in life expectancy and quality. It involves being informed about your own body, about your own preferences for care, about which health recommendations can be defended with rigorous evidence, and about end-of-life decisions (Alexander, 2003). Health Psychology advocates Health Education and Health Promotion which aims at “bringing about behavioural changes in individuals, groups, and larger populations from behaviours that are presumed to be detrimental to health, to behaviours that are conducive to present and future health” (Simonds, 1976). It attempts to help people change their lifestyle toward a state of optimum health.

The central concern of health education is health behaviour. Positive informed changes in health behaviour are typically the ultimate aims of health education programmes. Health behaviour is considered as a subclass of lifestyle behaviour that includes activities taken by people, who believe themselves to be healthy, that are designed to maintain health. It includes not only observable overt actions but also the mental events and feeling states that can be reported and measured (Gochman, 1982; Gochman, 1997). Health Behaviour is defined as: “those personal attributes such as beliefs, expectations, motives, values, perceptions, and other cognitive elements;
personality characteristics, including affective and emotional states and traits; and overt behaviour patterns, actions, and habits that relate to health maintenance, to health restoration, and to health improvement”

Gochman’s definition is consistent with and embraces the definitions of specific categories of overt health behaviour proposed by Kasl and Cobb in their seminal articles (1966). Kasl and Cobb define three categories of health behaviour as follows: (1). Preventive health behaviour: Any activity undertaken by an individual who believes himself to be healthy, for the purpose of preventing or detecting illness in an asymptomatic state. (2). Illness behaviour: Any activity undertaken by an individual who perceives himself to be ill, to define the state of health, and to discover a suitable remedy. (3). Sick-role behaviour: Any activity undertaken by an individual who considers himself to be ill, for the purpose of getting well. It includes receiving treatment from medical providers, generally involves a whole range of dependent behaviours, and leads to some degree of exemption from one’s usual responsibilities [Kasl and Cobb, 1966].

In the broadest sense, health behaviour refers to the preventive as well as remedial actions of individuals, groups, and organizations and also their determinants, correlates, and coping skills, attitudes and life styles that enhance the quality of life (Parkerson and others, 1993). Goals of health behaviour have been largely incorporated in the field of health psychology. Health Behaviour emphasizes the enhancement of health and prevention of disease in healthy people. More specifically, it involves the application of psychological principles to such physical health areas as lowering high Blood pressure, controlling cholesterol, managing stress, alleviating pain, and stopping smoking and moderating other risky behaviour, as well as encouraging regular exercise, medical and dental checkups and safer behaviours.
Health Education is given in every stage of life cycle; from childbirth education, the beneficiaries of which are not yet born, to self-care education and rehabilitation for the very old. Health education given for the adolescents in the schools includes classroom teaching, teacher training, and changes in the school environment that supports preventive healthy behaviours. Preventive health behaviour is footed on Positive attitude towards health which is an essential factor to maintain a healthy, creative and productive life. Many adults, in spite of knowing the risks involved in certain habits, still continue with them (WHO, 2006). They are addicted to such risk habits which had developed in them while young. Adolescence is the time when many persons take on unhealthy habits and follow risk behaviour. Therefore, health education is very effective as a preventive measure during adolescence.

Health behaviour includes concerns such as Dietary behaviour, Hygiene, Mental health, Violence and Unintentional injury, Tobacco, Alcohol and other drug use, Physical activity, Protective factors, and Sexual behaviour (WHO and CDC, 2006). Deficiency or deviancy in any of these dimensions will have adverse effect on overall health of a person. Global Student Health Survey in Schools developed by WHO assesses the student’s health with respect to these areas. As a child moves through the school-age years and into adolescence, prevention of behaviours and habits that can lead to health risks takes on a greater importance. Rationale for considering various dimensions of Health Behaviour for adolescent education is furnished below:

1. Dietary behaviour

Dietary behaviour is a very significant indicator of the overall well-being and development of adolescents. This is explained by the fact that it is during this period that adolescents gain up to 50% of their adult weight, more than 20% of their adult height and 50% of their adult skeletal mass. Adolescent Nutrition focuses on both malnutrition (more
important in the case of women) and obesity. In under-nourished children rapid growth during adolescence may increase the severity of under-nutrition. Iron is deficient in almost all age groups. Naturally the shortfalls create more vulnerability for adolescent girls. Obesity is now seen with increasing frequency and may be due to urbanisation, less physical activity at school and home and changing food habits. Childhood onset adult diseases like hypertension, diabetes and heart disease and co-morbid conditions are also considered (Balasubramanian, 2005).

Study undertaken by Tara, (2006) found that Nutritional deficiencies (protein-energy malnutrition, iron, Vitamin A, and iodine deficiency) affect school participation and learning. Data on self-reported height and weight will be used to calculate body mass index and provide a reasonable proxy measure of whether students are overweight or underweight (Brener, McManus, Galuska, Lowry and Wechsler, 2003).

As part of a school health programme, school meal programmes can be a source of healthy foods to students (who may not have other regular sources of food) and can promote daily attendance, class participation, and academic achievement. Schools can teach nutrition education as part of health education curricula to help students develop the knowledge, skills, and behaviours needed to foster lifelong healthy eating habits (Taras, 2006, CDC.1996 and WHO, 1998).

2. Hygiene

Adolescents need to acquire hygienic habits in order to maintain good health. In many schools girls do not drink water adequately, nor pass urine frequently at school because of the poor hygiene school toilets (Nair, 2004). This contributes towards silent urinary tract infection. In many residential institutions for girls, proper menstrual hygiene is not taught to the girls. The girls also need to be made aware that some amount of vaginal discharge and dysmenorrhea is within normal limits.
Oral hygiene is very poor among adolescents. Petersen EP, Bourgeois, Ogawa, Estupinan-Day, Ndiaye (2005) pointed out that dental caries affect between 60-90% of children in developing countries and is the most prevalent oral disease among children in several Asian countries. In addition to causing pain and discomfort, poor oral health can affect children's ability to communicate and learn. More than 50 million school hours are lost annually because of oral health problems (Kwan, Petersen, Pine and Borutta, 2005).

Diarrhoeal diseases kill nearly 2 million children every year. Hygiene education and the promotion of hand-washing can reduce the number of diarrhoeal cases by 45%. (Jones, Burt, Petersen and Lennon, 2005; WHO, 2004). About 400 million school-aged children are infected with worms worldwide. These parasites consume nutrients from children they infect, cause abdominal pain and malfunction, and can impair learning by slowing cognitive development (Luong, 2003).

Using the data from the Global Student Health Survey Schools can help improve child and adolescent health by providing and maintaining sanitary conditions. By providing well-maintained and adequate numbers of sanitation facilities and safe water as part of the school health programme, schools can reinforce the health and hygiene messages delivered in health education and serve as a model to both students and the broader community.

3. Mental health

World-wide, approximately 20% of children and adolescents suffer from a disabling mental illness (WHO, 2005). Anxiety disorders, depression and other mood disorders, and behavioural and cognitive disorders are among the most common mental health problems among
adolescents. Half of all lifetime cases of mental disorders start by age 14 (Kessler, Berglund, Demler, et al. 2005).

Every country and culture has children and adolescents struggling with mental health problems. Most of these young people suffer needlessly, unable to access appropriate resources for recognition, support, and treatment. Ignored, these young people are at high risk for abuse and neglect, suicide, alcohol and other drug use, school failure, violent and criminal activities, mental illness in adulthood, and health-jeopardizing impulsive behaviours. (WHO, 2001). Each year, about 4 million adolescents world-wide attempt suicide. Suicide is the third leading cause of death among adolescents (WHO, 2001).

As part of a school health programme, school mental health and social services can play a critical role in fostering healthy social and emotional development among students. To help students develop positive mental health, school mental health and social services can teach life-skills such as problem-solving, critical thinking, communication, interpersonal relations, empathy, and methods to cope with emotions and crises. In addition, school mental health and social services can include prevention, assessment, treatment, and case management for students either directly or through referrals to community-based programmes (AAP, 2004).

4. Violence and Unintentional Injury

Unintentional injuries are a major cause of death and disability among young children (WHO and UNICEF, 2005). Each year, about 875,000 children under the age of 18 die from injuries and 10 to 30 million have their lives affected by injury. Injury is highly associated with age and gender. Male children aged 10-14 have 60% higher injury death rates than female children. Teenagers aged 15-19 have higher rates than those aged 10-14 years (64 compared to 29 per 100,000). (WHO,
2005). In 2000, it has been estimated that approximately 1.4 million adolescents aged between 10 and 19 years lose their lives through injuries and accidents, violence, suicide, pregnancy-related complications and other preventable illnesses (WHO, 2000; Brown, 2001; Ahmed and Anderson, 2002).

Estimated global homicide death rate for boys aged 15-17 is 9 per 100,000 (WHO, 2005). For every youth homicide, approximately 20 to 40 victims of non-fatal youth violence receive hospital treatment (WHO, 2002). Many unintentional injuries lead to permanent disability and brain damage, depression, substance abuse, suicide attempts, and the adoption of health risk behaviours. Victims of bullying have increased stress and reduced ability to concentrate and are at increased risk for substance abuse, aggressive behaviour, and suicide attempts (ABC, 2002).

School health programmes can help reduce violence and unintentional injuries in schools by establishing social and physical environments that promote safety and prevent injuries and violence implementing health education that teaches students knowledge, attitudes, and skills they need to adopt safe lifestyles establishing crisis response mechanisms providing mental health and social services to meet the needs of students and providing safe physical education and extracurricular physical activity programmes (WHO and UNESCO, 1999).

5. Alcohol, Drug and Tobacco Use

In most countries, alcohol-related mortality is highest among 45- to 54-year-olds, but the relationship between the age of initiation of alcohol use and the pattern of its use and abuse in adulthood makes the study of alcohol consumption among adolescents important (Poikolainen, Tuulio-Henriksson, Aalto-Setala, Marttunen and Lonnqvist, 2001)

Alcohol is the number one drug of choice for teens, but it is also extremely dangerous (Nesbitt, 2002). For instance, teens who drink are
more likely to have a bike/car crash, get into a fight, have unsafe sex, or experience problems in school. Intentional and unintentional injuries related to alcohol use are far more common among youth and young adults (Facy, 2000). Young people who drink are more likely to use tobacco and other drugs and engage in risky sexual behaviour, than those who do not drink (Hibell, Andersson, Ahlstrom, Balakireva, Bjarnason, Kokkevi and Morgan, 2000).

Problems with alcohol can impair adolescents’ psychological development and influence both the school environment and leisure time negatively (Bonomo, Coffey, Wolfe, Lynskey, Bowes and Patton, 2001). Alcohol use decreases concentration, attention, and memory retention, which all affect academic achievement. It also impedes the healthy development of social, emotional, and physical skills which children need in order to develop self-confidence and self-esteem (Sharon, and Wright, 2005). Early users put themselves at high risk for a variety of health and safety problems.

Tobacco use in many lower- and middle-income countries ranges from 10 to 33%, with use especially high among boys (Warren et al., 2000). Ninety percent of smokers begin smoking by the age of 19 (Fibkins, and William, 1993). The overwhelming majority of smokers begin tobacco use before they reach adulthood. Among those young people who smoke, nearly one-quarter smoked their first cigarette before they reached the age of ten.

Smokers have markedly increased risks of multiple cancers, particularly lung cancer, and are at far greater risk of heart disease, strokes, emphysema and many other fatal and non-fatal diseases. If they chew tobacco, they risk cancer of the lip, tongue and mouth.
Children are at particular risk from adults’ smoking. Adverse health effects include pneumonia and bronchitis, coughing and wheezing, worsening of asthma, middle ear disease, and possibly neuro-behavioural impairment and cardiovascular disease in adulthood. Many studies show that parental smoking is associated with higher youth smoking.

Teens who are addicted to tobacco have several common experiences. A number of them tried their first cigarette in the sixth or seventh grade. Smokers often do not perform well at school. They do not feel they are a part of school and are isolated from those students who are active in sports. Most of the smokers feel they have little hope of going to college or getting a good job after high school. They also report addictions to other substances, such as alcohol. They experience pressure from home and school, and use tobacco as a form of relief. In addition, teen smokers enjoy trying to hide their smoking or outwit school administration. This has made school more fun for some tobacco users (Lynch, Barbara and Bonnie, 1994).

Tobacco use has short-term and long-term physiologic, cosmetic, social, and economic consequences. Both cigarette smoking and smokeless tobacco use have direct health consequences. Even though people are aware of the health hazards, many find it difficult to stop using tobacco. According to a (1993) Nebraska study, rural youth are not exempt from drug use. In fact, these youth were at a greater risk of alcohol and tobacco use than their national peers. Currently 5 million people die each year from tobacco consumption, the second leading cause of death worldwide. If present consumption patterns continue, it is estimated that deaths from tobacco consumption will be 10 million people per year by 2020 (WHO, 2006).

The nicotine in tobacco acts as a stimulant, depressant, or tranquilizer depending on the dosage. An individual builds up tolerance to tobacco use, requiring larger doses to maintain a certain physiological
effect. When the body becomes accustomed to the presence of nicotine, it then requires the chemical to function normally. This level of dependence is referred to as an addiction.

Nicotine is considered the number one entrance into other substance abuse. Adolescents between the ages of 12 and 17 who smoke daily are 15 times more likely to use illicit drugs than their peers. Substance abuse is a learned behaviour. Teenagers who begin smoking are more likely to continue use into adulthood (Christen, Arden and Joan, 1994). By age 14, 35% of youth have engaged in some form of illicit (illegal) drug use (Urvia McDowell). By the end of high school, more than 50% will have tried at least one illicit drug. In 1993-94, 4.54% of drug users were in the age group of 12-17 years and 13.86% were in the age group of 18-23 years. The actual age of first use of drugs is known to be as low as 5 years (MHRW, 1998). Also a considerable number begin taking drugs when they are still minors. There is ample evidence to show that a majority of first time drug users are adolescents (Baron, 2002). Such an early use of drugs usually leads to addiction for life: the teenagers that begin using illicit drugs before the age of 15 are more likely to develop a lifelong dependence on illegal substances. This could also lead to abuse of harder drugs.

Factors associated with increased risk for any type of illicit drug use include at least one or more of the following: (MHRW, 1998).

- Poor parent-child relations: Studies show that living in a stressful home environment with relatively little parental support and monitoring places adolescents at greater risk for drug use.
- Family environments that model drug use: Adolescents are more likely to use drugs if someone in their home uses drugs. For example, parents who use drugs may practice poor parenting which may increase the risk of drug abuse for adolescents. Also,
parental or sibling drug use sets a model of acceptable inappropriate behaviour for teens, makes it seem like a normal part of life, and may encourage its acceptance by youth.

- Peer drug use: During adolescence, peers become a major influence because of the increased time spent with them outside of the home. Some teens feel pressured to fit in and do what their friends are doing. Consequently, teens that have friends who use drugs are more likely to use drugs themselves.

- High risk communities: Living in communities where drug use is widespread not only makes drug accessibility easier, but also normalizes the act of using drugs.

- Low self-esteem: Adolescents who do not have positive views of themselves, or who lack support and encouragement from others are more likely to use drugs.

- Poor school achievement: Teens who have negative attitudes toward school and low expectations of academic success are at increased risk of drug use. Also, teens who use drugs typically exhibit declines in grades, and inconsistent attendance at school.

Although scientific evidence on the efficacy of school health programmes conducted in schools is limited, (Paglia, and Room, 2002) such programmes have been designed to help reduce risks associated with alcohol use among young people (McBride, Farringdon, Midford, Meuleners and Phillips, 2004). School health programmes can help students acquire communication skills, critical thinking, refusal, and other life skills needed to avoid problems associated with alcohol and other drug use.

Schools can provide an ideal venue not only to teach about the harmful effects of smoking, but also to teach students refusal skills and an understanding of the behaviour of the tobacco industry. A school tobacco
control programme must also incorporate facilities and events for prohibiting tobacco use in schools, and helping students and staff to quit smoking (WHO, 2002).

6- Physical Activity

Participating in adequate physical activity throughout the life span and maintaining normal weight are the most effective ways of preventing many chronic diseases, including cardiovascular disease and diabetes (WHO, 2002).

The prevalence of type 2 diabetes is increasing globally and now is occurring during adolescence and childhood (Pinhas-Hamiel, Zeitler, 2005). Participating in adequate physical activity also helps build and maintain healthy bones and muscles, control weight, reduce blood pressure, ensure a healthy blood profile, reduce fat, and promote psychological well-being (Warburton, Nicol and Bredin, 2006).

Roughly 60% of the world's population is estimated to not get enough physical activity. Patterns of physical activity acquired during childhood and adolescence are more likely to be maintained throughout the life span, thus sedentary behaviour adopted at a young age is likely to persist (WHO, 2003).

As part of school health programmes, schools can offer physical education and opportunities, both during and outside the school day, for all students to participate in physical activity and sports. Physical activity helps children to stay alert and concentrate better. Students who are physically active are more likely to have higher academic performance and less disruptive behaviour (WHO, 2007).

7. Protective Factors
For most adolescents, school is the most important setting outside of the family. School attendance is related to the prevalence of several health risk behaviours including violence and sexual risk behaviours. (WHO, 2004)

Adolescents who have a positive relationship with teachers, and who have positive attitudes towards school are less likely to initiate sexual activity early, less likely to use substances, and less likely to experience depression. Adolescents who live in a social environment which provides meaningful relationships, encourages self-expression, and also provides structure and boundaries, are less likely to initiate sex at a young age, less likely to experience depression, and less likely to use substances (WHO, 2002).

Being liked and accepted by peers is crucial to young people’s health development, and those who are not socially integrated are far more likely to exhibit difficulties with their physical and emotional health. Isolation from peers in adolescence can lead to feelings of loneliness and psychological symptoms. Interaction with friends tends to improve social skills and strengthen the ability to cope with stressful events (WHO, 2004).

Parental bonding and connection is associated with lower levels of depression and suicidal ideation, alcohol use, sexual risk behaviours, and violence (Barber, 2002). School health programmes can help create a supportive and caring school environment and provide students with knowledge and skills they need to develop positive and supportive relationships with their peers and families.

8. Sexual Behaviours

During adolescence, youth experience physical growth and hormone changes that prompt sexual feelings (Futris). Physically, the body is developing the capacity to generate life. The sex organs are
maturing and typically by the end of puberty, both men and women have the ability to procreate.

Talking to teen about these changes and their impact may be uncomfortable, but the issue of sex should be a part of the infamous "talk" during adolescence. Kotchik (2001) reports that by the time they graduate, half of all high school students will have begun having some sort of sexual experience. This percentage is higher in men, minority teens, and teens from lower socioeconomic households.

According to the Alan Guttmacher Institute (AGI, 2001), a small number of early teens are sexually active: two out of ten girls, and three out of ten boys. However, by the age of 18, 65-70% of teens report being sexually active. Girls typically engage in sexual activity to express emotions related to love, while boys tend to have sex for pleasure rather than emotional closeness. Overall, studies by AGI show that parental, developmental, and peer influences contribute to the early initiation of sexual activity.

- Living in a single parent home: Teens who live in single parent homes are more likely to be sexually active than those from two parent households. Parental divorce during the early teen years has also been associated with the early onset and increased frequency of sexual activity in girls. These effects are often due to less monitoring and supervision that typically occurs in single parent households.

- The influence of an elder sibling: Teens who have an elder sibling (more specifically, a sister) who is sexually active or who has had a baby are more likely to begin having sex at a younger age.

- The perception that peers are sexually active: Studies consistently find that if a teen perceives peers to be sexually active, whether
they are or not, heavily influences their decisions about sexual activity.

- Early pubertal development: Teens who mature physically earlier than their peers typically hang out with an elder crowd. Elder peers may influence the decision to begin sexual activity earlier.

- Deviant peer groups: Teens who associate with peers who use substances or are delinquent (e.g., skip school, take part in minor criminal activities such as shoplifting) are more likely to engage in risky sexual activity. For these youth, risk taking activities are more likely to be perceived as normal.

- Sexual Abuse: Teens who experienced involuntary sexual activity (e.g., sexual abuse as children) are more likely to begin having sex at an early age, typically have more sexual partners, and are less likely to use any form of protection.

- Alcohol and drug use: Teens who use alcohol and drugs are at greater risk of engaging in sexual activity. Consequently, these youth also are more likely to engage in unsafe sexual behaviours (e.g., unprotected sex, sex with multiple partners).

