CHAPTER 2

REVIEW OF LITERATURE

A review of the conceptual and empirical literature, relevant and related to the topic is studied. The initial part of this chapter gives an overview of the physical and psychosocial implications of adolescence, self esteem and body image during adolescence, sexuality in adolescence, the need for sexuality education and its relevance, national programmes and policies for adolescent education and the issues concerning adolescent girls.

Studies conducted in the area of adolescent sexuality are reviewed in the second part. The studies are broadly categorized into:

- Studies on knowledge, behaviour and attitude towards sex and sexuality
- Studies on self esteem and body image of adolescents
- Studies of adolescent girls' knowledge regarding menarche and reproductive health
- Intervention studies in the area of adolescent sexuality

Adolescence is a time of unparalleled change, a time, when one can experience euphoric joy, plummeting despair, numbing apathy and overwhelming confusion, sometimes all within the span of an hour. Adolescence brings with it unfamiliar bodily changes, uncontrollable emotions and newer kind of sexual stirrings all that can make life traumatic as well as thrilling. Despite the uniqueness of each and every teenager,
adolescence is a universal experience. Everyone, regardless of race, religion, or culture, must make the transition from childhood to adulthood via adolescence.

The term adolescence comes from the Latin Word “Adolescere” meaning to grow to maturity. Adolescence is a period of transition from childhood to adulthood marked by: Perceptible physical, biological and emotional changes. A need to extend relationships beyond the immediate family, a sense of idealism, curiosity and adventure always will be with this group of people. Adolescence means “to emerge”, to achieve identity. It is the period from childhood to adulthood extending from the eleventh year to the twentieth year, thus encompassing the teenage years (Mahale 1987).

Thus adolescents are persons between the age group of 10-19 years. Growth phases can be demarcated as early adolescence (10-13 years), middle adolescence (14-16 years) and late adolescence (17-19 years).

2.1. Bio-Psychosocial Implications of Adolescence

To understand adolescence, one needs to look into the Biological, Psychological and Social implications of adolescence. Puberty, the short period that overlaps the end of childhood roughly marks the beginning of adolescence. The biological and physical changes in puberty transform children into sexually and physically mature adults (Hyde, 1990). The physical growth spurt, one of the initial noticeable changes, occurs for girls roughly between 10-12 years and for boys from 12-14 years. Biological changes emphasize the events of puberty that transform the bodies of children into those of sexually and physically mature adults
There are four major body changes that occur at puberty; changes in body size, changes in body proportions, development of the primary sex characteristics and development of the secondary sex characteristics (Hyde, 1990). Growth is far from complete when puberty ends, nor is it entirely complete at the end of early adolescence.

The convergence of physical maturation with changing personal and social expectations confronts adolescents with new developmental tasks. Biological maturation contributes more heavily to some tasks while cultural norms contribute more to others such as developing social skills and personal standards.

The first and the most difficult developmental task for adolescents is the acceptance of their changed body and physique because these radical body changes have physical as well as psychological repercussions. The emergence of adult sexual potency is a source of disturbance and anxiety and may push the young person into clandestine experimentation leading to an increase in promiscuity, teenage pregnancies and venereal diseases.

Achieving a satisfying and socially accepted masculine or feminine role is the second important developmental task. The parent’s sex role and their own acceptance of the same play an important part in their children imbibing a correct concept of sex roles. Parents’ own attitude will form the foundation of sex orientation in life of their child.

Locating oneself as a member of one’s own generation by developing more mature relations with one’s age-mates is the next developmental task.
Achieving emotional independence from parents and other adults is the fourth developmental task. Sociologists and psychologists have viewed adolescence as a key developmental period for an increase in the exercise of autonomy. The parenting style, family interaction and transitions relate to the family life cycle influence the development of autonomy in adolescents.

Selecting and preparing for an occupation and economic independence is the fifth important developmental task. It is during this period that the young person tries to think and aspire towards his/her future career.

Preparing for marriage and family life is the last important developmental task of this stage. Each of these developmental tasks confronts adolescents with the larger task of achieving a continuous and stable sense of themselves (Duvall 1977). The psychological changes distinguish adolescence in terms of the developmental tasks to be accomplished.

A sociological perspective views adolescents in terms of their status and the society’s expectations. Sociologists define adolescents in terms of their status in the society. From a sociological perspective, adolescents emerge as individuals who are neither self-sufficient and hence not adult nor completely dependent and thus not children. Hence, society tends to deny an adolescent the indulgence bestowed upon a child as well as the personal freedom of the adult.

Thus adolescence is a period in life that begins with biological maturation, during which individuals must accomplish certain developmental tasks, and that ends when they achieve a responsible adulthood as defined by society.
2.1.1. Milestones in Adolescent Development

Fenwick et al. (1994.) describe the milestones in adolescent development. According to them, during early Adolescence (11-14 yrs), concern about appearance increases, independence from family becomes more important, rebellious/defiant behaviour is shown, importance of friends and peer group increases, ego dominates view of all issues.