With the widespread availability of information, the influence of the media and the breakdown of traditional family structures, sexual behaviour among adolescents may be described as being in a state of flux. While information on sexual activity and behaviour is limited, and the methodologies of existing studies are questionable, a consistent finding is of a high level of pre-marital sexual activity, mainly among adolescent boys. More adolescents are sexually active before marriage — as early as 12 years at times — than was thought earlier (HIV/AIDS Media manual, India, 2007). A disturbing trend is the lack of use of contraceptives and lack of knowledge of sexually transmitted diseases and preventive behaviour. Studies show that adolescents who begin sexual activity early are likely to have sex with more partners and with partners who have been
at risk of HIV exposure and are not likely to use condoms (UNAIDS and WHO, 2005).

There is considerable interest among adolescent boys for information on reproductive health (Mehta 1998). Parents and teachers play very little role in giving information and are even reluctant. Peers are often the most important source of information, which is often misleading and inaccurate. Studies (Jeejeebhoy, 1996) on sexual behaviour of adolescents indicate that adolescent sexual activity is higher in boys than girls though there is under-reporting of non marital relationships in girls. Though attitudes to premarital sex are conservative, both boys and girls engage in premarital sexual activity, boys more than girls (Mehta, 1998). Commercial sex workers often serve as partners for first time sexual encounters. Contraceptive use is low in general and is rare in sex with commercial sex-workers. Knowledge of HIV/AIDS and safe sex is low.

Worldwide, the highest reported rates of STIs are found among people between 15 and 24 years; up to 60% of the new infections and half of all people living with HIV globally are in this age group (WHO, 2004). The ironic situation is that most teen-agers have very little fear about disaster like HIV (Lynn and Pike, 1997). In fact, they have entered the age where they usually believe, "It will never happen to me." Parents and concerned adults often worry about the sexual decisions of 15- to 18-year-olds. It is important to explain that anyone can be infected by AIDS, regardless of sexual orientation (Blake, 1990). Fifteen- to 18-year-olds may be under pressure to be sexually active because of things they see or read in the media. They also are influenced by peers, the individual with whom they are involved and their own hormones or curiosity.

In many countries, HIV infection and AIDS is reducing average life expectancy, threatening food security and nutrition, dissolving households, overloading the health care system, reducing
economic growth and development, and reducing school enrolment and the availability of teachers (UNAIDS 2004). STIs are among the most common causes of illness in the world and have far-reaching health consequences. They facilitate the transmission of HIV and, if left untreated, can lead to cervical cancer, pelvic inflammatory diseases, and ectopic pregnancies (WHO, 2005).

2.2 LIFE SKILLS AND FAMILY LIFE EDUCATION

Much behaviour that comprise young people’s lifestyles may directly or indirectly impinge on their health in the short or long term; Certain behaviour is initiated in the adolescent years, while some patterns of behaviour become established in earlier childhood (HURLOCK, 1986). Adolescence is a time when temptations are great and they are encouraged to be enthusiastic and careless. They challenge morals and indulge in risky and dangerous behaviour (Planning Commission, Govt. of India, 2001). The youth may develop unhealthy life style and risk behaviour. It is a time or turning point in life when they can make or break themselves. So, youth is the time when the preventive strategy should be taught and learnt, before risk behaviour catches them young.

Adolescents need to understand the concepts of risk behaviour, such as unprotected sex and the use of alcohol and drugs, the possible consequences of such behaviour and how to avoid them (WHO, 1998). And they need to know where to go for services and help. Young people in many parts of the world are denied sex and health education in schools because parents and other authorities fear it encourages early sexual activity. But there is compelling evidence from studies conducted around the world and in many different cultures that, in fact, sex education encourages responsibility (Nair, 2004). Knowledgeable young people tend to postpone intercourse or, if they do have sex, use condoms (Jagnayak, 2005).
Experience shows, however, that information is not enough (UNAIDS -2007). Young people need life skills such as decision-making, communication and negotiation. Improving literacy rate and availing visual and print media can facilitate adolescents’ access to information, but not necessarily so on Adolescent Sexual and Reproductive Health (ASRH). Studies across South Asia (Mehta, 1998 and Jeejebhoy, 1996) on sexual activities and knowledge indicate that Education did not increase knowledge of sex and reproduction. The educational system does not adequately meet the needs for imparting sex education. It is now being recognized that in order to reduce risky sexual behaviour and empowering adolescents to make informed decisions for facing the challenges of life they need to develop the necessary life skills (WHO 1998). Thus, the focus of interventions with adolescents has to shift from giving information, to building life skills. While life skills are built through experiential learning, these skills can be enhanced in the context of ASRH and through client friendly service delivery system.

Capabilities of persons include personal, conceptual, managerial and technical skills. Of these, the personal skill is the basic skill that makes the person competent to acquire other skills. Life skill is nothing but personal skill. It can be defined as the ability for adaptive and positive behaviour that empowers a person to make informed choices in the face of complex life situations. The World Health Organization (WHO, 1993) defined life skills as the abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life. WHO (1994) identified a core set of life skills that included problem-solving, decision making, goal-setting, critical thinking, communication skills, assertiveness, self awareness and skills for coping with stress. Life skills enable individuals to translate knowledge, attitudes and values into actual abilities - ie. "what to do and how to do it". Life skills are abilities that enable individuals to behave in healthy ways, given
the desire to do so and given the scope and opportunity to do so (WHO, 1997).

Life skill makes a person psychologically and socially competent to perform the basic human functions. Psychosocial competence can be defined as a person’s ability to maintain a state of social and mental well-being while adjusting with oneself or interacting with others (WHO/GPA, 1994). Psychosocial competence has an important role to play in the promotion of health in its broadest sense; in terms of physical, mental and social well-being (Parsons, Hunter, and Warne, 1988). In particular, where health problems are related to behaviour, and where the behaviour is related to an inability to deal effectively with stresses and pressures in life, the enhancement of psychosocial competence could make an important contribution. This is especially important for health promotion at a time when behaviour is more and more implicated as the source of health problems.

The most direct interventions for the promotion of psychosocial competence are those which enhance the person's coping resources, and personal and social competencies (Weissberg, Caplan, and Sivo, 1989). In school-based programmes for children and adolescents, this can be implemented by the teaching of life skills in a supportive learning environment. The capacity to say “NO” to unwanted influences from peers and even from persons of authority is one of the many life skills that an adolescent should learn and practice, especially to avoid the menace of substance abuse, alcohol and smoking (Pentz, 1983). It is a person's ability to maintain a state of mental well-being and to demonstrate this in adaptive and positive behaviour while interacting with others, his/her culture and environment.

Life skills development emphasizes the links between knowledge, attitude, values and positive health behaviour. Life skills education is an active and dynamic process and is based on the social learning theory
(Nga, 2000). Actual practice of skills is vital either by working in small
groups or in pairs through brainstorming, role-play, games and debates.
Homework assignment practice in actual situations is also necessary. The
optimal strategies for Life Skills Education are using existing
infrastructure of schools, providing access to adolescents on a large scale
and having experienced teachers as facilitators. Counselling is undertaken
when an adolescent shows consistent failure in mastering good life skills,
resulting in adjustment failure at school, home or social circles (Sharma,
2000).

Life skills cannot be imbibed through reading books. Different
training methods are used for different skills. After training, the skill
should be practiced in real life situations. The main aim of life skills
training is to make children perform better in all walks of life by
acquiring psychological competence; finding proper solutions to day to
day problems; coping with different situations in life; performing well in
different spheres of life; creating a positive attitude; identifying capability
and improving ability (Nair, 2000). An adolescent with a wholesome
personality is one, who has strong mental, physical and cognitive skills,
which enable him to behave, relate to and act effectively in the family and
in the society at large.

The emergence of sexually transmitted infections (STI) and HIV /
AIDS have necessitated sex education in schools (WHO/GPA, 1994).
Sexual abuse of children and child prostitution is now increasingly being
recognized prevalent in the society (Kathleen et al.-2000). For young
adolescents sexual matters should be presented in a way that is acceptable
to the local community, emphasizing the advantages of practicing
abstinence and dangers of irresponsible behaviour. For elder adolescents,
the programme should lay emphasis on understanding and appreciating
one’s sexuality and fostering the attitude that sexual relationship is like
any other relationship where the feelings and needs of both partners are equally important.

The Reproductive and Child Health (RCH) Programme of Government of India has given an opportunity for the first time to plan and execute concrete actions for promoting adolescent reproductive health (WHO, 1990). However, many parents are not yet ready to accept sex education for their children in school. Hence a more acceptable term "Family Life Education" has been used (Nair, 2004). Family Life Education is an acceptable mode of introducing what is essential for adolescents to understand and appreciate.

Adolescence is a period of experimenting, experiencing and expanding. Adolescents need help and guidance in decision-making, problem solving, critical thinking, developing interpersonal skills, self-awareness, empathy, coping with stress and managing emotions (Chandrasekhar, Ramachandran, and Ramakumar, 2001). The rebelliousness and dislike for parental intrusion usually keeps parents at bay because teenagers do not relish the idea of help and guidance from parents. However, this may not always be so. Beneath frequent violent outbursts, sudden mood swings and related interpersonal problems of an adolescent, there may be a person crying out for professional help (Hurlock 1986). All adolescents need support and guidance. When parents find it difficult to handle signs of trouble, professional help should be sought at the earliest. Extra care is needed while offering help to adolescents problems because it is not easy for teenagers to accept the fact that they need help. Attempts should be made to understand the adolescent, and to safeguard, protect and guide him/her. The Family Life & Life Skills Education Programme is a good support system for adolescents at the community level.
Family Life & Life Skills Education given to high school students by Child Development Centre, Medical College, Thiruvananthapuram, Kerala (2004) is an instance of school based adolescent education programme. The basic strategy adopted in this programme was to reach out to each and every student of Class- IX and XI belonging to 96 schools under the Thiruvananthapuram District Panchayat. Family Life & Life Skills Education Classes were conducted and Counselling services were offered to those who demanded or were identified by their teachers. The problems identified among the sample group are furnished under the following heads:

Family problems

The family problems observed among the adolescents were alcoholic father, financial difficulty, broken family, sibling rivalry and separation from home. Girls had more family problems than boys. Alcoholic father was a serious problem in a significant proportion of adolescents. As a chronic drinker he caused nuisance and physical harassment to his family. Absence of the father due to separation, broken family and financial difficulties resulted in insecurity, frustration and disappointment in the adolescents. All these had an adverse effect on the mental health of adolescents resulting in poor performance in class and psychological problems like anxiety and depression.

Emotional problems

Emotional problems reported were anxiety / tension and intolerant anger. Emotional problems were found to be more in girls than boys. Many students reported feelings of anxiety and tension. They were anxious to questions asked, to talk to opposite sex, to face a crowd or about their career. Both boys and girls had problems in controlling their anger. They usually reacted in a destructive manner ending up hurting others and feeling guilty later.
Drug abuse

The few adolescents who had come for help seemed to be aware of the consequences of drug abuse and wanted to reduce the frequency of usage. The most commonly abused local drugs were Shambhu, cigarette and Pan Parag. Use of other drugs (alcohol and Hans) was less common. The usage of certain drugs was due to their easy availability in the nearby areas of schools. Most boys using drugs reported that they had been using them for about 3 years. The drug use started because of curiosity, but later culminated into a habit. Drug use was more common in some schools; the teachers were aware of the problem and had warned the students about the adverse effects.

Psychological Problems

Students reported having psychological problems like depressive symptoms, suicidal tendencies / attempted suicide, phobia, irrational beliefs and low self-esteem. Some of the adolescents preferred to be alone all the time as they were unhappy with their life. Some of them were at different stages of the suicidal process and a few admitted to having serious thoughts about suicide. Students with suicidal ideations reported family and financial problems. Low Self-esteem could have played an important role in suicidal tendencies among adolescents.

Sexual abuse

Sexual abuse was present in 24 girls and 6 boys. Some of the adolescents reported to have been sexually abused before they attained puberty. Most cases of sexual abuse were of incest; usually by the step father, father himself or uncle. Abuse by touching private parts or giving bad looks was also reported. Cases in which intercourse took place were few.

Pornography
Some students had reported watching ‘blue’ films regularly. Frequent viewing reduced their interest and performance in studies and other serious activities.

**Sexual doubts**

Students had doubts about sexuality especially about masturbation.

**Involvement in sexual act**

Those who had sex with a person and of the same age felt guilty about it and were curious to know if it was carried out in the safe period.

**Homosexuality**

Only a few cases of homosexuality were detected and as such it was not a prominent problem among students.

**Inter-personal problems**

Adolescents reported to have had the habit of sharing their thoughts and feelings with their peers. They had given great importance to friendship, but used to get easily hurt due to peer conflicts. Some students complained that their academic performance had been disrupted because the teachers unduly favoured some students.

The forgoing literature on health psychology, risk behaviour and adolescents’ needs stressed the necessity of developing and implementing strategies to deal with adolescents’ health behaviour which includes concerns such as Dietary behaviour, Hygiene, Mental health, Violence and Unintentional injury, Tobacco, Alcohol and other drug use, Physical activity, Protective factors, and Sexual behaviour. Family Life and Life Skills Education Classes aim at meeting the sole objective of helping the adolescents get through his / her life phase successfully.

### 2.3 APPRAISAL OF HEALTH BEHAVIOUR

The major focus of this part of the review is to draw out the assessment done in the area of Health Behaviour in Kerala, other parts of India and abroad.
The 2001 Census report of India ranks Kerala as the most literate among all states and union territories. According to the Census, the literacy rates for women and men in Kerala are 88 and 94 per cent respectively and thus the gender gap in literacy is just 6 percent as against 22 percent for the country (Banthia, 2001). The same census also reveals that Kerala is the only state in India where the sex ratio favours women. The sex ratio (women per 1000 men) in Kerala was 1058 as against 933 for India. In terms of reproductive behaviour, according to the Second National Family Health Survey, 1998-99, Keralite woman on an average end with 1.5 deliveries (IIPS and ORC Macro, 2001). Indirect estimates based on the 2001 census show that Kerala as the leading state with below replacement level of fertility (Guilmoto and Irudaya, 2002). The Human Development Index (HDI) prepared by the Indian Planning Commission ranks Kerala as the first throughout the last 20 years, 1981-2001. Kerala’s HDI for 2001 was 0.638 as against the all-India index of 0.472 (Planning Commission, 2002). Evidently, all the conventional indicators rank Kerala as the top most. Even the Gender Empowerment Measure (GEM) developed by the United Nations Development Programme and the alternative measures developed by Hirway and Mahadevia recently also accord Kerala the leading position (UNDP, 1995; Hirway and Mahadevia, 1996).

In spite of the high status in health and HDI accorded by various agencies, the Health Behaviour of people in Kerala still requires improvement. The ills of Kerala society consist of high incidence of suicides and accidents, cancer, widespread alcoholism, mental disorders, high rates of divorce and separation, HIV and AIDS, growing individualism and decline of family support networks partly due to internal as well as international migration. (Mohamed, Irudaya, Kumar and Mohammed, 2002). Kerala is the most suicide-prone state of India. The suicide-rate of Kerala is about three times the national average and has been so for many years now. The malaise has gripped both towns and
villages alike. More and more persons - the adolescents, young, middle-aged, and aged - find life increasingly miserable. Frequently, they opt to stop the sufferings by taking their own lives. Statistics reveals that most persons who resort to giving up their lives do so at their most productive age (N.C.R.B-2002).

Reasons for the abnormally high suicide-proneness of Kerala Society has not been conclusively established. The following aspects are thought to be forcing more and more individuals to consider suicide.

- **Social Changes**: Weakening protective value of social institutions like family, poor or absent communications, increased divorce rates.
- **Deterioration in indices of social progress**: Unemployment, High crime rates, alcohol consumption and violence against women and children.
- **Life styles**: Consumerism and spending beyond resources pushing people into debt burdens.
- **Mental Disorders**: Particularly, depression untreated or under-treated.
- **Negative interactions from society towards suicidal individuals**: painful, unpleasant, isolating and rejecting.
- **A generation growing up with low frustration tolerance, problems in education system, parenting attitudes**.

A survey of 11000 high school students between fourteen and seventeen years age revealed that 27% had thought about suicide, 16% had a specific plan, 8% had made an attempt and 2% had made attempts requiring medical attention (Joseph et.al, 1995). Kerala has been among the states with the highest crime rates in the country for some years. In the year 2001, the state has been the first in India in crime rates-306.1/100000. The per capita alcohol intake is said to be among the highest. The state has a very high rate of accidents too (N.C.R.B, 2002).
It is, therefore, important to address the risk behaviour, health practices and life styles of young men and women in Kerala.

From 2005 onwards Kerala has been suffering widespread viral fever. The types of fever reported were Dengue fever, Canicola Fever and mostly Chikungunya which showed its ruthless attack in 2007 (Kerala government Public Relations report-2007). In 2006, throughout India, 1400000 people were affected by Chikungunya. In 2007 this disease caused severe damage to health and economy of the people in Kerala. A survey study (Pillai, Kumar and Shafi, 2007) showed that, on an average, doctors diagnosed 185 chikungunya cases out of 250 patients in a day. This means that 73% of the patients reported per day in various hospitals in different parts of Kerala, were Chikungunya affected. Among these 0.02% of the patients died. An average of 1400 Chikungunya patients reported per day in a district. This has created the awareness that the life style and habits of the people are to be corrected or changed in order to control the pests that spread viruses.

Risk factors for cervical dysplasia in Kerala, was assessed by Varghese, Amma, Chitrathara, Dhakad, Preetha, Letha, and Nair. (1999). The study confirmed the importance of genital hygiene in the fight against infections that had a role in the development of cervical dysplasia and cancer. Many women could not afford sanitary pads, while adequate facilities for washing after coitus were often unavailable. Health education, satisfactory living standards, and the empowerment of women were prerequisites for reducing the incidence of cervical dysplasia. The risk factors for invasive cervical cancer included early age at the time of first sexual intercourse, multiple sexual partners, low socioeconomic status, and a history of sexually transmitted disease (1). The predominance of risk factors associated with sexual behaviour suggested that a sexually transmitted infectious agent caused cervical neoplasia.
The most common presenting symptom was vaginal discharge, which occurred in 33% of the women; lower back pain was experienced by 16% of them. It was reported by 70% that they always washed themselves after coitus but by only 8% that they used sanitary pads during menstruation. The adoption of hygienic practices was related to educational level: thus 93% of the women who used sanitary pads had been educated in high schools or colleges. Illiteracy and poor sexual hygiene were risk factors for cervical dysplasia.

Sexually transmitted diseases were the commonest group of infectious diseases in most countries. Infection of the genital tract was undoubtedly exacerbated by poor sexual hygiene. The observed deficiencies in genital hygiene were associated with ignorance, low socioeconomic status and certain aspects of sexual behaviour. Poverty combined with low status does not allow a vast majority of women to negotiate safe sex, and thus makes them vulnerable to the disease.

In India, although traditional norms oppose premarital sex, some studies indicate a growing trend towards premarital sexual activities among adolescents (Sharma, 2000). Risk behaviour and misperceptions about sex among low-income college students of Mumbai has been assessed by Leena Abraham (1998). The survey data showed that many boys and girls had engaged in sexual acts of varying degrees of physical intimacy, but there were marked gender differences. While “any sexual experience” was reported by nearly half the boys (49%), only 26% reported sexual intercourse. Comparatively fewer girls reported either “any sexual experience” (13%) or sexual intercourse (3%). Sexual partners of girls were peers, either as ‘true love’ or ‘time pass’ partners. Girls tended to be monogamous, except in some instances of ‘time pass’ relationships. Boys’ sexual partners included peers (as both ‘time pass’ and ‘true love’ partners), commercial sex workers (CSWs) and elder women, whom they called ‘aunties’. Boys not only engaged in multiple
partnerships but also explored different types of sex through these partnerships.

About one-fourth of boys in this particular sample had engaged in risky premarital sex, and their sexual networks included multiple partners and unsafe sex. They carried misperceptions about what constituted risky behaviour and therefore did not consider themselves at risk. Although many girls were aware that some boys had sexual relations with their peers and that some went to “red light areas”, they did not perceive any risk of contracting HIV from their future partner or spouse. However, as long as boys continue to have unprotected sex within multiple, transitory relationships, including relationships with ‘aunties’, ‘time pass’ friends and CSWs, they are at risk of contracting STIs, including HIV, and are likely to pass on the infection to their spouse or other partners (Abraham, 1999).

Studies by Jejeebhoy, (2000), and Abraham (2000) in Mumbai suggest that between 20% and 30% of young men and between 0% and 10% of young women report premarital sexual experience. Sexual initiation occurs earlier than many assume, and is often unplanned and unprotected. Moreover, substantial proportions of young men report having sex with sex workers—usually without condoms.

Sexual behaviour studies of unmarried youth in India estimate that 19-28% of young men and 1–9% of young women have had (penetrative) sexual experience (Family Planning Association of India, 1994; Goparaju, 1993; Bhende, 1994). These studies indicate that premarital sex among young men is not as rare as commonly believed, while it continues to be comparatively rare among young women. Gender differences in sexual behaviour are not merely the result of over-reporting by men and under-reporting by women, but rather are the outcome of a sexual ideology that promotes male sexuality and controls female sexuality in India (Abraham,
Studies have reported that young people form a significant segment of those attending sexually transmitted infection (STI) clinics and those infected by HIV (AIDS Research and Control Organisation, 1995; National AIDS Control Organization, 1994; Ramasubban, 1992). It is, therefore, important to understand the risk behaviour of young men and women.

The Youth sexuality study was carried out as part of University Talk AIDS programme at Pune (N A R I, 1997). The study was planned to understand the sexuality issues in context of HIV/AIDS in youth. Realizing that higher level of knowledge of HIV/AIDS is not enough but behaviour change aspects should be addressed; a need for a systematic base-line data was required to plan interventions. AIDS awareness was reported high. Boys & girls have different relation ranging from social, emotional, professional, to physical and sexual relations. Sexual Experience was not responded by many girls & boys (574 & 386 responses). Age at first sexual experience in girls is at 16.1 year; for boys it is at 16.9 year. Heterosexual experience reported in boys 37% (184/501) & girls 12% (29/252) ranging from non-penetrative (kissing, genital fondling etc) to penetrative sex in both except oral sex only in boys. Sex with CSWs reported 4% (23/499). Homosexual experience by 15% boys (77/501) & 5% girls (13/251) reported. Condom use: Only one third (79/213) reported condom use, a fifth (42/211) its consistent use. The students expressed a need for interactive communication on these issues.

The study has demonstrated that although knowledge of HIV/AIDS is high in both boys and girls, and comparatively higher in boys, yet myths and misconceptions persist. Though the young people have reported risky behaviours but AIDS was not perceived to be a problem by them. The qualitative data had provided valuable insights of certain behaviours related to youth sexuality like the varied meanings of
safe-sex, fears related to masturbation and perception of individual responsibilities, why certain beliefs and attitudes are held and perceived differently by boys and girls. This has also enabled in understanding the vocabulary used by the college students which would be useful for addressing meaningful intervention.

The college students are a sexually active age group having a wide social network. This network of association can be useful for dissemination of correct information on reproductive health matters that includes HIV/AIDS/STDs/RTIs etc, if this included as a college activity. The unmet needs of the students create more misconceptions in their minds. Their ever increasing curiosity and dependence on the easily accessible unreliable literature leads them to engage in risky behaviour that needs to be prevented.

Adolescent girls constitute one fifth of the female population in the world. In countries like India, adolescent girls face serious health problems due to socio-economic, environmental conditions and gender discrimination which makes them more vulnerable to health risks. A vast majority of girls in India are suffering from either general or reproductive morbidities. Balasubramanian, (2005) conducted a study on Health needs of poor unmarried adolescent girls in rural Tamil Nadu. The study explored health needs of 391 adolescent girls in the age group 11-18 years. A complete house to house survey of unmarried adolescent girls was done in 13 villages of Chunampet panchayat, Tamil Nadu, not only to assess their general and reproductive health status, but also to assess their care seeking behaviour for their illness and to document their menstrual practices and patterns. Findings showed that the mean age of girls was 14.56% years and a majority of them (89%) had attended school. About 67.26% of the girls interviewed had reached menarche, and two-fifths of these girls felt tense, anxious and angry during their periods. It was also observed that prevalence of reproductive morbidity was very
high, and 82% of girls who had attained puberty had one or more gynaecological problems. The mean age of menarche was 13.48 years. A negative association was observed between age at menarche and morbidity i.e. prevalence of morbidity increased with age at menarche. Dysmenorrhoea and menstrual irregularities were highly prevalent. There was a close relationship observed between menstrual hygiene and reproductive morbidity.

The prevalence of reproductive morbidity was higher among working girls. The prevalence of general morbidity increased with age and it was higher among illiterates than literates and was slightly higher among girls who did not work. The treatment seeking behaviour for reproductive illness was very low; however it was comparatively good for general illnesses like cold, cough, headache, fever, etc. Around 50% of the girls had undergone treatment for these illnesses. It was apparent that adolescent girls had some reservations in seeking treatment for reproductive illnesses even though they had these for a long time. Findings indicated that girls suffered the health consequences of their socio-economic status, poor personal hygiene and lack of nutrition. Improving awareness about self care practices and care seeking behaviour may prevent the reproductive morbidities that were an outcome of poor personal hygiene. Also, there is an urgent need for accessible health services for adolescent girls in rural areas in all dimensions including reproductive health.

Paul, Dinesh et al. (2005) conducted a study on Psycho-social morbidities among adolescents going to schools of South West Delhi. The objectives of the study were to identify needs and problems of school going adolescents, to identify the correlates affecting adolescent mental health and to identify adolescents with problem behaviours. Data was collected from schools of South West Delhi through purposive sampling. In all 1302 adolescents in the age range of 12-19 years were selected
randomly for the study. The tools employed were personal data sheets (for adolescents and teachers), Youth Self Report (YSR) and identification of sources of daily stress. Only about 35.41% adolescents had secured marks above 50%. About 76% adolescent girls were found to be undernourished. Factors associated with this were gender discrimination, nutrient deficient diets and media influence for encouraging slim physiques. Eight core problem behaviours identified were withdrawn, somatic complaints, social problems, thought problems, attention problems, delinquent behaviour, aggressive behaviour and anxiety/ depression. These were further classified as Internalizing Syndrome (withdrawn, somatic and anxious/ depressed), Externalizing Syndrome (delinquent behaviour and aggressive behaviour) and Neither Internalizing or Externalizing Syndrome (Social problems, thought problems and attention problems).

About 630 students were identified as having psycho-social morbidity, and among these 422 were categorized as high risk cases. Ten common concerns which were sources of stress were too many things to do, concern about weight or physical appearance, doing home work, frequent nagging and scolding, meeting deadlines at work, taking many decisions, attending tuitions, meeting responsibilities outside home, and arguments with friends and family. Also, a significant positive correlation (Karl Pearson’s Coefficient of Correlation) was found between the class in which adolescent was studying and the problem behaviour.

A study was conducted (Parwej, Saroj, Kumar, Rajesh, Walia, Indarjeet, Aggarwal and Arun, 2005) to measure the effectiveness of a reproductive health education package in improving the knowledge of adolescent girls aged 15-19 years in Chandigarh. A reproductive health education package, developed in consultation with parents, teachers and adolescents, was delivered to randomly sampled classes of two senior secondary schools and one school was selected as control. In one school,
a nurse conducted 15 sessions for 94 students in three batches using conventional education approach. In another school she conducted sessions for a selected group of 20 adolescents who later disseminated the messages informally to their 84 classmates (peer education).

Results showed that the teachers, parents and students overwhelmingly (88%, 95.5% and 93% respectively) favoured reproductive health education programme. Five percent of the respondents reported that someone in their class is having sexual relations, and 13% of the girls approved of pre-marital sexual relations. Reproductive health knowledge scores improved significantly after intervention in conventional education (27.28) and peer education group (20.77) in comparison to the controls (3.64). Post-test scores were not significantly different between peer education group and conventional education group (43.65 and 40.52 respectively) though the time consumed in delivering the peer education intervention was almost one third of the time taken to implement conventional education. Conclusion: Peer education and conventional education strategies were effective in improving the reproductive health knowledge of adolescent girls but peer strategy was less time consuming.

Bhagat, Bhattacharya and Khan (2004) conducted a study on Risk Behaviour of those who attended VCTCs in context of HIV/AIDS. On an average, the VCTC attendees had gone to 3 CSWs and had relationship with 5 non-regular partners. Mean age of man having sex with men was 18.3 years. 53 per cent were using condom, of which 36.4 were men and 16.7 per cent were women. Risk Behaviour (sexual and non-sexual) and Test Results: Among the positives, 38 per cent had STD. 36.5 per cent had visited CSW of which 67.8 per cent were HIV positive. 59 per cent of the respondents were married at the time of first sexual experience of whom majority observed to be positive. Majority of the respondents had heterosexual orientation of whom around 56 per cent were positive.
Knowledge about HIV/AIDS and Risk Behaviours among the Respondents: Among the respondents, 74 per cent have heard about HIV/AIDS but only 55.3 to 58.3 per cent were aware of how HIV was transmitted and prevented. Heterosexual risk behaviours was the main reason for attending the VCTCs. The major reason among women was, however, the presence of prolonged illness and HIV positivity of their spouse. The reason for one third of the men who attended voluntarily was a history of risk behaviour.

Vasantha and Lakshumma, (2005) assessed the impact of women’s education on health and family welfare aspects. The sample comprised 100 mothers (50 illiterate and 50 literate) of school going children. Random sampling method was used in selecting the sample from Gyampalli village of K.V. Palle Mandal of Chittoor District. A questionnaire was prepared for the purpose of data collection and it contained thirty questions and was broadly divided into 3 categories namely physical health, child care and sanitation, and nutrition and diet. Results of the study indicated that a large percentage of women were caught up in old beliefs and faiths due to lack of knowledge which could be provided only through education on hygiene, sanitation, etc. Education on hygiene helped in reducing child mortality by taking care of diseases like diarrhoea. There were not many differences among responses of literate and illiterate mothers regarding knowledge. However, significant differences existed among some statements such as ‘Our traditional habit of eating more rice and less vegetables and lentil makes a proper nutritional meal’ which recorded 57% positive responses by illiterate mothers as compare to nil response by literate mothers. Illiterate mothers lacked knowledge about nutrition and the effect of surroundings on the child’s health.

Male Sex Workers were a significant yet invisible population in India. The few studies that have examined the complex dimension of
sexuality in India have found that significant numbers of men do have sex with other men. One study, undertaken among residents in slum areas in Chennai, found that 6% of men had had sexual intercourse with another man. Almost 7% of the men who had sex with other men were HIV-positive, and more than half of them were married. These men exchanged sex for money, food or goods and may cater to either male or female clients or both. A pilot study on male sex workers in three cities: Kolkata, Vijaywada, Ahmedabad indicated high sexual activity, low risk perception, low adoption of safe practices. The study found that male sex workers were subjected to violence, male rape, criminal assault, intimidation and extortion. Local media had strong negative opinion on male sex workers. (NIMSW/SHRC, 2005)

In the North Eastern region, especially in the states Manipur, Mizoram, and Nagaland, the primary route of HIV transmission was through injecting drug usage and concentrated chiefly among drug injectors and their sexual partners (Solomon et al., 2004). Injecting drug use was not limited to India’s north-eastern states. There had been a sharp rise in HIV infections among drug injectors in Tamil Nadu, where 39 percent were infected in 2003, compared with 25 percent in 2001 (NACO 2004). A smaller study in Chennai found 64 percent of injectors were HIV positive, according to sentinel surveillance done in 2003 (MAP, 2005)

There was a significant overlap of sex work and injecting drug use in Manipur, where a drug injection driven epidemic had been prevalent for at least a decade. In Manipur the first wave of the epidemic was among drug users. In the second phase it was transmitted to unsuspecting spouses. From 1995 the spread of the epidemic was more through the sexual route. From 1997 the mother to child transmission of the virus began. (Kannan and Vinayakan, 2005) Around 20 percent of sex workers said they had injected drugs, according to behavioural surveillance. In
other north eastern states about ten percent of sex workers reported injecting drugs (MAP, 2005).

Harm reduction efforts (including needle and syringe exchange, as well as limited drug substitution programmes) were introduced in some states, such as Manipur (MACS, 2002). There, in 2003 the HIV prevalence among drug injectors was 24%—the lowest levels detected among injecting drug users in that state since 1998. Elsewhere the epidemics among drug injectors appear to be well established, with HIV prevalence having reached 14% in Nagaland in 2000–2003, for example.

Single and married men who travel on work, such as truckers, are highly vulnerable. As multi-partner clients of sex workers who do not always practice safe sex, they are vulnerable to HIV infection and unknowingly infect their spouse. This group is highly vulnerable to infection as a result of unsafe practices related to injecting drug use or unprotected sex with other men (UNGASS-India report, 2005).

India has one of the largest road networks in the world and an estimated 2 to 5 million long distance truck drivers and helpers. The extended periods of time that they spend away from their families place them in close proximity to "high-risk" sexual networks, and often results in them having an increased number of sexual contacts (Ekstrand et al., 2003). During journeys drivers often stop at ‘dhabas’, roadside hotels that usually provide food, rest, sex workers, alcohol and drugs. A study published in 1999 showed that 87% of the drivers had frequent and indiscriminate change of sexual partners, and only 11% of them used condoms although their AIDS knowledge was fairly good (Kootikuppala et. al., 1999). HIV prevalence patterns in truckers have tended to mirror the local epidemics (Jain and Smitha, 2005). Relation between Alcohol Consumption and CSW Exposure states that 154 (55.48%) truck drivers gave history of alcohol consumption out of which 105 (68.2%) gave
history of exposure to CSW as compared to 57 (44.2%) of those who did not consume alcohol. Difference was found to be statistically highly significant.

Migrants account for 26.6 percent of the country’s population (Census, 2001). The National Surveillance Survey data for 1999-2000 (55th round) shows that about 2.28 million persons migrated from other countries to various states in India. The states receiving a high percentage of these migrants are: West Bengal (44%), Tamil Nadu (12%), Kerala (10%), and Uttar Pradesh (8%) (Srivastava and Sasikumar, 2003).

Cross sectional study was conducted on Pune Ahmednagar Highway to assess the knowledge of long distance truck drivers about HIV/AIDS and to study the sexual behaviour of these drivers with reference to HIV/AIDS. 283 truck drivers participated in the study. (S Chaturvedi et.al.,-2006) Of these, 275 (97.2%) were aware of HIV/ AIDS. Though 268 (94.69%) had knowledge of transmission by heterosexual route, knowledge of other routes of transmission was lower. Misconceptions about HIV transmission such as spread of the disease by sharing meals, mosquito bite and using same toilet were high. 128 (45.23%) truck drivers had more than 5 sexual partners. 162 (57.24%) had exposure to Commercial Sex Workers (CSW) out of which only 11(6.8%) had used condom every time while visiting CSW. There was significant association of alcohol intake and visit to CSW. High-risk behaviour was established in the study sample. Safe sex and use of condom have to be energetically promoted among long distance truck drivers.

Study by Venkataramana and Sarada, (2001) on spread of HIV infection in India through the commercial sex networks revealed that eighty-five per cent of HIV transmission in India occurred through heterosexual contact. One billion population, a large number of female
sex workers, high prevalence of sexually transmitted infection (STIs) and low condom use made a potent combination for explosive growth of the epidemic. Taking available estimates of the number of female sex workers (FSWs), their work patterns, prevalence of HIV and STIs and condom use among them in 1999 as the base, and adopting reasonable infectivity rates, the paper attempted to present a model to estimate the spread of HIV infection in commercial sex networks until 2005. HIV infections in commercial sex networks were estimated to increase from the level of approximately 2.49 million in 1999 to about 3.93 million by 2005 in a favourable scenario, and to 6.87 million in a worse scenario. Spread of HIV was influenced in the short term by condom use and prevalence of STIs, and these were the only factors that could be manipulated to limit the spread of the infection.

High rates of adolescent childbearing found in South and South-West Asia is obviously related with early age marriage. Bangladesh has one of the highest levels of adolescent childbearing, followed by Nepal and India; all these countries are characterized by early age marriage for females. Examples from these countries showed that by the time they were 18 years of age about 47% had had a child and over three fifths (63.3%) had had a child before age 20. Similarly, over half the women aged 20-24 in Nepal and almost half the women in this age group in India had a child before reaching age 20 (Mathur, Malhotra and Mehta, 2000).

According to studies commissioned by UNESCO, Sexually Transmitted Disease (STD) is a major health problem among youth in much of Asia. For example, in Bangladesh two thirds of all reported STDs occur among people under 25 years of age and the incidence is much higher among women aged 15-19 than among men of the same age(1). Half of the HIV/AIDS-infected persons in Vietnam were adolescents and youth (4). In China, 8.7% of the HIV carrier and AIDS patients belong to the age group 16-19(5) (Sun, 2000).
HIV infection could not be contained by the intensive state or city specific action programme since it is rapidly spreading among people that had previously been seen as low risk, such as housewives and richer members of the society (Prasad, 2004). Infection is no more confined to highway truck drivers, other truck drivers, sex workers, and migrant labourers. The most distressing cases are that of the unsuspected innocent rural people particularly the women group of relatively young age (Kumar, 2004). The silent killer infection is spreading silently in rural India that its exact prevalence is beyond any authentic estimation. It is spreading rapidly into those segments like young professional, school, college students, and housewives, in both rural and urban societies that India does not recognize as being at risk. AIDS is coming out of the closet. Now it has spread extensively throughout the country. Since 1991, the prevalence of many health-risk behaviours among high school students has decreased. However, many high school students continue to engage in behaviours that place them at risk for the leading causes of mortality and morbidity. The prevalence of many health-risk behaviours varies across cities and states.

**Overseas studies**

The Youth Risk Behaviour Surveillance System (YRBSS-2005) conducted in United States monitored six categories of priority health-risk behaviours among youth and young adults, including behaviours that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviours that contribute to unintended pregnancy and sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV) infections; unhealthy dietary behaviours; and physical inactivity. In addition, the YRBSS monitored general health status and the prevalence of overweight and asthma. YRBSS includes a national school-based survey conducted by CDC and state and local school-based surveys conducted by state and local education and health agencies. This report summarized results from the national survey, 40

YRBS reported that Nationwide, 16.0% of students had smoked a whole cigarette for the first time before age 13 years. Overall, the prevalence of having smoked a whole cigarette before age 13 years was higher among male (18.3%) than female (13.6%) students; overall, the prevalence of episodic heavy drinking was higher among male (27.5%) than female (23.5%) students; Nationwide, 31.5% of students described themselves as slightly or very overweight. Overall, the prevalence of describing themselves as overweight was higher among female (38.1%) than male students (25.1%). Nationwide, 6.2% of students had had sexual intercourse for the first time before age 13 years. Overall, the prevalence of having had sexual intercourse before age 13 years was higher among male (8.8%) than female students (3.7%); Nationwide, 46.8% of students had had sexual intercourse during their life.

In the United States, 71% of all deaths among persons aged 10–24 years result from four causes: motor vehicle crashes, other unintentional injuries, homicide, and suicide. Results from the 2005 national Youth Risk Behaviour Survey (YRBS) indicated that, during the 30 days preceding the survey, many high school students engaged in behaviours that increased their likelihood of death from these four causes: 9.9% had driven a car or other vehicle when they had been drinking alcohol; 18.5% had carried a weapon; 43.3% had drunk alcohol; and 20.2% had used marijuana. In addition, during the 12 months preceding the survey, 35.9% of high school students had been in a physical fight and 8.4% had attempted suicide. Substantial morbidity and social problems among youth also result from unintended pregnancies and STDs, including HIV infection. During 2005, a total of 46.8% of high school students had sexual intercourse; 37.2% of sexually active high school students had not used a condom at their last sexual intercourse; and 2.1% had ever injected
an illegal drug. Among adults aged 25 years, 61% of all deaths result from two causes: cardiovascular disease and cancer.

During 2005, a total of 23.0% of high school students had smoked cigarettes during the 30 days preceding the survey; 79.9% had not eaten 5 times a day and had not taken fruits and vegetables during the 7 days preceding the survey; 67.0% did not attend physical education classes daily; and 13.1% were overweight. Results from the 2005 national YRBS indicated that risk behaviours associated with these two causes of death were initiated during adolescence.

### 2.4 HIV AND AIDS AS A SOCIAL AND HEALTH PROBLEM

This part of the review features the emergence of HIV and AIDS as a social and health problem.

AIDS has spread to every part of the world threatening people from all spheres of life. This does not merely mean loss of life alone, but it is a handicap to the welfare and progress of the humanity as a whole (Anand, Pandav and Nath, 1999). AIDS has the power to change national destinies, bring miseries to families and communities and to touch the deepest social taboos.

The best way to understand HIV is to see its mirror image-VIH; Very Important Human issue. It is a very important and serious issue causing socio-economic, biomedical and therapeutic problem. HIV has challenged human intelligence and has created mass hysteria (Deodar, 2006) It has attracted unprecedented quantum of money for its’ study, control, treatment and management of its damaging effects (Schartlander et. al., 2001). It seems that the cost of the panic it has created is more expensive than the expenditure on research, prevention and control and treatment. The Asian Development Bank estimated that in 2001 alone, economic losses due to HIV/AIDS in Asia were about $7 billion. It could rise to $17 billion by 2010 if present trends continue. (Stover and others.
Based on an assumption of 4.5 million cases, the estimated annual cost of HIV/AIDS appears to be about one per cent of India’s GDP. This comes to about Rs 28,000 crore (Sharma, 2005) Thus, HIV/AIDS is not just a health issue; it is a development issue as it affects the economic and social fabric of the society.