During Middle Adolescence (15-16 yrs), they become less self-absorbed, and start making own decisions, experimenting with self image, seeking new experiences, developing morals and values, making lasting relationships, and becoming sexually aware.

In late Adolescence (17-18 yrs), they start viewing world idealistically, get involved in world outside home and school, start stabilizing relationships and will treat adults as equals, independence will be expected.

Differences in the timing of pubertal change from one adolescent to the next, or within any adolescent, are collectively known as Asynchrony. For adolescents who believe changes should occur together, the fact that they have not or that they occurred together but at the “wrong” time, can have enormous implications on their personal disposition. The Berkley research found that boys who matured early appeared more adult and more attractive to their peers and adults than late matures. Early matures were more self confident and less dependent compared to late mature who are anxious and scared of rejection by peers.
Clear gender differences exist in the effects of timing. Early maturing girls do not share the advantages of early maturing boys (Brooks-Gunn 1991). Many are self-conscious about their bodies, and lack the poise of late maturing girls.

2.2. Body Image of Adolescents

Body image i.e. how people believe they look to others forms an important part of a person’s self-esteem. This is especially true during adolescence. There is an increased value placed on peer acceptance and approval and a heightened attention to external influences and social messages about cultural norms. Body image and related self-concept emerge as significant factors associated with health and well-being during adolescence, as youths begin to focus more on their physical appearance. How adolescents formulate and define their body image ideals and subsequent self-comparisons is strongly influenced by personal, familial, and cultural factors.

Adolescents’ and adults’ self images reflect the attitudes of others, or their perceptions of these attitudes, as well as their own evaluations of how attractive they are. Body images are caught by social mirrors and always reflect comparisons with others. These images can get pretty distorted at times, especially in adolescence, when bodies change in so many ways. In early adolescence, physical changes contribute heavily to adolescents’ senses of themselves. Adolescents’ self-images are strongly tied to their body images; this is true of both sexes. Further more, just how satisfied adolescents are with their bodies predicts their levels of self-esteem especially for girls.
Many adolescent girls believe physical appearance is a major part of their self-esteem and their body is a major sense of self (American Association of University Women, 1991). The experience of body dissatisfaction can lead to poor health habits and low self-esteem. These negative feelings may contribute to a higher prevalence of depressive symptomatology and lower self-esteem among girls (Siegel et al., 1998) and can affect health behaviours associated with poor eating habits, dieting, depression and anxiety, and eating disorders.

Adolescents are concerned about the appearance of their bodies (Elkind, 1984). Some investigators have found that the adolescents’ judgment of their physical appearance is the most important factor in their self-esteem (Simmons and Blyth 1987). At this time of rapid body changes, young people are most apt to be dissatisfied with their appearance (Koff 1990). Many studies indicate that during adolescence, looks become more critical for girls than for boys. (Simmons and Blyth 1987). Girls are far more likely to believe themselves to be too fat, when in fact their weight is normal for their height.

In general, boys have a more positive body image than girls. Girls tend to be critical of the way they look, believing themselves to be heavier than they are and wanting to be thinner. Boys, on the other hand, are content with their appearance, wanting if anything, only to be somewhat more muscular. Girls’ tendency to over estimate their weight declines after mid adolescence; however, their dissatisfaction with their bodies continue to increase through late adolescence (Healy et al. 1993).
2.3. Self-Esteem in Adolescence

The capacity for self reflection that comes with adolescence brings with it a concern about personality in general and thoughts about oneself in particular. The beliefs an adolescent has about himself or herself will determine many of their emotional reactions. To be healthy, these thoughts about one needs to be self-correcting, leading to healthy appraisal of oneself.

Self-esteem is the overall positive or negative evaluation of oneself. Self-esteem is closely identified with self-respect. It includes a proper regard for oneself as a human being and an accurate sense of one’s personal place within the larger society of family, friends, associates and others. Clemes and Bean (1999) have defined, the following four conditions that must be fulfilled in order for a high sense of self-esteem to be developed and maintained:

- **Consecutiveness**, that results when a child gains satisfaction from associations that are significant to the child and the importances of these associations have been affirmed by others.

- **Uniqueness**, that occurs when a child can acknowledge and respect the qualities or attributes that make him or her special and different and receives respect and approval from others for these qualities.

- **Power**, that comes about through having the resources, opportunity, and capability to influence the circumstances of his or her own life in important ways.
- Models that reflect a child’s ability to refer to adequate human, philosophical and operational examples that serve to help him or her establish meaningful values, goals, ideals and personal standards.