Scientists have different theories about the origin of HIV. The earliest known case of HIV was from a blood sample collected in 1959 from a man in Kinshasha, Democratic Republic of Congo. (How he became infected is not known.) Genetic analysis of this blood sample suggests that HIV might have stemmed from a single virus in the late 1940s or early 1950s.

With the report of immuno deficiency cases of some youths in Los Angeles in 1981 the new disease was identified. In 1982 public health officials began to use the term "acquired immunodeficiency syndrome," or AIDS, to describe the occurrences of opportunistic infections, Kaposi’s sarcoma, and Pneumocystis carinii pneumonia in previously healthy men. Formal tracking (surveillance) of AIDS cases began that year in the United States.

The cause of AIDS is a virus that scientists isolated in 1983. The virus was at first named HTLV-III/LAV (human T-cell lymphotropic virus-type III/ lymphadenopathy- associated virus) by an international scientific committee. This name was later changed to HIV (human immunodeficiency virus).

HIV is formidable and all-powerful. All attempts to dislodge it are unsuccessful. For self-propagation this organism has made human tissue its heaven (Risbud, 2005). It sneaks into human defense system and breaks it down. Then it sits pretty in human beings for decades for others germs and ailments to attack. It evades clinical diagnosis for want of specific signs and symptoms. The ground reality is that ecologically HIV
is a shrewd enemy; it does not attack; with promiscuous and polygamous sex behaviour, human beings continue to present themselves to HIV and fall victims (Dupont, 2003). HIV fully exploits the sexual behaviour of man. In fact, the industrial and economic growth and the resultant socio cultural changes have benefited this virus perhaps more than man himself.

Reacting to the global reports of HIV/AIDS, Indian Council of Medical Research (ICMR) initiated surveillance for HIV infection in India in 1985-1986, and the first evidence of HIV infection in sex workers in Chennai, Madurai and Vellore was obtained in 1986-1987 (John, Babu, Jayakumari and Simoes, 1987). The first AIDS patient was identified from Mumbai. Due to the seriousness of the disease, concerns were raised about how India will cope with as HIV has entered the country. In 1987 National AIDS Control Programme was launched to coordinate national response. Its activities involved surveillance, blood screening, and health education. By the end of 1987, out of 52,907 suspected people tested, around 135 people were found to be HIV positive and 14 had AIDS (NACO, 1997). Most of these cases had occurred through sexual transmission. But, soon it was discovered that there was rapid spread of HIV among injecting drug users in Manipur, Mizoram and Nagaland.

Since the infection continued to rise, there was need for greater organized and coordinated efforts to check, control, and care for the AIDS affected people. A five year strategic plan (NACP Phase-I) was developed and approved by the Government of India in 1992 during the 8th Five Year Plan. Under the strategic plan, the National AIDS Control Board and the National AIDS Control Organisation (NACO) was set up in 1992 for formulation of policies, prevention work and control the programme relating to HIV and AIDS (UNGASS-India Report-2005). This plan established administrative and technical basis for programme management and also set up state AIDS bodies in 25 states and 7 Union territories. The plan progressing in Phase I, Phase II and Phase III was
able to make a number of improvements in HIV prevention including improvements in blood safety.

In 2001 National AIDS Control and Prevention Policy was launched (UNGASS-India Report-2005). Meanwhile, the rate of HIV infection continued to rise from .2 million in 1990 to 3.86 million in 2000. By 2003 it rose to 5.1 million. Survey showed the increase to 5.2 million in 2005 (NACO, MHFW-2006). However, the estimates of the Indian Government and the United Nations agencies have been at variance. As per UNAIDS Global AIDS Report- 2006 the Estimated Number of HIV cases (Adults and children) was 5,700,000 in 2005. Adults (15-49 years) alone constitute 5,600,000. Women (15-49) 1,600,000. World Bank study (2005) showed that India had at least 60% of all people living with HIV in Asia. UNDP reported that in 2006, though the national prevalence rate was still less than one percent, India had 5.7 million people living with the HIV/AIDS (UNDP, 2006).

The national HIV prevalence has increased dramatically since the start of the epidemic, but a study released at the beginning of 2006 suggests that HIV infection rate has fallen in Southern India, the region that had been hit hardest by AIDS (Kumar and Jha, 2006). In addition NACO has released figures suggesting that the over all rate of new infection in the country is slowing (NACO, 2006). 2007 report by NACO and UNAIDS shows that 2.5 million Indians are currently living with HIV. In fact, the true prevalence is disputed, (Prasada, Ganguly, Mehendale and Bollinger, 2004) because even small changes in prevalence could translate to large absolute numbers of infected individuals.

India has a large population and population density. Due to its large population, India has a substantial proportion of the world's HIV infections (Banthia, 2001). The HIV/AIDS epidemic in India is
characterized by heterogeneity; it seems to be following the Type 4 Pattern, where the epidemic shifts from the most vulnerable populations (such as CSW, IDU, MSM) to bridge populations (clients of sex workers, STI patients, partners of drug users) and then to the general population. (Shefalee, 2004). Prevalence of HIV infection in general population depends on the size of the interface- extent of promiscuity. Transmission is from interface to general population and never the other way. On the contrary the transmission occurs both ways between commercial sex workers and interface. The shift usually occurs when the prevalence in the first group exceeds 5 percent, with a two-three year time-lag between shifts from one group to another (NACO, 2002).

The spread of HIV within the country is as diverse as the societal patterns between its different regions, states and metropolitan areas (MAP report 2005). The transmission route is predominantly heterosexual (85.7%), except in the North Eastern states where injecting drug use is the main route of HIV transmission. About 75% of HIV cases reside in the states of Andhra Pradesh, Karnataka, Maharashtra, and Tamil Nadu, New Delhi, Bihar, Utter Pradesh, Madhya Pradesh, Punjab, Rajasthan and Haryana (NACO, 2006). Among the high risk population, the state of Rajasthan, Nagaland, Bihar and West Bengal showed increasing HIV among Female Sex workers. Kerala, Delhi, Gujrat and Goa show rising trend among MSM population. State of Delhi, Assam, Hariyana, West Bengal and Kerala show increasing trend among IDUs.

Various districts in different states and Union Territories are graded into four categories based on the prevalence of virus infection (NACO, 2006); accordingly, there are 163 ‘A’ category districts termed ‘hot zone’ wherein 1% of the general population and more than 5% of high-risk groups are infected with the virus. In “B” category there are 59 districts with less than 1% prevalence in the general population and 5% prevalence among high-risk groups. 278 districts are in ‘C’ Category having less than 1% prevalence in the general population and less than
5% among high-risk groups. Prevalence among the general population is 0.25% in 111 ‘D’ categories, which are considered as “safe districts”.

The highly prevalent states identified by NACO reveal the fact that the predominant mode of transmission is through heterosexual activities, which account for 85% of the infection spread. A significant increase in injecting drug use, with drug users switching from inhaling to over-the-counter injecting drugs has occurred over the past four years. The other routes of transmission by order of proportion includes prenatal (3.6%) infected needles and syringes (2.4%), unsafe blood and blood products (2.0%) and unspecified and other routes of transmission (8%), (NACO-2004). The bulk of HIV infection in India is due to unprotected heterosexual intercourse (NACO, 2006). Several studies suggest that a half to three-quarters of all new HIV infections are due to first or second-generation infections related to male use of female sex works, (Rodrigues, Mehendale, Shepherd, et. al., 1995) which is common; a 2004 survey in five cities found that 11% of urban adult men often paid for sex, and 29% had ever done so.

Recent evidence suggests that the virus is moving into the general population from high-risk groups. Despite this, a mentality of ‘us’ and ‘them’ continues to prevail, where PLWHA are marginalised from mainstream society (Elamon, 2006). In India, as elsewhere AIDS is perceived as the disease of the ‘others’- of people living on the margins of the society, whose lifestyles are considered ‘perverted’ and ‘sinful’ (Rai, 2001). Discrimination, stigmatization, and denial are the outcomes of such values, affecting life in the families, communities, work places, schools and health care settings. Because of HIV/AIDS related discrimination, appropriate policies and models of good practices remain underdeveloped. People living with HIV/AIDS continue to be burdened by poor care and inadequate services.
The social reaction to HIV positive is overwhelmingly negative. Therefore widespread hesitation exists among HIV/AIDS suspect to presenting themselves for testing for the fear of being identified and subsequently isolated in the society due to stigma attached. This must have to be dispelled with high degree of public awareness and education. Low literary level and consequently low level of awareness about HIV/AIDS is one of the most challenging public health problems ever faced by the country. There is a need to address this very important emotive issue with care. The society and government has the responsibility to support these unfortunate people to live a respectable life and to contribute constructively to the society.

The sentinel surveillance data 2004 by NACO estimated that HIV prevalence in India is 0.91%. Once the HIV crosses the 1% of general population it becomes a generalized epidemic and is extremely difficult to contain (Naidu 2006). For example in South Africa once HIV became a generalized epidemic, in five years time the prevalence increased from 4% to 24%. In 15 years time, in Botswana almost one in every three between 15-49 age group became infected. Botswana lost 26 years of life expectancy. Awareness and effective behaviour change among the people can reverse the trend of rising HIV epidemic. For this Thailand is an Example, where HIV was contained even after it crossed 2% of the population (UNAIDS-2007). Adopting a multi sector - prolonged approach the rapid spread could be curbed. So, in India where the infection is a less than 0.1% of population there is ample scope for containing the spread; provided, a right strategy is adopted.

2.5 ASSESSMENT OF THE RISK FACTORS AND VULNERABILITY TO HIV/AIDS

This part of the review draws out the extent of assessment done in the area of HIV and risk Behaviour and Vulnerable Population in India and abroad.
Awareness about the fatal epidemic, AIDS, is an important factor for containing its spread. Since the disease is spreading widely in India, a national level assessment had been initiated by Ministry of Health and Family Welfare. Assessment of the awareness of HIV among people of India (MHFW, 1998-99) showed that about 60% of the men and 42% of the women surveyed were aware of HIV and AIDS in India. A very high level of awareness was observed in Andhra Pradesh (70.2%), Goa (84%), Haryana (76%), and Himachal Pradesh (74%) Maharashtra (78%), Manipur (86%), Mizoram (89%), Nagaland (82%), Panjab (81%), Tamil nadu (86%) and Kerala (92%). In Bihar the lowest was reported (15%).

A study on awareness of AIDS among school students and teachers of higher secondary schools in north Calcutta (Chatterjee, Baur, Ram, Dhar, Sandhukhan and Dan, 2001) was conducted by Department of Community Medicine, Calcutta National Medical College. Higher Secondary School students and their teachers were studied to assess the knowledge about AIDS and attitude towards AIDS patients. Only 13.5% senior school students and 16.2% teachers had clear knowledge regarding AIDS-its general aspects, transmission and prevention. Girls had higher and clear knowledge than boys. 45.8% of girls, 8.8% of boys students and 20.3% of teachers had positive attitudes towards nursing an AIDS case. It was suggested that schools have to device ways to open up more effective communication with students in relation to education on sex and AIDS. Training on AIDS should be emphasized on school teachers who on their turn can teach the students in a correct way about AIDS.

Department of Community Medicine, Post Graduate Institute of Medical Education and Research, Chandigarh aimed to assess the existing level of knowledge of school children of 9th and 10th classes about Acquired Immune Deficiency Syndrome (AIDS) Aggarwal and Kumar, 1996). Three high schools in an urban area and three in the villages of a district of North India were included in the study. A pre-tested closed-
ended questionnaire was administered to 336 students available. Overall level of knowledge about AIDS was found to be high. However, there were significant differences in knowledge among rural-urban and male-female students. There were some misconceptions in knowledge regarding transmission, prognosis and prevention. Books and media were the most common sources of information. Most of the students wanted to learn more about AIDS. Since overall knowledge levels were high it was concluded that AIDS education should concentrate on clarifying areas of misconceptions.

The number of HIV infected in India are increasing dramatically especially in certain pockets and is currently indicating spread from urban to rural areas, more young people getting infected (UNAIDS2005). It is roughly estimated that 60% of the HIV infected are located in rural areas. As per the sentinel Surveillance in 2005 by NACO female HIV infected constitute 38.4% of which 57% of them come from rural background. Patnaik (2006) has done a survey on “HIV/AIDS among migrant rural labourers of Ganjam district of Orissa”. The survey found that in the district of Ganjam about 2.25 percent of populations have been affected by AIDS and among them about 90% was mostly Surat returned migrants. Mostly rural people of Ganjam migrate to Surat textiles to work as manual labourers. Marginalized groups, Unemployed rural youth living in economically unstable and disadvantaged social setting migrate to Surat where without the control and supervision of parents they become particularly vulnerable to HIV –AIDS infection. As majority of the migrants stay far away from their families, living with friends or relatives from their villages, they usually indulge in unsafe sexual activities resulting in HIV infection and AIDS.

A study on the Impact of Domestic Violence on Women’s HIV Risk in Slums of Chennai, (Vivian, Johnson, Sethulakshmi, Bentley et. al; 2003) found that there was a direct link between marital violence and
women’s ability to protect themselves from HIV/AIDS. Research team conducted in-depth interviews and focus group discussions among men and women in two randomly selected slums of Chennai, India. Violence had been shown to increase women’s risk to HIV/STDs through three main routes: increased sexual risk-taking in women with a history of sexual abuse in childhood or adolescence; forced sex with an infected partner; and women’s inability to negotiate condom use. The study suggested that to reduce women’s immediate risk to HIV/STD infection, HIV messages promoting condom use and monogamy should also target men. Conducting interventions that provide women with the tools to elevate their economic status may empower women. Unless violence is recognized and addressed, HIV prevention efforts targeting women in the slums of Chennai may be proved ineffective.

Bishoyi (2006) in her study named “Awareness and knowledge regarding HIV/AIDS among the women in rural India” examined the determinants of women’s knowledge regarding HIV/AIDS using data from a nationally representative survey in India. Although around 45% sample women had heard about the disease, their knowledge regarding its modes of transmission and prevention is found to be limited. Bivariate and multivariate analysis has been carried out to understand the awareness and knowledge regarding HIV/AIDS among women in rural India by selecting social economic and demographic variables. The result found that as the age of women increases the awareness also increases. Similarly as the year of schooling increased the knowledge of HIV/AIDS also increases.

The tribal communities in India have traditional practices that can increase young women’s vulnerability to HIV/AIDS (Pati and Das, 2002). An example is in Khoraput district of Orissa where the tribals have the festival wherein girls and boys dance together and drink locally made country liquor, after the dance the boy chooses a girl and they have sex.
At this time even outsiders and non tribal join in and choose their sex partner. Because of this, tribal girls often face sexual exploitation, violence and HIV/AIDS infection.

There are also fares where adolescent boys and girls interact freely and also consume alcohol and have unsafe sex on occasion with more than one partner. In tribal societies when a young girl attains puberty (become jubatman) she stays at a different house (basathat) where she can experience sex with many adolescent boys: involve in unsafe sex and invite HIV. Early marriage and pressure to have a child also increase the vulnerability of young girls to HIV/AIDS and other STIs. Moreover tribes have a lot of superstitions and beliefs that create a social and cultural barrier in accessing health services. Both genders in the tribal family consume home made liquor almost daily. Under its influence it is difficult to practice safer sex such as using condom or avoiding sex outside marriage. Even if one was aware of the issue, lack of knowledge on basic facts of life and lack of knowledge of HIV/AIDS/STI prevention compounds the problem.

Rao (2006) conducted a case study on the livelihood settlement of HIV affected among Dommarra community in Ramayanpet area of Andhra pradesh. Dommras have spread in majority states in India but concentrated in five districts of Andhra Pradesh namely Medhak, Nizamabad, Karimnagar, Nalgonda, and Warangal. They are called Doms, Dombaras, Domins and Dommaras in various places of the country. Dommarra community is an ancient traditional sex workers tribe. They claim their hierarchy hails from ‘Rambha’ the court dancer of God Indian, as per mythology. Dommaras spend time in sex work which they are proud of. In the lime light of HIV/AIDS they are rethinking about themselves and their children. A total 28 people died out of AIDS and more than 178 are suffering with HIV in their district settlements.
Scattered in villages there are 143 AIDS and 495 HIV infected cases have been reported.

Naidu (2006) has pointed out that in Andhra Pradesh, the number one state in the country in terms of HIV, Prakasham, Karimnagar and Guntur district have the infamous record of 38% of men and ten % of married women engage in sex with non regular partners. This is extreme risk behaviour. Traditional and strong sexual net works made Andhra Pradesh high HIV prevalence state in country. Some tribes such as Dommara, Kalavantulu, Erukala, Bhogam, and the like are traditionally in commercial sexual work and places like Chilakaluripita, Peddapuram and the like are historically commercial sex centers. High trafficking of women and girls from Andhra Pradesh make the state major supplier of commercial sex workers to all the sex net workers in India including Goa, Mumbai Delhi and Kolkatta.

The state of Goa has emerged as one of the finest tourist destinations in the world. Tourists are largely attracted towards the beaches in Goa (ESG, 2005-06). Heavy concentration of people in urban areas have resulted many social evils such as, alcohol consumption and prostitution and these encourage the youth to have unsafe sex. The higher proportions of people have migrated from other states to Goa in search of jobs especially in construction and industries. Most of the workers visit prostitutes, many of whom are carriers of HIV (GSACS, 2005).

Manipur has experienced an alarming rise of HIV/AIDS infected persons and it has become the most serious public health problem. The state is known as the epicenter of AIDS in the North Eastern States (NACP, 2004-05). Moreover this tiny state is one of the six states having high number of HIV positive cases in the country. Unfortunately it has international boarder of about 350 kilometers with Myanmar, facilitating international drug smuggling. Besides there are three commercial sex
centers, one each in Imphal, Churchandpur, and Morech, as identified by Manipur State AIDS Control Society, close to Burma border. More than 20% of the sex workers here are HIV infected, and they are often visited by drug users (Singh, 2004).

West Bengal shares international borders with Bangladesh, Bhutan and Nepal. A range of socio-economic factors in the region along with weak regulatory measures have lead to burgeoning human trafficking across these borders, particularly women and children. West Bengal is both a destination and a conduit for trafficking in humans, many of whom face sexual exploitation. The state is also a source of human trafficking bound for western India and beyond Indian shores to West Asia. Trafficking and sexual exploitation constitute a potent combination that facilitates the spread of HIV in the state (NACO, 2004). West Bengal also witnesses large-scale migration, both into and out of the state. Hostile and lonely environments, separation from families, lack of access to information, health services and social support systems can lead to social and sexual practices that make migrants more susceptible to HIV exposure. This also translates into an increased vulnerability for married women. Most married women have only their husbands as sexual partners, but lack the awareness and power to negotiate safer sex with them.

According to India's National Commission of Women, Nepal and Bangladesh account for 2.60% and 2.75% of the female sex workers (FSWs) in India, respectively (2002 data). These inflows only add to the large number of children, women and men from within West Bengal (and India) who are forced to rely on sex work for survival and risk exposure to HIV. A mapping exercise carried out by WBSAP&CS and TNS Mode, Kolkata, in 2002 estimated around 49,000 female sex workers in West Bengal.
In high HIV prevalent states like Andhra Pradesh, Maharashtra and Tamil Nadu, one of the highest HIV prevalence groups were found to be wives of truck drivers who may be away from home for lengthy periods, or auto/taxi drivers who have frequent contact with many people. The relatively high rate among wives of agricultural workers also provides evidence that HIV has moved into the rural areas (Rao, 2006). The fact that HIV infection is more likely to be found in women with lower education poses an additional challenge to HIV information and education programmes. Illiterate women at antenatal care clinics had the highest rate of infection at 2.2 percent in 2004-2005. This rate steadily declined with rising levels of education so that infection among graduate women and above was 1.4 percent. Nonetheless, it is notable that the infection rate was 1 percent or higher in all education groups, the rate that causes a state to be designated high HIV prevalent.

Gujarat being an industrialized state, migration of labourers from various parts of India is very high (GSACS, 2005). Mobility and migration of people make them more vulnerable, as a result of separation from spouse and release of social sanctions leading to high-risk sexual practices and consequently contracted HIV, which in turn was carried to their spouses and to their children. On one hand, with the increase in urbanization most of the societies were in transition, young population was under less social restrain, and on the other, lower literacy level of rural women coupled with local customs & traditions make them more vulnerable to the infection. Large numbers of women suffer from reproductive tract infections (RTIs), which are mainly due to poor sexual hygiene especially during menstruation and sexually transmitted infections from their spouse. Gujarat came into middle level HIV prevalence state as early as 1994.

A Study on Sexual Behaviour among Long Distance Truck Drivers (Chaturvedi1, Singh, Banerjee, Khera, Joshi, and Dhrubajyoti,
2006) was conducted to assess the knowledge of long distance truck
drivers about HIV/AIDS and the sexual behaviour of these drivers with
reference to HIV/AIDS. 283 truck drivers participated in the study. Of
these 275 (97.2%) were aware of HIV/AIDS. Though 268 (94.69%) had
knowledge of transmission by heterosexual route, knowledge of other
routes of transmission was lower. Misconceptions about HIV
transmission such as spread of the disease by sharing meals, mosquito
bite and using same toilet were high. 128 (45.23%) truck drivers had
more than 5 sexual partners. 162 (57.24%) had exposure to Commercial
Sex Workers (CSW) out of which only 11(6.8%) had used condom every
time while visiting CSW. There was significant association of alcohol
intake and visit to CSW. High-risk behaviour was established in the study
sample.

On an all India level, HIV information and awareness among sex
workers continues to be low, especially among those working in the
streets. The Behaviour Surveillance Survey (BSS) of 2001 found that 30
per cent of street based sex workers did not know that condoms prevent
HIV infection, and in some states such as Haryana, fewer than half of sex
workers (brothel-and-street based) knew that condoms prevent HIV.
Large population of sex workers (42% nationally) also thought they could
tell whether a client had HIV on the basis of his physical appearance
(NACO, 2002/MAP report, 2005).

According to the BSS survey (2001) conducted in 21 states, 66
percent of female sex workers correctly identified both methods of
prevention: consistent condom use and having faithful and uninfected
sexual partners. Brothel-based FSW showed greater levels of awareness
(70%) than non-brothel based sex workers (63%). The awareness level
was higher in West Bengal (80%), Tamil Nadu, Maharashtra, Goa (77%)
as well as Andhra Pradesh (75%).
There are, of course, some exceptions. Among them are the sex workers of Kolkata’s Sonagachi red-light area (in West Bengal) who have shown that safer sex programmes that empower sex workers can curb the spread of HIV. Condom use in Sonagachi has risen as high as 85% and HIV prevalence among commercial sex workers declined to fewer than 4% in 2004 (having exceeded 11% in 2001). In Mumbai, in contrast, available data suggest that sporadic and piecemeal efforts to promote condom use during commercial sex have not been as effective; there, HIV prevalence among female sex workers has not fallen below 52% since 2000 (NACO, 2004).

**Prevalence in Kerala**

Kerala, a southern Indian state with traditionally favorable health outcomes, is not immune to this threat. The population of Kerala is uniformly scattered throughout the state and is fairly well advanced in its demographic transition (Banthia, 2001). The rapidly declining growth rate, highest mean age at marriage especially of families, a very high level of acceptance and awareness of family planning methods and fertility control, a moderate decline in the mortality rate etc. are the commendable achievements in health standards which are almost comparable to that of developed countries in the world (IIPS and ORC Macro, 2001). In spite of all the achievements in health sector, the first HIV positive person was identified in 1987.

The epidemic in Kerala is distinctly related to migration and presents unique features, which differ from other neighboring states (Zachariah, et. al., 2003). High literacy and poor industrial development of Kerala has led to considerable migration of people especially youth to other states and to Arabian, Gulf countries for work. 40% of the house holds have at least one migrant, 81% of the migrants leaving for the first time are unmarried (Zachariah, et.al. 2002). Return migrants with out blood test indulge in sexual relations with their spouse and unknowingly
spread the disease in the rural areas, spelling catastrophe to the mass and particularly, the women who are more vulnerable. Most of the women have acquired infection from their husbands (Kumar, 2004).

The number of reported AIDS death till 2005 was 617. More than 86% of HIV infections in the state were acquired sexually and very few infections occurred through blood transfusions or injection drug use. It is reported by KASACS (2007) that the awareness of AIDS and its preventive measures among people of Kerala is 98% but, majority of the people are forgetful or negligent about them in practical life. Sentinel surveillance data showed an increasing trend of HIV infection among MSMs and IDU population in Kerala (NACO-, HSS 2005). It is estimated that there are 70,0000 to 1000000 people infected with HIV in Kerala. On the basis of the surveillance data lined, Kerala falls within the group second. indicating moderate HIV prevalence, with rates of the 5% or more among the high HIV risk behaviour groups but below 1% on the antenatal women.

A situational analysis of HIV discrimination was conducted in the Trivandrum district and Cochin City (Elamon, 2004). The method followed was the UNAIDS’ "Protocol for the identification of discrimination against people living with HIV". Sources of data included Professionals working in ten key areas of social life, PLWHA, written policies, reports, and legislation. Result of the study revealed an almost complete absence of specific legislation or internal written regulation dealing with the practice of HIV/AIDS discrimination. The notable exception to this is the legislation making the "knowing transmission" of HIV a criminal offence. Discriminatory practice was found in many institutional setting including health care (e.g., hospitals), employment (e.g., banks), and education (e.g., schools). Even the trade union movement did not support HIV positive workers. In other areas, there has been almost no consideration of HIV and this has resulted in a policy
vacuum. Conclusions of the study suggested that effort is required in the development and implementation of legislation to prevent HIV discrimination. Large organizations, where such policies are currently absent, need to show leadership in the development of internal written policies. The legislation and the policies need to be combined with appropriate strategies to make people working in organizations aware of their responsibilities and able to act individually and collectively to prevent HIV discrimination.

**Over seas Prevalence**

A report released by the Australian Centre for Independent Studies (Tobias, 2007) states that more than one-third of the adult population in Papua New Guinea could die of AIDS-related causes within 20 years if the spread of HIV is not controlled in the country. According to the report, if HIV prevention measures are not increased, the virus could have a negative impact on the country's economy and labour force. The report estimates that 118,000 people, or 2% of the population, living in Papua New Guinea are HIV-positive and that HIV prevalence will be 18% by 2010 and 25% by 2020. Miranda Tobias, the reporter, author and a researcher at CIS, said that young women in the country are being targeted by residents who believe that HIV is spread through witchcraft. There were about 500 attacks on women in the past year that involved torture, sometimes for days, to obtain "confessions" from the women and that some of the attacks resulted in murder.

In 2006, almost two thirds (63%) of all persons infected with HIV are living in sub-Saharan Africa—24.7 million [21.8 million–27.7 million]. An estimated 2.8 million [2.4 million–3.2 million] adults and children became infected with HIV in 2006, more than in all other regions of the world combined (UNAIDS, 2007). The 2.1 million [1.8 million–
2.4 million] AIDS deaths in sub-Saharan Africa represent 72% of global AIDS deaths. Across this region, women bear a disproportionate part of the AIDS burden: not only are they more likely than men to be infected with HIV, but in most countries they are also more likely to be the ones caring for people infected with HIV.

Across sub-Saharan Africa, women are more likely than men to be infected with HIV, and they are more likely to be the ones caring for people infected with HIV. The number of people living with HIV in Eastern Europe and central Asia rose in 2006, as it had in 2005. (UNAIDS, 2006). An estimated 270 000 people [170 000–820 000] were newly infected with HIV in 2006, bringing to 1.7 million [1.2 million–2.6 million] the number of people living with HIV—a twenty fold increase in less than a decade. Although the rate of new HIV infections appears stable after the steep increase observed in 2001, an increase in the number of new HIV cases was again reported in 2005, compared to the two previous years.

Almost one third of newly diagnosed HIV infections in this region are in people aged 15–24 years. The majority of young persons with HIV live in two countries: the Russian Federation and Ukraine which, together, account for approximately 90% of all people living with HIV in this region. As the epidemics evolve, more people are developing HIV-related illnesses and are dying. AIDS death toll in Eastern Europe and central Asia grew in 2006 to 84 000 [58 000–120 000] (Global AIDS estimate, 2006).

The Russian Federation and Ukraine account for about 90% of HIV infections in Eastern Europe and Central Asia, where the use of non-sterile injecting drug equipment remains the main mode of HIV transmission (UNAIDS 2006).
Although the patterns of the HIV epidemics are changing in some Latin American countries, the epidemics in this region overall remain stable, with new HIV infections totaling about 140,000 [100,000–410,000] and 65,000 [51,000–84,000] people dying of AIDS in 2006 (UNAIDS, 2006). Two thirds of the estimated 1.7 million [1.3 million–2.5 million] people living with HIV in Latin America reside in the four largest countries: Argentina, Brazil, Colombia, and Mexico. However, estimated HIV prevalence is highest in the smaller countries of Central America where it was just under 1% in El Salvador, Guatemala and Panama, 1.5% in Honduras and 2.5% in Belize in 2005 (UNAIDS 2006).

In South American countries, such as Chile and Venezuela, prevalence rates between 2.8% and 6.3% have been found in cities (Montano et al., 2005; Bautista et al., 2006; Pando et al., 2006), and 6% prevalence has been reported among sex workers in parts of Brazil. The most populous country in Latin America, Brazil, is home to 620,000 [370,000–1 million] people living with HIV, one third of all persons living with the virus in Latin America (UNAIDS, 2006). The country’s emphasis on prevention and treatment has helped to keep its HIV epidemic stable for the past several years.

In most countries, the levels of HIV infection among prison populations tended to be significantly higher than in the general population. An example is in Iran where experts highlight the danger of rapidly increasing HIV rates within particular groups, including youth, drug users and sex workers. Incarceration appeared to be the biggest risk factor for HIV infection, according to UNAIDS December 2005 Update.

People living with HIV in United States of America (USA) accounts 1.2 million [720,000–2.0 million] in 2005 (UNAIDS, 2006). Based on data from the 35 states and 7 areas with long-term, confidential name-based HIV reporting, the most common risk factor for HIV infection remains unsafe sex between men (accounting for about 44% of
HIV or AIDS cases reported in 2001–2004), followed by unprotected heterosexual intercourse (34% of cases) and the use of non-sterile drug injecting equipment (17%) (US Centers for Disease Control and Prevention, 2006). (However, it is to be noted that the 35 states and territories do not include some of the states which have reported the largest number of AIDS cases, such as California, Illinois, Maryland and Pennsylvania.)

In Korea according to UNAIDS 2004 report, by the end of December 2003, a cumulative total of 2440 HIV cases including 389 AIDS cases had been reported. An estimated 4,000 HIV-infected individuals were living in the country at the end of 2001 (prevalence of 0.01% among people aged 15 to 49). The great majority (96%) of HIV infections were estimated to be sexually transmitted, with 13% occurring among women. National sero-prevalence surveys have identified only sporadic cases of HIV infection. Behavioural surveys in 2001 found that 26.8% of sex workers reported using condoms during all sexual contacts (UNAIDS, 2004). Sex was the leading route of infection in Korea. HIV transmission among homosexual population appears challenging. In 1992 homosexual contact was the number one route for HIV transmission.

The early AIDS cases in Thailand were reported predominantly among homosexual males, subsequently, the virus spread rapidly among injecting drug users, and to sex workers and their clients. Nearly 80% of HIV infected was in the age group 20-39 years. HIV/ AIDS were the leading cause of death among young adults in Thailand. About 400,000 young adults, average age 36, had died since the beginning of the epidemic (UNAIDS, 2002). The male-to-female ratio of reported AIDS cases is 2.8:1. Of the AIDS cases reported to date with a known route of transmission, heterosexual mode accounts for the highest proportion of cases (88%), followed by injecting drug use (6%) and peri-natal transmission (5%). Thailand has been widely hailed as one of the success
stories in the response to AIDS. By 2003, estimated national adult HIV prevalence had dropped to its lowest level ever, approximately 1.5% (UNAIDS, 2004).

However, Thailand’s epidemic is far from over. The epidemic is more diverse now than it was a decade ago. Whereas commercial sex largely steered the course of the Thai epidemic in the early 1990s (an estimated 85 percent of new infections in 1990 were between sex workers and clients), other modes of transmission have since come to prominence. HIV prevalence is unacceptably high in several groups including injecting drug users (IDUs), men who have sex with men, mobile populations, and among seafarers. Despite successes, Thailand’s AIDS crisis is expected to continue to grow as the large number of PLWHA who were infected during the past 10 years or earlier will develop AIDS in the coming years. According to projections for the next five years, nearly 50,000 new AIDS cases will occur in Thailand every year.

In China there is nationally low prevalence but high-level prevalence of HIV in specific populations and certain regions. The epidemic is increasing dramatically. The main transmission routes are through intravenous drug use and through the sale of blood and plasma. (UNTG, 2001). There is a severe HIV epidemic among people who sold blood. In certain areas with concentrated blood donors, the HIV infection rate is as high as 60%. HIV prevalence among IDUs reached a high level. In certain areas in Yunnan and Xinjiang, the HIV prevalence among IDUs is as high as 80%. Although sharing injection equipment among IDUs are the main transmission route (cause of 50% of reported cases in 2002), the proportion of sexually transmitted HIV infections also increased from 5.5% in 1997 to 11.0% by the end of 2002. Data from Sentinel Surveillance indicated that HIV prevalence rate among CSW is increasing, Mother to Child Transmission (MTCT) of HIV continued to increase.
The accumulated number of HIV infections exceeded 1 million in China by the end of 2002. Although the adult prevalence rate is less than 0.1%, the epidemic has spread to 31 provinces (autonomous regions and municipalities) and the number of reported HIV/AIDS cases increased significantly. In some populations and regions, the epidemic is very severe. For instance, Yunnan accumulatively reported 12,000 HIV infection cases. Besides, Xinjiang, Guangxi, Sichuan, Henan and Guangdong estimated infections of more than 40,000. (UNAIDS, 2004).

The burden of HIV infection and disease continues to increase in many developing countries. An emerging theme is of an HIV pandemic composed of mini-epidemics, each with its own characteristics in terms of the trends in HIV prevalence, those affected, and the HIV-related opportunistic diseases observed. A number of explanations for the observed differences in the spread of HIV infection have been proposed but since the factors concerned, such as sexual behaviour and the prevalence of other sexually transmitted diseases, are closely interrelated, it is difficult to tease out which are the most important. Among HIV-related opportunistic diseases, tuberculosis stands out as the most important cause of morbidity and mortality in most developing countries, but the relative prevalence of other diseases show considerable regional variation (Grant and Cock, 1998). Thus, there is a need for local approaches to the global problem of managing HIV disease. The most pressing public health challenges are to use existing knowledge of strategies to reduce HIV transmission, and to apply them in ways appropriate to the local situation, and to develop, evaluate and implement interventions to prolong healthy life in those already infected.

2.6 STRATEGIES ADOPTED FOR PROMOTING HEALTH BEHAVIOUR AND PREVENTING HIV INFECTION
The focus of this part of the review is to draw out the prevention and awareness strategies adopted in the areas of HIV and Health Behaviour in different communities.

Millions of adolescents and young people are confronting many risks and challenges which were not encountered by the earlier generations. It is significant to note the walk-in client data from VCTC, which shows that young people seropositive cases below 14 years of age makes up to 4.3 percent, and between the age group of 15-49 it is 88.7% (NACO and CMIS, 2005). Nearly 50% of the new HIV infections occur in young people between 15 to 24 years old. AIDS has become foremost a problem for the present generation. This is partly because a large part of the world population is young (one fifth of the world population is between 10 to 19 years of age). Secondly, since HIV/AIDS syndrome is essentially a sexually transmitted infection it affects the young sexually active the most (Jejabhoy, 1996). The fundamental risk for young people is due to their ignorance about issues on sexuality, HIV/AIDS/STIs and the dangers of unprotected sex (UNICEF, 2003). Therefore, an early intervention targeting adolescents with information on HIV/AIDS/STIs as well as skills to improve their self confidence and to make them assertive may be effective to safeguard their future health status.

The routes of HIV infection are through Blood transfusion, Drug injection, Mother to child transmission, and Sexual contact. Among these, blood transfusion has 95% of efficiency in HIV transmission; however, 80% of the infections occurred through sexual contact. Among different modes of sexual transmission, heterosexual contact accounts for 75% of the infection in India (NACO, 2004). HIV spread can be controlled by curbing promiscuity. Despite India’s deeply religious mooring and a culture that believes that sexuality is a sacred relationship enshrined by wedlock, promiscuity occurs in certain cases. People should know that HIV infection can be easily prevented: if husband and wife are faithful to
each other, by avoiding extra marital sexual intercourse, and sex with prostitutes, and call girls, and by observing abstinence before marriage (Chhabra, 2006).

“Education is a crucial and currently essential element in society’s armoury against HIV transmission. It is a necessary, though not sufficient, component in all prevention activities”, (Coombe, 2003). Creating awareness is a great weapon against AIDS (Kelly, 2000). This is certainly true for AIDS/HIV where prevention is the only cure. Prevention, control and management of HIV AIDS require high degree of public awareness, knowledge, in one hand and excellent research in diagnostic laboratory, well equipped hospitals and AIDS care centers on the other.

As the HIV problem intensifies, the issue of prevention of HIV transmission to those who are not affected becomes even more critical (NACO, 2006). Information to combat AIDS is not enough as among those who know the ABC message (Abstinence, Be faithful, Condom) of campaigning few put them in to practice (UNAIDS, 2007). For the ABC-method, Communication campaigns addressed to adolescents and young people also advocate ‘D’ (Delaying of sexual debut). There is an opinion that this ABCD message is too idealistic (Narendra, 2005) and enhances the vulnerability of the very young. Therefore awareness programme should convince the people leading to a behavioural change in them.

The age old social value system of single sex partner need be emphasized while promoting safe sex practice. Values of brahmacharya and marriage based on safe sex behaviour and moral hygiene need to be promoted through school and non- formal education to the youth and the other vulnerable (Deoder, 2006). There is urgent and immediate need for healthy sex education among the youth, because, a good number of those infected are young and in the most productive years of their lives. While half of new HIV infections occur in youth aged 15 to 24, prevalence rates
are lowest among those in the 5 to 14 year age group (UNAIDS and WHO, 2005). Therefore, addressing children during this age period is a real “window of hope” for preventing the spread of HIV (World Bank, 2002).

Effective teaching about sexuality, sexually transmitted infections (STIs) including HIV and HIV prevention requires an open, facilitating environment (Hargreaves and Glynn, 2002). The intended curriculum is only a small part of what is learned. Learners also learn from informal education and observation, from practice, from hearing, from praise, from body language, and from recognition, for example. Teacher ease or discomfort with the topic of HIV and AIDS is likely to be perceived by learners and likely to influence how they learn about the subject. Attempts to deliver HIV and AIDS education in schools are severely restrained by social and cultural norms, and sexual relations and power inequalities. These constraints will often manifest themselves in selective teaching, where messages on HIV and AIDS are either not communicated at all, or restricted to overly scientific discussions without reference to sex or sexual relationships.

A review commissioned by UNAIDS 1997, was based on the analysis of 68 research reports on sexual health education from diverse countries. The main conclusions were: Education about sexual health and/or HIV does not encourage increased sexual activity; Quality sexual health education either delayed the onset of sexual activity, reduced the number of sexual partners or reduced unplanned pregnancy and rates of sexually transmitted infections; Responsible and safe behaviour can be learned. Despite clear evidence to the contrary, there continue to exist fears that teaching young people about sex will encourage sexual activity (Grunseit, 1997).
Sexual health education is best started before the onset of sexual activity. For the Promotion of Quality Education UNAIDS Inter-Agency Task Team (IATT) on Education (IIEP/UNESCO, 2002) presented framework for quality education that demonstrates how education systems can and must change their operations in relation to HIV and AIDS. Effective learning is critical, in particular in the relationship between the learner and the educator. But the inputs, processes, results and outcomes that surround and foster, or hamper, learning are key as well. These factors can be seen as affecting learning at two levels. – At the level of the learner and at the level of the learning system (UNESCO, 2003). At the level of the learner, IATT recommends that education systems promote quality education which:

1. Considers the content of formal and non-formal learning to include appropriate and relevant education about HIV and AIDS that is age- and sex-specific. New approaches to content and curricula must provide effective teaching on HIV transmission and prevention, including negotiation and decision-making skills to help young people avoid unwanted sex or unsafe situations, and addressing sensitive issues such as sex and sexuality. This also provides a porthole of opportunity to improve school health programme.

2. Enhances learning processes to ensure children and adults are equipped with the knowledge, values, capacities and behaviours to take decisions that are in the best interest of themselves and others. Stigma and discrimination must be addressed so that the learners may be rid of panic and fear.

3. Promotes the establishment of legislation supportive to learning, with legal frameworks covering all aspects of the relationship between HIV and AIDS and education systems – to ensure the right to education
for all. Equity concerns should be addressed, possibly through legally initiated affirmative action.

IATT makes some suggestions (UNESCO, 2003) which include: The need to emphasize that HIV and AIDS is priority for education so that individuals must recognize the impact of the pandemic on their daily lives and institutions and systems need to change to be both reactive and responsive to HIV and AIDS; There must be a focus on inclusion in education with a rights-based learning environment, which may involve efforts to make schools more affordable and accessible: It is important to recognize that gender issues are key to the problem, with growing evidence showing that these influence transmission, infection and impact of HIV and AIDS.

Adolescence Education Programme: An intensive partnership between Department of Secondary & Higher Education and the National AIDS Control Organization has paved new ground in mainstreaming HIV prevention across different sectors (MHRD and DSEL, 2004). National Education Action Plan was developed for integration of HIV prevention education. The Action Plan outlined specific outcomes for scaling up the School AIDS Education Programme for co-curricular activities in classes IX-XII to 100% of the schools across the country. For curricular activities, training resource and Common Minimum Framework was developed by NCERT as part of the Scheme of Content on Adolescence Education. For teacher education, a revised National Framework on Teacher Education was finalized and this covers pre-service and in-service education of teacher and teacher educators.

Responsibilities were assigned to various nodal and partner organizations like the National Council for Teacher Education (NCTE), National Council of Educational Research & Training (NCERT), Council of Boards of Secondary Education (COBSE), Kendriya Vidyalaya
Sangathan (KVS), Navodaya Vidyalaya Samiti (NVS), Central Tibetan School Authority (CTSA), National Literacy Mission (NLM) and the National Institute of Open Schooling (NIOS) and each organization was asked to develop their own activity-wise Action Plans with specific outcomes and timeframes in tandem with the National Action Plan.

A National Core Committee has since been constituted under the Chairmanship of Secretary (S&HE) in November 2005 to review the overall progress in implementation of the NAP from time to time, to lay guidelines for the implementation and arrangement of the NAP, to identify areas for coordination amongst various Departments/Ministries/Agencies involved and to give suggestions to the implementing agencies. On similar lines State Core Committees have been formed in 32 out of 35 states to effectuate Adolescence Education Programme.

The National AIDS Control Organization of the Ministry of Health and Family Welfare, Government of India, has developed a module “Jeewan Ke Liye Shiksha” (in Hindi) for teachers in collaboration with UNICEF as part of its programme to implement AIDS education in the school system (UPSACS, 2002). The modules serve as a resource guide for teachers in imparting education about adolescence, HIV/AIDS and STIs to the students.

To enhance knowledge, create positive attitude that leads to change in the behaviour pattern of people, India Canada collaborative HIV/AIDS project (ICHAP) has initiated entertainment-education (E-E) approach in the form of street plays (Bhargave, 2006). Under the phase 400 street plays in 206 villages and towns were organized by ICHAP in Bhagalcot district during 2004 to make the people aware of their own responsibility towards the elimination of HIV/AIDS from the society. E-E activities on HIV/AIDS awareness includes interpersonal communication using brochures flipcharts, interactive aids faires festivals
and mobile exhibitions, and the entertainment education approaches like folk media, street plays and video shows. The objective of the street plays was to make the masses realize their responsibility towards elimination of HIV/AIDS from the society. Entertainment, education activities such as street plays can reach vulnerable groups and information dissemination is easily made continuous through this way.

CHARCA project in India was initiated in April 2003 as UN partner’s collaborative programme to empower adolescent girls and young women through awareness and knowledge on HIV AIDS. It was a district wide multi stake holder general population intervention. (NACO, MFHW, 2005) It is a process oriented, community driven project addressing the vulnerability of girls and young woman, aged between 13-15 years to STI/HIV/AIDS. This project is concerned with strengthening the women in terms of providing information, improving skills, and increasing access to quality services thereby reducing vulnerability of women. The project is being implemented in the district of Bellary (Karnataka), Guntur (AP), Udaipur (Rajasthan), Kanpur (UP), Kishanganj (Bihar), and Aizawl (Mizoram).

Rajive Gandhi Workforce for the prevention, control, and management of AIDS-a project started in August 20, 1996 and completed in October 1997 (Kalpalatha, 2006). Result showed that it had succeeded in encouraging people to openly discuss the subject and seek information, and provided adequate medical, social, and psychological support. The project also developed a cost effective strategy for prevention, control, and management of AIDS.

Universities Talk AIDS popularly known as UTA is a project to create awareness on HIV/AIDS amongst the students started in the year 1991. UTA project began as a collaborative partnership between the National Service Scheme (NSS), Department of Youth Affairs and Sports
and NACO. The project involved creating awareness among students and the youth on issues related to HIV/AIDS through workshops, seminars and written materials especially designed for them. Information and Counseling Centers on HIV/AIDS were set up in 11 identified universities all over the country providing counseling as well as vital information on HIV/AIDS and issues related to adolescent sexual and reproductive health (NYKS, 2005).

The UTA initiative employed by interactive and participatory approach that involved youth in finding relevant solutions themselves for the prevention of HIV/AIDS spread through their high-risk behaviour and lifestyle. It had been successful in creating awareness on HIV/AIDS and had developed responsible attitudes towards sex among the student youth. The information dealt not only with HIV/AIDS but also with other important issues for the youth such as drug abuse, relationships, courtship and marriage etc. The key message was to delay the first sexual experience and adopt safe sex practices. Evaluation of the project had indicated that it had reached 7595 institutions and 6.5 million youth all across the country.

The Ministry of Youth Affairs and Sports, (2006) in consultation with NACO has prepared a five year plan and action agenda called YUVA - Youth Unite for Victory on AIDS. Launched in June 2006 YUVA envisages to reach out to the adolescents and youth in all parts of the country to ensure that by 2010 all young people have accurate information, skills and access to HIV prevention services/facilities in a conducive, safe and supportive environment. The target is to cover 50% of young people by 2007, 65% by 2008, 75% by 2009 and 90% by 2010 and sustain the momentum through mainstreaming. These goals are proposed to be achieved through involvement of all youth volunteer networks in the country, the youth NGOs, youth clubs and youth
development centers and through integration of HIV issues in all programmes of the ministry.

The Ministry of Youth Affairs and Sports initiated development of two resource Kits: Kit I and Kit II through its Adolescent Cell (MYAS and UNFPA, 2004). These kits consist of resource material on various issues related to adolescent health and development (like growing up, nutrition, rights, gender, reproductive health, RTI/STI, drug abuse, HIV/AIDS, personality development, life skills, etc.) developed by various organizations. These kits were being made available to resource persons, facilitators, adolescents, teachers, parents, etc. through the extensive field network of the National Service Scheme and Nehru Yuva Kendra Sangathan. They served to improve access to good resource material at the community level. Guidelines have been developed for Kit I and Kit II, explaining who could use the material and how to use the material for gaining and imparting information on adolescent health and development issues.

The Manipur Network of Positive People (MN+P), formed in 1997 was a self support group working for the HIV prevention in the high prevalent State (Oinam, 2004). Their activities included sharing of experiences, lobbying legislation to protect the basic human rights, conducting meetings, conferences and providing counseling. They also launched mobile home care and referral services to hospitals. As drug addiction was the chief mode of infection in Manipur Needle and Syringe Exchange Programme (NSEP) aimed at the IDU was introduced in 1995 (MACS, 2002). Though looked suspicious and was criticized initially, this programme proved effective for the prevention of infection among drug addicts. Other activities in Manipur included publishing, posters and booklets such as State AIDS policy, AIDS Status report, AIDS Alert, and Resource Directory. Condoms were distributed at the office of AIDS Control Society; district Hospitals, Public health Centre, Family Planning
Department, STD clinics, Counselling Centers, and NGO centers. Media and channels also created awareness among the people.

DISHA -2000 was a student to student educational programme in Goa (GSACS, 2005). Under this programme Goa medical college educated the students of High Schools and Higher Secondary Schools on family life values including sexuality and HIV/AIDS.

In July 2005, Andhra Pradesh State AIDS Control Society launched an intensive, month-long AIDS Awareness and Sustained Holistic Action (AASHA) Campaign (APSACS, 2005). AASHA focused on promoting AIDS awareness, strengthening service delivery, and increasing demand for HIV/AIDS-related services by engaging all sectors of society, from government agencies to individuals and families. The main goal of the campaign was to deliver prevention messages to every home in Andhra Pradesh. AASHA Highlights; Special gram sabhas were held in 34,000 villages, reaching 11 million people, Intensive television and radio campaigns were launched, Over 9,000 HIV awareness folk performances in tribal areas, Opened 100 new VCTCs and 56 new PPTCTCs, started 43,000 new condom depots and 12 new orphans’ homes were established.

Village AIDS Awareness Clubs (VAAC) in the village, Banigandlapadu, in Khammam district of Andhra Pradesh had devised a simple and effective method of functioning. In Banigandlapadu which has the only junior college in the entire mandal, every student was a member of the club. In the other villages, young people in the 16-30 age groups joined the club. These youth were organized into groups of four and sent across to various households, where they spoke to villagers about HIV/AIDS and related issues. They also held discussions in a central place in the village and tried to rope in as many people as possible to attend these meetings. They discussed the consequences of HIV infection,
how it could be prevented, the use of condoms, and stigma and discrimination. They quoted statistics and discussed case studies. Whenever three or four students were on a bus or train, they began a loud discussion on these issues, inevitably drawing those around them into it. The clubs also occasionally organized events like a walk or a rally, a condom distribution day or a children’s competition. They used public forums and gatherings, like jatras and religious festivals, to spread the message. The clubs also held cultural shows, skits and plays to spread the message. Recently, a four-day peer leader training programme was held for 80 young people from the villages in the mandal (UNAIDS- New Delhi, 2007).

‘Will Balbir Pasha Get AIDS?’ was an innovative approach to reducing HIV/AIDS prevalence through mass media communications in Mumbai conducted by Population Services International (PSI-2003). ‘Balbir Pasha’ campaign, was part of PSI’s behaviour change HIV/AIDS intervention programme, ‘Operation Lighthouse’. The campaign was based on the principle that people can learn by observing the behaviour of others (social learning theory of Albert Bandura). PSI and the advertising agency Lowe, therefore, created a fictional character called Balbir Pasha. The Campaign was aimed at young men from the lower socio-economic strata. The campaign started with teasers that asked, “Will Balbir Pasha get AIDS?” The next phase conveyed key messages on HIV/AIDS that would cause the target audience to question their own behaviour. This phase focused on three key risk-factors for HIV: alcohol, risky sexual behaviour and the myth that people with AIDS necessarily look unwell. The last phase of the campaign encouraged people to call the AIDS helpline for information.

Though the campaign generated controversy, significantly, it had an impact on attitudinal change. Before the campaign, only 39 per cent of
the respondents who visited CSWs perceived themselves at risk for HIV. After the campaign, 56 per cent perceived themselves at risk.

In order to work for awareness generation on HIV and AIDS in over 30000 Panchayats and to work towards achieving the national objective of reducing the rate of new HIV infections in highly vulnerable states by the year 2007, the project ‘Red Ribbon Express’ had been planned by Nehru Yuva Kendra wherein 4 special trains started from 4 different directions i.e. from Jammu (J&K), Jodhpur (Rajasthan), Kanyakumari (Tamil Nadu) and Guwahati (Assam) (MYAS & UNFPA-2004). These special trains move on different routes, covering a distance of over 6000 kilometers, each, holding over 29000 programmes and activities in over 29000 villages/urban areas. It was targeted that each programme/awareness reached approximately 500 people in person. It was also expected that during point to point distance between target villages the campaign would further address to 500 persons. Thus estimated that each of the events would address 1000 persons in total. Considering that each sensitized person would talk to 5 persons, the overall reach would be 29,000 x 1000 x 5 i.e 145000000

A variety programme had been organized in West Bengal (France, 2006) where condom promotion was done through Kite flying: colourful kite carry the message that using condom was a simple and instinctive act- the kites fly in the sky and reach in distant areas.

Aman Foundation, Kolkata organized an awareness workshop on March 8, 2006 at Hotel Green Inn, Kolkata. The main objective of the event was to generate awareness on HIV/AIDS and related issues among Muslim communities through the Maulavis, Muslim religious leaders who also function as key opinion builders. The workshop largely focused on the main routes of HIV transmission and cleared myths and misconceptions regarding HIV/AIDS. It made the audience aware of the
fact that HIV can affect anybody and it would show no symptoms for a long time (Aman Initiatives, 2007).

AIDS Prevention Society and The Thalassaemia, Kolkata, teamed up with West Bengal State AIDS Prevention & Control Society (WBSAP&CS) to organize "Red Ribbon Cup", a friendly cricket match between the Film Stars XI and Mohan Bagan XI on February 26, 2006 at the Mohan Bagan Club grounds, Kolkata (NACO, 2005). The objective of this event was to involve celebrities like film stars and sporting heroes in making the issues of HIV/AIDS and thalassaemia (and the link between them) more visible. A unique Prevention strategy was a Musical programme on HIV/AIDS, conducted in Park, Kolkata on February 3, 2006. Music was combined with HIV/AIDS information.

Sonagachi Project Launched in 1992 by the All India Institute of Hygiene and Public Health, began as a small health promotion project to inform sex workers in Kolkata (Calcutta), about AIDS as well as to promote condom use and sexually transmitted infection (STI) testing in this community (Dhar, 2004). The mobilization effort, which was conducted in Sonagachi red light district, had evolved into a multi-faceted community effort to empower sex workers (particularly women) in ways that go beyond HIV prevention. The project, which was collaboration between government, non-government, and community-based organisations, worked in over 40 areas throughout the state of West Bengal to address a community of around 60,000 male, female, and transgender sex workers based in brothels, streets, and hotels (Jana, Basu, Mary, Rotheram-Borus, and Newman, 2004).

Efforts to empower people with knowledge and tools for health were at the centre of Sonagachi programme. Participation is a key feature of Sonagachi project. Peer educators provided sexual health and HIV education to sex workers and ‘madams’, and distributed condoms.
Women who could not read attended literacy classes, were taught by other sex workers, and enrolled their children in daycare, school, and other programmes. To support those non-formal education efforts, 29 educational centers in and around the red light area of Kolkata had been set up. To foster economic security, sex workers seeking credit were invited to patronize a community-lending cooperative that provided affordable loans. As part of its empowerment strategy, the Sonagachi Project also promoted the talents of sex workers through a cultural wing - 'The Komal Gandhar'. In addition, an anti-trafficking unit controlled by self-regulatory boards worked across West Bengal to protect children; two homes were also in operation to provide a safe shelter for children in distress.

In 1995, the sex worker community being served by the project came forward to develop their own network - Durbar Mahila Samanwaya Committee (DMSC) - and to create forums, such as workshops and seminars, dealing with basic rights to health in the broader framework of livelihood security and the right to self-determination. DMSC observes March 3 as the International Day for Sex Workers Rights. DMSC took over management of the project in 1999. This created the social space for participation and transferred project ownership to the community.

Development Issues of Sonagachi Project were HIV/AIDS, Health, Rights, Literacy, Women, children, Economic Development. The Sonagachi Project has been identified as a World Health Organization (WHO) model project. Evidence supported the claim that this project had an impact. In 1992, rates of consistent condom use with clients in the previous 2 months was 1%. By 2001, that figure had increased to 65%. Prevalence of syphilis dropped during that period from 25% to 8.76%. From 1992 to 1998, HIV prevalence among female sex workers increased from 1% to 5%; however, the 1998 figure for Mumbai, Bombay was 51%. In Sonagachi, West Bengal, safer sex programmes that empower
sex workers have resulted in a decline of HIV prevalence among sex workers to less than 4 percent and a high condom use of 85 percent. Available data indicates that sporadic and piecemeal efforts to promote condoms during commercial sex have not been as effective (NACO, 2004).

In Karnataka ‘Samuha-Samraksha’, a voluntary group, conducted a school education programme that had succeeded in creating awareness about HIV/AIDS. Samuha’s awareness programmes, including candlelight memorials, have helped to remove the stigma of HIV/AIDS as a killer Disease. In the high prevalence Koppal district Samuha conducted slide shows and interactive sessions in local theatres. In Karnataka, Samuha had established free seva clinics where people were counselled, diagnosed and given free treatment. Samuha ran a chain of women’s clinics which dealt with all health complaints, including HIV/AIDS and reproductive tract infections. The programme, called ‘Namma Arogya’, had heightened awareness and increased access, including bringing in infected children (Kannan, Vinayakan, 2005).

Breaking the mold on traditional HIV/AIDS behaviour change approaches, Operation Lighthouse in India (OPL) is tackling HIV/AIDS prevention behaviour change with an integrated and intensive approach that has produced improvements in behaviour, attitudes and knowledge among high-risk men. Implemented by PSI/India with funding from the U.S. Agency for International Development (USAID), Operation Light House is increasing safer sexual behaviours on the part of high-risk adult males in twelve port cities across India (PSI and USAID, 2006).

Given the concentrated nature of the HIV epidemic in India, OPL has focused on high-risk adult males because of their potential to infect their wives and girlfriends in the general population. The heart of the programme is Integrated Behaviour Change Communications (IBCC).
The Operation Lighthouse IBCC strategy is to deliver a single, consistent message across all interpersonal communication (IPC) channels for three months at a time. The IBCC strategy evolved to reach targeted groups of men in high traffic locations with repeated exposure to a common message. More than 375 trained interpersonal communicators comprise teams that conduct one-to-one and one-to-group IPC sessions, based on the quarterly theme, to raise personal risk perception and to promote the practice of protective behaviours such as abstinence, partner reduction and consistent condom use.

Through IBCC high-risk adult males are reached an estimated six to nine times annually through different on-ground interventions, thereby ensuring that they spend time thinking about these sensitive issues. An additional 220,000 high-risk males are reached at a lower level of intensity through similar interventions. Barriers to safer sexual behaviour — taboo topics, an "it can’t happen to me" attitude, and failure to recognize risky behaviours — are identified through quantitative research techniques developed by PSI. Discrete themes that address current behaviours and beliefs are selected and developed into fresh, innovative messages, and each theme runs exclusively for a set period of time. Exposure, attitudes and behaviours are tracked each in quarter, enabling managers to react quickly to trends and changes in the field. Data in 2003, for example, showed that the programme had had little impact on motivating partner reduction. The resulting focus on this topic for six months in 2004 led to an important increase in partner reduction (PSI and USAID, 2006).

Activities in Kerala

Different surveys showed that nearly all people in Kerala are aware of AIDS and more than 95% know all the modes of transmission (Mohamed, Irudaya, Kumar and Saidu, 2002). Mass media campaigns are being continued and numerous awareness programmes are conducted to
make the hard to reach and less literate people such as tribal, coastal people etc. aware of AIDS. The unique feature of the Information Entertainment Communication programmes of Kerala State AIDS Control Society with mass media was its interactive nature. (Kerala Calling-December, 2004)

Kerala AIDS Control Society joining hands with Kerala State Barbers’ Association and supported by The Family Planning Promotion Trust of Hindustan Latex launched a new HIV/AIDS awareness programme in Kerala from May 2007 onwards. 5000 barbers, around 300 from each district, have been selected and trained for the programme. The barbers will use an apron with AIDS awareness message written and a sprayer with AIDS awareness sticker affixed on it. The customer will have an apron with an HIV warning written in reverse but could be read through mirror. While doing the service the Barber will pass information to the client about HIV/AIDS and preventive measure. Besides, a ‘table talk magazine’ on HIV and AIDS will be provided for the clients in waiting to read.

Kerala State Aids Control Society (KSACS) had produced a talk show programme “A Positive life” to mainstream the issues of sexuality, STD and HIV/AIDS in Doordarshan and could reach out to different segments of public through this programme. TV spots featuring popular film stars and artists had also been telecast on primetime channels. The objective was to create awareness and to empower the public to discuss the difficult issue of HIV/AIDS in the family and prevent further spread of the infection. An increasing number of programmes had been aired through various radio stations in the state by arranging panel discussions, features, and live phone-in programmes. “Ask the Doctor” was such a popular radio programme. The “Dear doctor” column in newspapers and “Nammal Thammit” – the talk show in TV were well appreciated.
To spread the AIDS prevention message among the general public, outdoor media is very effective. KSACS has utilized the walls of government hospitals and public offices to write AIDS prevention messages with pictures and attractive designs. Bus panels are the other outdoor media utilized for carrying AIDS messages. About 650 KSRTC buses were used for this purpose. HIV/AIDS publicity through train and railway stations have been initiated. The IEC wing of KSACS has developed several IEC materials such as posters and brochures. These posters aimed at various segments of population and are displayed at different places across the state.

To remove the myths around HIV, and the stigma that results from it, it is important to highlight that even after acquiring HIV, individuals live meaningful lives. An exhibition football match was organized by Kerala State AIDS Control Society, which was inaugurated in the presence of Bency and Benson, the two HIV positive children who at one time had been thrown out of school on account of their HIV infection. The match, which had members from the Council of people living with HIV in Kerala, as well as several ministers and senior bureaucrats, was a perfect example of a unified multi sectoral response to the problem of HIV/AIDS.

Kerala State Aids Control Society (KSACS) had commissioned several street plays and stage performances like Kadhaprasangam, Kakkarissi Nadakom, and Magic shows etc. They were performed in different locations by local artistes (*Kerala Calling*-December, 2004). A number of workshops had been conducted in the field of ‘Information, Education and Communication.’ A series of media workshop had been organized at Calicut, Malapuram, Kannur and Trivandrum in association with local Press Clubs and Kesari Memorial Journalist Trust.
To motivate the journalists and media persons to write and produce good articles and quality programmes on AIDS, KSACS had constituted an award entitled Red Ribbon Media Award of Rs. 10,000/- in the four categories viz. Television, Radio, Newspaper and Magazine.

Panchayath institutions and other local self-government departments have shown keen interest in the programme and they have started earmarking their resources for supporting the activities. The proclamation of Vaikom Municipality as the first AIDS Literate Municipality is an example in this regard. This was made possible by a joint effort of the Panchayath Institutions.

Many projects have effectively utilized educational institutions for their programmes. NSS and NCC units have given remarkable help. Most projects incorporate these units in observation of World AIDS Day. They also join the Information, Education and Communication (IEC) activities as part of AIDS conscientisation.

Innovative steps have been taken by the government to tackle the AIDS menace (Kumar, 2004). Every district has now started a Voluntary Counselling and Testing Centre (VCTC), where people can obtain HIV testing as well as avail counselling services at a nominal fee of Rs.10.

Centers named ‘Pulary’ are started to provide easy and free treatment for sexually transmitted diseases. Diagnosis, treatment, counseling and awareness can be availed from such centers in different Government district/ Taluk hospitals and Medical Colleges of Kerala (Shailaja, 2006). Medical Counselling Centers named “Jyothis” function in various Public health Laboratory, and Micro Biology departments of Medical Colleges and in District/ Taluk hospitals in Kerala. ‘Jyothis’ helps a person to take right decision when confronted by health problems.
‘Prathyasa’, a centre in every district run by KSACS is the forum where HIV infected can meet, share, and have mutual help and support. The infected are made aware that being HIV+ is not an end of life; they are counselled to live positively with HIV/AIDS. Anti Retroviral Therapy is made available through treatment centers called ‘Ushus’. This enables the infected ones to be in the mainstream social life.

‘Sneha’ a programme to reduce mother to child transmission function in every Government medical Colleges and District hospitals. ‘Sneha’ provides care, counselling and awareness for the HIV infected mothers. Adolescent Education Programme -‘Ente Nanma’- for the students of 8-11 classes is conducted by specially trained school teachers. Children are educated on Growth and Development, HIV, AIDS, STI, Drug addiction, Alcoholism and Reproduction.

‘Targeted Interventions’ are projects aimed at Behaviour Modification, Risk Reduction, Treatment and Rehabilitation of vulnerable and infected persons. The projects are enacted by volunteers who were the benefactors of these projects. In each district there are 4-5 projects functioning and totally there are 36 projects in the State (Shailaja, 2006).

**Response of the Government of India**

Ever since the number of HIV infected persons in India attracted global attention, the country has launched a major offensive by enlisting popular support in the fight against HIV. This initiative is a step towards strengthening local responses at the grassroots level to make communities HIV resilient. India, along with other Member States adopted the Declaration of Commitment on HIV/AIDS, in the United Nations General Assembly Special Session (UNGASS) on HIV/AIDS in June 2001. The Declaration of Commitment reflects global consensus on a comprehensive framework to achieve the Millennium Development Goal of halting and beginning to reverse the HIV/AIDS epidemic by 2015 (UNGASS- India Report, 2005).
A five year strategic plan (NACP Phase-I) was developed and approved by the Government of India in 1992 during the 8 Five Year Plan. Under the strategic plan, the National AIDS Control Board and the National AIDS Control Organisation (NACO) were set up in 1992 within the Ministry of Health and Family Welfare with full financial and administrative powers. NACP in India is built on a rights based or ‘integrationist’ health model. Preventive education, voluntary and confidential testing, harm reduction interventions for groups at greater risk of infection, non-discriminatory treatment, care and support for positive people constitute the core of the government’s HIV/AIDS programme and are compatible with universally accepted health and human rights standards (Jain, 2005).

The Phase-I and Phase-II of NACP, originally conceived to be a five year project, was extended for two more years and the second phase ended in March 2006. The objective of NACP-I was to initiate a major effort in the prevention of HIV transmission and reduce future morbidity, mortality, and the impact of AIDS. The project was implemented as a centrally sponsored scheme with cent percent financial assistance to the states and union territories from the government of India. Initially, the limited national capacity to deal with HIV/AIDS called for a simple, realistic and flexible framework which included five basic components.

- Strengthening management capacity for HIV/AIDS control
- Promoting public awareness and community support
- Improving blood safety and rational use
- Controlling sexually transmitted disease
- Building surveillance and clinical management

Planning for Phase-III has begun with multicultural participation and greater involvement of people living with HIV/AIDS (PLHA) (UNGASS-India Report, 2005). The National AIDS Control Program
Phase III (NACP-III, 2007-2012), aims to support the Government of India in achieving its goal of halting and reversing the HIV/AIDS epidemic by 2012 through integration of prevention and care, support and treatment programs. It has set itself an ambitious timeframe in proposing to achieve the target of halting and reversing its HIV/AIDS epidemic by 2012 (instead of 2015), but the program is very much seen as part of a longer term plan to realize the 6th Millennium Development Goal (MDG) and complete the long term reform agenda by 2015 (NACO, 2006).

NACP III is using a four pronged strategy of:

- Preventing new infections in high risk groups and general population
- Providing greater care, support and treatment to PLHAs
- Strengthening the infrastructure systems and human resources in prevention, care, support and treatment programmes at the district, state and national level
- Strengthening the nationwide Strategic Information Management System

The specific objectives of NACP-III are to reduce the estimated new infections by 60 percent in the first year of the programme in high relevance states, so as to obtain reversal of the epidemic and by 40 percent in the vulnerable states so as to stabilize the HIV epidemic (You and AIDS, 2007).

**NACO- Strategy**

In India, the National AIDS Control Organisation (NACO) carries out the country's National AIDS Programme, which includes formulation of policy and implementation of prevention and control programmes. It was established in 1993 and is now running the third phase of the National AIDS Control Project (NACO, 2001). In fact, NACO is the
national response to the fatal epidemic. The programmes initiated by NACO are;

Blood Safety Programme: The major objectives of the Blood Safety Programme is to ensure the easily accessible, adequate supplies of safe and quality blood and blood components for all irrespective of economic or social status. To achieve this, ensured blood-banking services at the State/district level, educated and motivated people about blood voluntary donation, enforced quality control of blood and set up a HIV testing network.

National AIDS Control Organisation has prepared a comprehensive Condom Programme by outlining clear strategies in the National AIDS Prevention and Control policy. The objective of the condom programme is to ensure easy access to good quality, affordable and acceptable condoms to promote safe sex encounters. With this objective programmes are organized to sensitize people for using condoms for family planning and for preventing HIV and STD and convinced the clients and the commercial sex workers, about condoms as a means for preventing the HIV transmission, and made available low cost and good quality condoms to the people all over the country easily at the time and place when they need it.

Information, Education and Communication Programme (IEC) is launched as one of the most important preventive strategies in the fight against HIV/AIDS. IEC is a process that informs, motivates and helps people to adopt and maintain healthy practices and life skills (NACO, 2001). It aims at empowering individuals and enabling them to make correct decisions about safe behaviour practices. IEC also attempts to create an environment which is conducive and supports access to treatment and services for those already infected. IEC is an effective
strategy to enhance knowledge, create positive attitude that lead to change the behaviour pattern of the community in a rational way.

Under the IEC, role of the folk media seems to be highly effective as the strategies are designed in local language theme, culture and also using local talent. Street play is one of the methods employed to change the society without disturbing the existing system. The analysis of the effectiveness indicated that street plays as one of the IEC activities significantly increased the knowledge of HIV and AIDS and also improved the knowledge of HIV/AIDS.

The IEC department of NACO has prepared several packages of materials aimed at various population groups, to be used by the outreach workers, health workers and peer educators working in government as well as non-government organizations. Packages comprised flashcards, posters, stickers, leaflets, and guide book training guides, educational games and kits.

Prasar Bharati, the broadcasting corporation of India under the Ministry of Information and Broadcasting that runs All India Radio and Doordarshan incorporates HIV/AIDS awareness and information in a variety of innovative ways. All India Radio broadcasts NACO sponsored programmes every week. ‘Jeevan Hai Anmol’ is aired on the primary channel and the Vividh Bharati stations of AIR. The State AIDS Control societies are roped in to provide field level inputs and to highlight issues of significance relating to HIV/AIDS which are woven into the radio programmes. The ‘Let’s Talk AIDS Programme’, broadcast on Delhi’s AIR FM Rainbow is another example of collaboration between NACO, AIR and civil society (UNGASS- India Report, 2005). BBC World Services Trust -NACO- Prasar Bharati media partnership to air television spots over the national news channel at prime time is another initiative started in June 2002 and continued till 2007.
NACO is utilizing the massive outreach of Doordarshan and private satellite channel for telecast of messages on HIV/AIDS prevention and control during prime time. These include messages on sexually transmitted diseases, blood safety and voluntary blood donation. Some of the specific activities are as follows:

NACO has sponsored a classical music programme "Spirit of Unity Concerts" to mainstream the issue of HIV/AIDS and to reach out to the cultural elite and other educated classes through this programme. Telecast of Spots made by the renowned film makers featuring the popular film stars are telecast to create awareness and empower women to discuss the difficult issue of HIV/AIDS in the family and prevent further spread of the infection.

A special programme, in the drama form, had been devised for rural and migrant youth. The programme titled "Jiyo Aur Jeene Do" has been being broadcast on 30 commercial broadcasting stations of AIR since June, 1998. NACO used the popular FM channel to combine entertainment and education in reaching out to the urban youth. The one hour programme titled "NACO Film Hit Parade" had received a wide and positive response from a number of people who responded seeking medical advice and counseling.

NACO had oriented the personnel of the Directorate of Field Publicity on the effective use of mobile exhibition kits produced by NACO in collaboration with DAVP in the appropriate regional languages. These kits were used in a countrywide month long campaign ‘Swastha Jagrukta Mah’ (Health Awareness Month) in every Parliamentary Constituency sponsored by the Ministry of Health and Family Welfare.

Since 1994, the Song and Drama Division of Government of India has involved in the AIDS awareness campaign. It had produced several street plays, songs and dramas and had performed in 400 different
locations utilizing the local drama troupes in many States. The Directorate of Field Publicity had also participated in the campaign conducting several programmes such as seminars, debate/essay and quiz competitions, panel discussions, features, phone-in programmes and film shows for AIDS awareness.

Two films have been made by Bollywood in 2004 and 2005 on HIV and the stigma and discrimination attached to it. *Phir Milenge*, and *My Brother Nikhil* are excellent feature films which however did not do well at the box office. Even though the Indian films did not have box office coffers jingling, they portrayed in a sensitive manner the trauma of a very real, social issue confronting the nation. In that sense they are landmark films (HIV/ AIDS in News – Journalists as Catalysts, 2005). The film *Philadelphia*, from Hollywood was the first mainstream Hollywood film highlighting unsafe sex between men that make them vulnerable to HIV/AIDS.

A toll free National AIDS Telephone Helpline has been set up to provide access to information and counselling on HIV/AIDS related issues. This is a computerized four digit number, 1097, with a voice response system linked with the telephonic hotline. This is a very popular service, since it maintains the confidentiality of the callers and helps the caller clarify doubts and access personal counselling without revealing their identity (NACO, 2001).

Young people are among the most vulnerable to HIV/AIDS. School AIDS Education is one of the important programmes that focuses on student youth, awareness levels and that help young people resist peer pressure and develop a safe and responsible lifestyle (NACO, 2001). The programme reinforces family values and respect for the opposite sex. The activities include training of teachers and peer educators among students, role playing, debates and discussions, question box and access to referral
services, if necessary. A training module has been developed for the programme in consultation with UNICEF.

National STD Control programme was started in 1946. As HIV infection is higher in conditions of presence of sexually transmitted diseases (STD) STD Control Programme was brought under the purview of NACO in the year 1992. The programme emphasized more on health seeking behaviour of the individuals having STD and on the removal of the social stigma attached to the problem of STD. Within the parameters of National AIDS Control Programme, IEC activities have been designed for the prevention of STD and HIV infection including rising of awareness and promotion of appropriate health care seeking behaviour of the people (NACO, 2001).

Targeted Interventions: The basic purpose of the Targeted Intervention programme is to reduce the rate of transmission among the most vulnerable and marginalized populations. One of the ways of controlling the disease from further spread is to carry out direct intervention programme among these groups through multi-pronged strategies, beginning from behaviour change communications, counselling, providing health care support, treatment for STDs and creating an enabling environment that will facilitate behaviour change. The State AIDS Control Societies are fully empowered to provide funding support to the NGOs for Targeted Interventions. Every State AIDS Society has appointed an NGO Advisor, who is a professional in the field of social work, to manage and guide the Targeted Intervention Programme. Some of the Targeted Interventions are furnished below.

‘Project Sakhi’ is a peer based Targeted intervention project for sex workers of Guwahati in Assam. It was implemented by the State AIDS Prevention Society. Recognizing the poor sexual health status of sex workers in Guwahati city, the gateway to the North East and their low
level of knowledge, present belief systems, practices in prevention and care of sexual health, it was observed that STD/HIV could spread rapidly and therefore such an intervention project was implemented.

A Targeted Intervention Project for awareness and prevention of HIV/AIDS/STDs along with syndromic treatment of STDs was designed and developed by AIDS Control Society, Chandigarh in accordance with guidelines of NACO, for rickshaw pullers of Chandigarh who needed information, education and motivation about the mode of spread of HIV/AIDS signs and symptoms and awareness about other issues related to these infections. The project was implemented by Family Planning Association of India, Mohali Branch with effect from 1st April, 1999. Over a period of 15 months, a significant change has been brought in through individual contacts, focused group discussions, exhibition, film shows, awareness camps, street plays, identification and treatment of STDs/RTIs and condom promotion. Through these activities, approximately four thousand rickshaw pullers and their families were contacted and provided information and counselling. A total of 642 STDs/RTIs patients were provided treatment and 395 rickshaw pullers were counselled. About 1,25,000 condoms were distributed among rickshaw pullers and the correct use of condoms was demonstrated to them.

International Labor Organization's Tripartite Action on HIV/AIDS in India: The ILO, in consultation with its Indian tripartite constituents and the National AIDS Control Organisation (NACO), has developed a three-phased programme, aimed at establishing a sustainable national action on HIV/AIDS prevention, care and support in the world of work (ILO, 2004).

The first phase of the project, implemented with financial support from the US Department of Labor (USDOL), aimed at mobilizing the
ILO's tripartite partners (government, employers’ workers and organizations) and developing a Plan of Action for the Phase-II. The Phase-I was implemented from June 2001 till the end of 2002. The project is now in Phase II (implementation phase from January 2003 to December 2007) supported by USDOL. The project provides technical assistance to a world of work agencies in order to help them integrate HIV/AIDS in their programmes, and has selected five states for demonstrating a tripartite action against HIV/AIDS in India. The selected states are Jharkhand, Madhya Pradesh, West Bengal, Goa and Delhi.

**Global Response**

UNESCO initiated a Global /multi-country initiative on Education and HIV/AIDS called EDUCAIDS in 2004 and it began to work in a number of countries, including Cambodia, Jamaica, Lesotho, Nambia, Swaziland and Zimbabwe, with the objective of strengthening education systems. It was one of the three core ‘Education for All’ initiatives, complementing those focused on literacy and on teacher education (UNESCO, 2005). For its part, the global union Education International, with a membership of over 29 million teachers and education workers, had an HIV training programme with WHO and other partners. By 2006, this had reached 133 000 teachers in almost 25 000 schools in 17 countries.

In China, as part of the School-based HIV/AIDS Prevention Project in Sichuan province to train teachers to carry out school-based HIV/AIDS education a ‘cascade’ model (whereby trainers train other trainers) has been adopted (Sun, 2000). A core group of teachers were first trained. They subsequently trained larger groups of school staff (including administrators), who then trained other local school staff. Throughout the training, interactive activities were used to help teachers take a life-skills approach with students, and to integrate HIV/AIDS-related issues into the curriculum. In school activities with students
included: Building life skills, Providing opportunities to address AIDS related issues across the curriculum, Drawing and writing competitions, Developing, rehearsing and performing plays, and Developing, publishing and disseminating written materials (such as leaflets and posters). National and local media have been used to publicize students’ work and contribute to school-community dialogues on AIDS-related issues. Efforts were made to enhance the quality and consistency of support through close monitoring of the different levels of training, and by providing awards for excellence in teaching about HIV/AIDS education at the school level. An important first step was consultation with senior officials in government ministries and departments. This facilitated political commitment and enabled resources to be identified to promote the involvement of teachers and, ultimately, young people themselves (Sun, 2000).

In Senegal, HIV/AIDS education and other sexual and reproductive health issues have been embedded within a wider programme of school health activities as part of the broader Focusing Resources on Effective School Health (FRESH) (UNESCO, 2002). This initiative is supported by WHO, UNESCO, the World Bank and UNICEF. An action plan was agreed to and acted upon. As a result, issues related to malaria, STIs and AIDS, malnutrition oral diseases, diarrhoeal diseases are now part of the national school curriculum. New health education guides are given to teachers. Training has been provided; addressing skills based health education for HIV/AIDS. Another move against HIV was by Leaders of many religions who joined hands against HIV/AIDS in Senegal. They conduct multi faith events and cultural practices to disseminate information for behaviour change. Other activities include Peer Education and Awareness among military persons.

In Vietnam Schools, a life skills programme to promote pupils’ knowledge, understandings, and perceptions of personal risk was
developed. This was introduced into pre- and in-service teacher training for primary and secondary school teachers (Warwick and Aggleton, 2002). In addition, a booklet on how parents might best talk with their children about AIDS-related issues was produced. Seminars for parents about life skills education were run through local parent-teacher associations. At the Ministry of Education and Training, a Life Skills Development Team was set up. Trained by international experts, the team subsequently trained regional and local school staff in how to develop and implement life skills based curriculum. By the end of 1999, around 950 teachers had been trained potentially reaching 27,500 pupils. The life skills approach was used to address sex education, sexual abuse prevention, HIV prevention as well as the prevention of drug abuse. One key to success was the formal support from members of the government. Teachers’ enthusiasm for the work also contributed to the programme’s success, even if at times they found the life skills approach and content challenging. Teachers indicated that the scheduling of some classes had to be revised to allow enough time for discussion. The demands placed on teachers and implications for lesson planning and scheduling, are to be taken into account as the programme continues in other schools, and expands into further and higher education sector (Warwick and Aggleton, 2002).

The social and health crisis facing young people in Malawi prompted the government and other organisations (such as UNICEF and UNFPA) to prioritize sexual and reproductive health education (UNFPA, 2001). A pilot Family Life Education Programme was developed. This programme aimed to build personal decision-making and communication skills among young people, reduce sexual health risks, and strengthen the capacity of the Department of Youth to address young people’s sexual and reproductive health. Young people were first consulted about their sexual and reproductive health needs. During the subsequent implementation phase of the work, young people were involved in: peer
education training and provision, community education sessions using interactive drama, song, poems and dances, exchange visits (national and international) to promote the sharing of information across different geographical areas, sporting activities, making and showing videos, developing and disseminating written materials in local languages, and youth festivals and competitions. In addition, adults (such as parents and local community leaders) have been involved so that they could learn about the work. The range of activities undertaken provided young people with many opportunities to discuss sexual and reproductive health issues.

In Philippines Youth Zone Project accessed resources from the private sector to directly benefit young people (Warwick and Aggleton, 2002). The project team consulted around 60 young people to develop an out-of-school service that would provide both opportunities to learn about sexual and reproductive health as well as access medical contraceptives. As young people often used shopping malls as places to meet and socialise, the service was set up in a mall. Young people felt that a special space should be set aside for them, and they suggested the name ‘Youth Zone’ for the project.

The activities provided at Youth Zone include: support and training for peer facilitators to address sexual and reproductive health through life skills, videos, films, lectures and group games to promote discussion about sexual and reproductive health issues, use of Internet chat rooms to access young people not able to get to the centre and to promote discussion, provision of counselling services (both face to-face and over the Internet), outreach activities to encourage young people to come to Youth Zone and provision of youth appropriate medical services (including contraception) to meet the needs of young people.

Two years on, project successes include: providing services to around 20-25 young people each day, creating a sense of value and
demand among young people using the project by asking them to pay a small fee for services, involving especially vulnerable young people both as service users and as service providers to other young people, and providing information and advice to parents and teachers in their personal and professional relationships with young people. One key to success has been consultation with, and the active involvement of, young people in Youth Zone’s development (Warwick and Aggleton, 2002).

In Kenya, Behaviour Change Communication (BCC) and Information Education and Communication (IEC) has been initiated for the prevention of HIV. Other programmes include Counselling, Treatment, Home Based Care, and Condom distribution. In Ethiopia training and intervention are given by voluntary organization Meserte Kristos. HIV- Education and awareness programmes are conducted in Campuses. The supportive works for the affected include Micro loans and home care. In Cambodia HIV education and awareness programmes are supported by USAID programmes. From 1993 Population Services International and BBC WST project; mass media campaigns that integrate HIV education with national health priorities have been playing a leading role in Cambodia. (Rispel, Letlape and Metcalf/Commonwealth Secretariat, 2006).

AIDS was first identified in 1981 in United States. The rate of HIV infection which had been high during that period in US slowed down by 1985 due to intensive awareness programmes. The prevention strategies followed now in US are quite strategic; Two notable among them are Special population Approach and Interventions for adolescent’s care which followed a step by step approach (UNAIDS,1999). Special population Approach, for vulnerable persons include such steps as; establishing a personal connection with the person initially, Arranging for the person to meet with a case manager, social worker or outreach worker, obtaining contact information of at least two people close to the
persons to make the follow up easy and possible and arranging to meet/contact the person again.

Interventions for adolescent’s care includes; offering to assist the adolescent for making decisions about disclosure of their status to their parents, children or other family members, arranging for peer support by other teens living with HIV if possible or link them with other teens via the internet, and beginning discussion with adolescent mothers about who will care for their children; bring in other team members and agencies to assist them.

In Libiya Nutrition Interventions was provided for food insecure people with HIV infection with a view to prevent their vulnerability due to famine. High level political commitment to HIV prevention and care, involving a wide range of partners and sectors of society were the activities in Uganda (UNAIDS, 2004). A successful multi pronged prevention and control strategy including same day results for HIV AIDS and social marketing of condoms, and self treatment kit for sexually Transmitted Diseases backed by sex education programmes, have helped reduce very high infection rates.

Drug Resources Enhancement Against AIDS and Malnutrition. (DREAM-Project) gives broad based support for people affected with AIDS in Mozambique (Lucy, and Katherine, 2004). The patients on treatment become DREAM’s best resources; they form self groups to support one another. Peer education and emotional support is profoundly encouraging. This is an example of how the perspectives, energies, and dedication of a community motivated by their faith and commitment to equity and friendship with poor, and working together with the government and other developmental partners, has pioneered new approaches to caring for people with HIV/AIDS.
In Canada, Toronto, “Maggie’s Prostitute’s Safe Sex Project” was started by Danny Cockerline. Sex workers were given pamphlets about safe sex and HIV knowledge, to be given to their customers. This encouraged the sex workers to feel that they were practicing safe sex and promoting it with their customers (11th IAC, 1996).

Funded by USAID, the Pakistan HIV/AIDS Prevention and Care Project (PHAPCP) was launched in July 2006. It continues and expands HIV/AIDS prevention, care and support activities initiated under the Implementing AIDS prevention and Care (IMPACT Project, 2007). The interventions of the three-year project will run through January 2009.

The main objectives PHAPCP are; to increase involvement of local nongovernmental organizations (NGOs) and other institutions in providing targeted HIV prevention interventions among vulnerable populations, including youth considered to be at risk; to increase the capacity of NGOs, the National AIDS Control Programme and provincial AIDS control programmes to implement quality HIV/AIDS programme; and to strengthen care and support activities for people living with HIV/AIDS (PLHA).

Project interventions focus on reducing risky behaviours, peer education, outreach, counseling and testing, and the early diagnosis and management of sexually transmitted infections. Care and support activities for PLHA will be expanded and strengthened through a model continuum of care programme to be implemented by the New Light AIDS Awareness Group, the leading organization working with PLHA in Pakistan. Among PHAPCP’s many collaborators are the national and provincial AIDS control programmes, UNAIDS and the World Bank.

In 2003, UNDP Seoul Office and the newly established KUISC (Korea UNAIDS Information Support Center) jointly organized the first ‘Seoul AIDS Walk' campaign to promote the public awareness of
HIV/AIDS prevention, in cooperation with governmental and non-governmental organizations. About 500 people joined the campaign, which would continue as a yearly event. The Korea Health Promotion Association with its branches, since 1987, has been actively involved in counselling services for AIDS prevention. It dealt with over 7,500 calls or visits and has contributed much in disseminating correct, scientific, understandable information on AIDS and AIDS prevention. Planned Parenthood Federation of Korea (PPFK) with its interests and well-established organization also has joined the efforts. The Korean Nurses Association has provided refreshing and education sessions on AIDS for its members who are qualified counsellors at the primary health care level (YOU and AIDS, 2004).

2.7 THE SCHOOL AIDS EDUCATION PROGRAMME (SAEP)

School AIDS Education Programme (SAEP) is an important component under National AIDS Control Programme Phase II since 1999 with an aim to provide preventive education on HIV/AIDS to school going children. National AIDS Control Organisation (NACO) is implementing this programme all over the country through State AIDS Control Societies and in close coordination with the Department of Education in States/UTs. The programme includes Training of Teachers and Peer Educators for imparting HIV/AIDS education to students.

National Behaviour Surveillance survey (2001) shows that young people lack correct knowledge on HIV/AIDS. 84.9% young people (15-24 years) had heard of HIV/AIDS, 27.1% had accurate knowledge of HIV/AIDS, only 17% were aware of all odds of prevention and had no misconception about it and only 40.7% had a positive attitude towards HIV/AIDS affected individuals. Therefore, National AIDS Control Organization has high priority to interventions to young people. The most widely deployed strategies to promote and protect the needs and rights of young people against acquiring HIV are: to provide young
people accurate knowledge and information, to equip young people with Life Skills to put knowledge in to practice and to increase accessibility and availability of youth friendly services.

Along with information young people need skills to manage challenging situations and take charge of their own health within the supportive communities and environments to protect them from health risks. The SAEP sessions are based on a module `Learning for Life` and are transacted by teachers in a co-curricular manner. Two teachers in each secondary/senior secondary school including a nodal teacher are trained in transacting sessions among students, which includes participatory activities like role plays, discussions, debates, competitions, question box, access to referral services etc. NGOs are involved as resource support in training of resource persons at the state, district and school level. They are also helping in conducting advocacy workshops at the state, district and school level with different line departments including Education Department.

The School AIDS Educational Programme (SAEP) is a key intervention that aims at providing preventive education and skill to young people in schools and is a critical component of the preventive intervention for the general community as no other institutional system reaches as many children as the school system. The main objective of SAEP is to equip every young adult who passes out of school, with basic knowledge about HIV so that each person has correct knowledge and skill to protect themselves from HIV.

Maharashtra was the first state to initiate SAEP in 1993. Most other states initiated the programme after 1997-98. Review on the SAEP conducted in Maharashtra, Andhrapradesh, Karnataka, Tamilnadu, West Bengal, Assam and Nagaland and some other states revealed that there is a huge demand for knowledge among young people on HIV and related issues (NACO and UNICEF, 2005). Teachers are the most effective
communicators to transact HIV prevention education. Sustainable, large scale and quality coverage can be conducted only by a Department of Education led approach with technical input from the Health Department and resource support from NGOs. The analysis further indicated that after the post intervention – there have been specific increases in knowledge levels of students on the growing up changes, basics of HIV/AIDS, modes of transmission, protection methods, and tests to identify HIV/AIDS. For the first time there has been a confidential non-judgmental space provided to young people to discuss issues hitherto not discussed so openly.

SAEP currently was introduced in 35 states/Union Territories/Municipal Corporations. The schools where SAEP was implemented increased from 14.8% in 2000-01 to 47.3% in 2004-04 of the total schools in the states where the programme is on going. The pace of implementation was more rapid in the high prevalence states with coverage increasing from 13% to 83.7% of schools. Review of the programme was done in Maharashtra, Andhrapradesh, Karnataka, Tamilnadu, West Bengal, Assam and Nagaland. In several states the programme discontinued and Data from many states including Kerala are not available (NACO and UNICEF, 2005).

In Kerala a study was conducted by Shylaja (2005) to find out the effectiveness of the School AIDS Education programme in Trivandrum Education District; to find out the information needs of students regarding various components of Family Life Education Programme (FLEP) and to understand some of the stakeholders’ ( Principals, teachers, resource persons) perceptions about SAEP. The investigator used self administered questionnaires for 10th and 12th STD students and interview schedules for teachers, principals, FLEP instructors. There were about 700 participants in total. The findings showed that Principals and teachers were neutral with SAEP. But students
were very enthusiastic and wanted to learn more. They want more SAEP classes to be conducted.

However, evaluation has shown that the coverage of SAEP in different states in India is not as per the expected goals, challenges are still to be addressed in ensuring quality of the interventions, the programme tends to digress into an information session rather than skill based participatory sessions with young people. The coverage of the students assumes that all students attended; however, evaluations showed that participation of girls students was not complete and in some states like West Bengal; in some schools, girls were asked to go home and the session was conducted for boys only. In fact, Principals in some schools did not give advance notice about the programme on account of apprehensions of lower attendance if students came to know of it earlier. Nearly 37% students felt that all doubts were not cleared and explanation was not provided to all questions. Some information was given in a capsule form or distorted form.

Teachers who have explicit interest in the assignment and commitment and good communication skill and skill in establishing rapport with young people were effective as trainers. The teachers planned their sessions well and in a sequential manner one leading to the other. The interconnectivity of topics and the sequence was missing in the sessions conducted by non-teacher district resource persons (NACO and UNICEF, 2005).

2.7 SYNTHESIS OF THE REVIEW

The investigator reviewed various studies and surveys conducted by different organizations and individuals in the area of Health Behaviour and HIV. The risk behaviour and unhealthy conditions of adults in various walks of life, dealt with in the review, shows that unless ignorance, violence and prevailing risk behaviour are recognized and addressed, as in the case of slum women in Chennai, tribal in Orissa and
Andhrapradesh and the adolescent students in Mumbai, and Thiruvananthapuram, HIV prevention efforts may be proved ineffective. The review also indicates that HIV/AIDS may continue to remain an important public health issue in India, despite the prevailing efforts to prevent new infections and increased investment in care and treatment. While the epidemic has to date been largely concentrated among risk groups, the future burden of HIV will largely be shouldered by married monogamous women and unmarried men from the general population. The main link population between low-risk and high-risk groups are individuals who have unprotected sex with male and female sex workers.

The review also brought home the fact that adolescents need special support and guidance in the present scenario of lifestyle diseases, especially AIDS. Youth Risk Behavior Surveillance System (YRBSS, 2005) monitored six categories of priority health-risk behaviors among youth and young adults, including behaviors that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV) infections; unhealthy dietary behaviors; and physical inactivity.

Dietary behaviour is very significant indicator of the overall well-being and development of adolescents. Tara (2006) showed that Nutritional deficiencies among children (protein-energy malnutrition, iron, Vitamin A, and iodine deficiency) affects school participation and learning. Another area of concern is hygiene; Nair, (2004) pointed that in many residential institutions for girls, no hygienic toilets are provided, nor proper menstrual hygiene is taught to the girls. Oral hygiene is very poor among adolescents (Petersen, Bourgeois, Ogawa, Estupinan-Day and Ndiaye, 2005).
World-wide, approximately 20% of children and adolescents suffer from a disabling mental illness (WHO, 2005). Most of these young people suffer needlessly, unable to access appropriate resources for recognition, support, and treatment. Alcohol is the number one drug of choice for teens (Sheila, 2002). Ninety percent of smokers begin smoking by the age of 19 (Fibkins and William, 1993).

During adolescence, youth are experiencing physical growth and hormone changes that prompt sexual feelings. Though attitudes to premarital sex are conservative, both boys and girls engage in premarital sexual activity, with partners who have been at risk of HIV exposure and are not likely to use condoms. Since adolescents are sexually active they fall easy prey to HIV; young people seropositive cases below 14 years of age makes up to 4.3 percent and between age group 15-49, it is 88.7% (NACO and CMIS, 2005). Nearly 50% of the new HIV infections are occurring in young people between 15 to 24 years old. The ironic situation is that most teen-agers have very little fear about disaster like HIV (Pike, 1997). In fact, they have entered the age where they usually believe, "It will never happen to me." National Behaviour Surveillance survey (2001) showed that young people lacked correct knowledge on HIV/AIDS.

Various studies have demonstrated that though knowledge of HIV/AIDS is high in both boys and girls, yet myths and misconceptions persist. Though the young people have reported risky behaviours but AIDS was not perceived to be a problem by them. Studies across South Asia (Mehta, 1998 and Jeejebhoy, 1996) on sexual activities and knowledge indicate that the prevailing education did not increase knowledge of sex and reproduction. This indicates the existing dearth of strategies to ensure that children and adults are equipped with proper knowledge, values, capacities and behaviours to take decisions that are in the best interest of themselves and others.
Review on the health behaviour and on HIV /AIDS has laid bare the facts that adolescence is a time or turning point in life when one can make or break oneself. The youth may develop unhealthy life style and risk behaviour which can imperil their life. Results from the 2005 Youth Risk Behaviour Survey indicated that risk behaviors leading to death were initiated during adolescence. So, this is the time when the preventive strategy should be taught and learnt. A review commissioned by UNAIDS and reported in October 1997, was based on the analysis of 68 research reports on sexual health education from diverse countries. The main conclusion of the study was that ‘responsible and safe behaviour can be learned’.

Adolescents need to understand the concepts of risk behaviour, such as unprotected sex and the use of alcohol and drugs, the possible consequences of such behaviour and how to avoid them (WHO, 1998). Young people also need life skills such as decision-making, communication and negotiation (Kathleen and Cal et al., 2000). Therefore, the focus of interventions with adolescents has to shift from information given, to building life skills. IATT recommends new approaches to content and curricula that provide effective teaching on HIV transmission and prevention, including negotiation and decision-making skills to help young people avoid unwanted sex or unsafe situations, and addressing sensitive issues such as sex and sexuality. This provides an aperture of prospect to improve school health programme.

The review of related subjects brought the researcher in touch with several diverse and innovative methods of HIV prevention programmes followed in different periods across different countries and cultures. Many such programmes were commendable for the effect they made. Some notable ones are: University Talk AIDS Project, which could cover 7595 institutions and 6.5 million youth all across the country, Village
AIDS Awareness Clubs of Andhra Pradesh, "Red Ribbon Cup" of Kolkotta, Sonagachi Project, ‘Samuha-Samraksha’in Karnadaka, IBCC strategy of Operation Light house, Family Life Education Programme in Thiruvanandhapuram, Helpline and some of the Targeted Intervention conducted by governmental and non-governmental agencies.

In Latin American countries, emphasis on prevention and treatment has helped to keep its HIV epidemic stable for the past several years. In Philippines Youth Zone Project provided support and training for peer facilitators to address sexual and reproductive health through life skills. In Vietnam Schools, a life skills programme to promote pupils’ knowledge, understandings, and perceptions of personal risk was developed. In China teachers take a life-skills approach with students, and to integrate HIV/AIDS-related issues into the curriculum. Experience from many countries shows that schools can devise ways to open up more effective communication with students in relation to education on sex and AIDS. All these examples open windows of hope; it is possible to foster Health behaviour and it is possible to contain spread of HIV/AIDS. But several researches also showed that several HIV awareness programmes were in fiasco because mere dissemination of information was not sufficient for reducing risk behaviour.

School AIDS Education Programme (SAEP) is an important component under National AIDS Control Programme Phase II since 1999 with an aim to provide preventive education on HIV/AIDS to school going children. SAEP advocates Life skills approaches which can assist people assess in what ways HIV is a problem for them personally and how to protect themselves by adopting health behaviour. The Interactive educational activities of SAEP can help people think more carefully about such issues. But the adolescents do, however, place demands on educators in terms of skills and resources. Moreover, the diverse culture, condition and locale of India can have different impact on the result of the SAEP
programme. It is, thus, critical to evaluate the outcome of SAEP intervention among the adolescent population in different communities. In this context the present study is a modest endeavor to appraise the effectiveness of SAEP and also to assess its influence on the Health Behaviour among the adolescents of Calicut District in Kerala.

2.8 CONCLUSION

The foregoing discussions have revealed that the research in the area of Health Behaviour is still in burgeoning stage, and also the deadly virus HIV is continuing to spread and the entire attempt to check its spread is still on the way. Several methods and strategies have been adopted in different communities and institutions by different agencies and organizations. Still, there is a need to devise, assess and employ innovative and different programmes to contain the spread of the fatal virus and to foster health behaviour among the people.

The review of related subjects brought the researcher in touch with several diverse and innovative methods of HIV prevention programmes followed in different periods across different countries and cultures. The factors that made those programmes successful can be assessed and adopted in other situations and localities too. The review also showed the drawbacks of some of those HIV awareness programmes, particularly, using the method of mere dissemination of information for reducing risk behaviour.

The review highlights the present needs of the students; they require correct information about sexuality and related issues and they call for some one to approach to, who can understand their problems. They also need to be empowered to take relevant decisions that would reflect their responsibility towards themselves and their life partners in future, especially in the reproductive matters, in a realistic manner.
The review has generated a base to plan and conduct the interventions for the adolescent students. The present research is a moderate contribution to the programme for prevention of HIV infection and enhancement of Health Behaviour. The present study makes an attempt to conduct SAEP in the prescribed way among a sample group in Calicut district in Kerala to assess its effectiveness in realizing the objectives. Global and Indian experiences have shown that educational interventions focused on life skills development have proven very effective in empowering adolescents to manage their reproductive and sex issues and concerns, including avoidance of risky behaviours. The investigator attempts to assess this in the selected area of study.

Reviewing the concerned areas of research few studies have been found to assess Health behaviour and very few studies were conducted to know the effectiveness of the SAEP for fostering health behaviour during the adolescent period. Some attempts are made by Kendriya Vidyalaya Sangathan (KVS) to know the effectiveness of National Adolescent education programme and NACO’s evaluation of school AIDS education programme done in some selected states as a part of the implementation of the programme. The Kerala State AIDS controlling board has not done any specific programme through the secondary schools in Calicut District. SAEP is very comprehensive programme designed by UNICEF, NACO, NCERT and NCTE for the cause of social development and also to promote the health behaviour through school intervention. The effectiveness of this programme needs to be undertaken for the improvement of the programme itself and also to know its effectiveness among adolescent school children. Hence, the present study is to assess how far this programme, SAEP, is effective in fostering Health behaviour among adolescents of Calicut in Kerala.

The present research is innovative and essential to fill the vacuum existing in the area of research concerning Health Behaviour and
HIV/AIDS. Besides, it is also inventive and crucial contribution to the HIV prevention programme and Life Skill Education; because, as per the review there have been no attempts to find answers for the questions;

- Whether SAEP including Life skill training is effective in increasing the awareness about HIV and to facilitate an attitudinal change towards the HIV positive people.
- Whether SAEP including Life skill training is equally effective among diverse Indian culture in increasing the awareness about HIV and to facilitate an attitudinal change towards the HIV positive people.
- Do all the components of SAEP show significant improvement among the adolescents? If not, which component is significantly more effective among adolescents?
- Do the variables like gender, locale and type of the institution have influence on the components of SAEP?
- Whether SAEP including Life skill training is effective in enhancing Health Behaviour among the adolescents?
- Is SAEP significantly effective for enhancing all the components of Health behaviour? Are there inter differences among the components of Health Behaviour with respect to the effectiveness of the intervention.
- Is there any difference in the effectiveness of the programme for fostering health behaviour among adolescents of gender, different locale and types of institutions?

The researcher felt that the above questions form a major research gap. Hence, the present research becomes a modest venture in reducing the gap.