James (1988) identifies self evaluation or self esteem as an important dimension of the self. According to James, self esteem is related to the evaluation of the one’s success in meeting set of goals. Harter (1990) presented two different theoretical views of self-esteem that both she and Rosenberg (1989) supported in their separate research. The first is from William James (1902) who viewed self-esteem as a ratio of a person's perceived success in a certain domain to the importance the person attaches to success in that domain. The second theoretical view is that of Cooley (1907) who considered self-esteem as originating with the person's perceptions of how significant others viewed the self.

The relationships between self-esteem and other variables have been extensively researched. Low self-esteem has been correlated with low life satisfaction, loneliness, anxiety, resentment, irritability, and depression (Rosenberg, 1985). Blyth and Traeger (1988) found a correlation between high self-esteem and perceived intimacy with parents. High self-esteem has also been correlated with academic success in high school (O'Malley and Bachman, 1979), internal locus of control, higher family income, and positive sense of self-attractiveness (Griffore, Kallen, Popovich, and Powell, 1990).

Relationships with parents provide the foundation for self-esteem. When parents love, children feel lovable and develop feelings of self-worth. These feelings become established in early life. Bartle, Anderson and Sabatelli (1989) found that self-esteem
among adolescents still reflects their interactions with parents. Adolescents with authoritative parents, who stress self-reliance, shared decision making, and willingness to listen, have higher feelings of self worth.

Moore 1992 has cited Harter 1990, Hirsch and Dubois, 1991, that one-third to one-half of adolescents struggle with low self-esteem, especially in early adolescence. The results of low self-esteem can be temporary, but in serious cases, can lead to various problems including depression, anorexia nervosa, delinquency, self-inflicted injuries and even suicide.

It was also found that satisfaction with physical appearance is a large component of self-esteem, and adolescent girls have greater dissatisfaction with physical appearance than boys.

Individuals with high self-esteem in childhood are likely to be adolescents with high self-esteem. Many studies have demonstrated that during middle and late adolescence, and into early adulthood, self-esteem stabilizes or even increases (Savin Williams and Demo, 1983; Harter, 1990). Gender and self-esteem Studies in a wide range of western countries have determined that adolescent females, on average, have a lower sense of self-esteem than adolescent males (Baumeister, 1993; Pipher, 1994). Most of the studies have found that adolescent females score lower on self-esteem than do adolescent males (Cairns, McWhirter, Duffy, and Barry, 1990; Eccles, Wigfield, Flanagan, Miller, Reuman, and Yee, 1989; Labouvie et al., 1990; Nottelmann, 1987; Wigfield, Eccles, Mac Iver, Reuman, and Midgley, 1991).
Studies which addressed the question of whether self-esteem changes over time have produced conflicting results. Some research has shown that self-esteem rises during adolescence and early adulthood (Bachman, O'Malley, and Johnston, 1978; Cairns, McWhirter, Duffy, and Barry, 1990; Chiam, 1987; Labouvie, Pandina, White, and Johnson, 1990; McCarthy and Hoge, 1982; O'Malley and Bachman, 1983). In a cross-sectional study of adolescent self-esteem, Simmons, Rosenberg, and Rosenberg (1973) found that self-esteem dropped during early adolescence, with the greatest decrease at age 12. From that point it gradually increased, with a burst at age 16. Once established, self-esteem is resistant to change other than what results from normal developmental processes (Fertman and Chubb, 1992).

A number of studies have implicated child sexual abuse in lowering self esteem in adults (Beitchman et al. 1992), but the most sophisticated examination of the issue to date is that of Romans et al. (1996). This study showed a clear relationship between poor self-esteem in adulthood and a history of child sexual abuse in those who reported the more intrusive forms of abuse.

Low self-esteem in an absolute sense is rare. Most of the comparative research contrasts the consequences of very high self esteem with more moderate levels. The most important factors that influence self-esteem are parents. Part of this influence is attributable to parenting style. The key qualities contributing to positive self-esteem appear to be approval and acceptance. Among the most damaging things parents can do is to abuse their children, physically or sexually. Family conflict and breakdown are likewise sources of damage. Genetic factors also have been found to have an influence.
Biological parents exercise a genetic influence; a part of the difference between the self-esteem of one individual and the next is inherited. This source of influence is significant and substantial; it is the single most important source of variations in self-esteem so far identified. But it still leaves most of the differences between people to be produced by events after they are born.

Finally, close and loving relationships with others later in life do contribute positively to self-esteem. But the likelihood of forming and sustaining successful relationships of these kinds become difficult during the adolescent years.

2.4. Sex and Sexuality in Adolescence

Sexuality is an integral component of human behaviour and is considered to be central to the human contact and communication. It is the expression of an individual’s identity and personality. Sexuality is regarded as the ability to have sexual feelings, involving a person’s feelings about the self, self-esteem, body image, ability to relate sexually to others, and ability to communicate such feelings, thus giving an identity and acknowledgement to the sexual nature of a being.

In an introduction to Foucault’s understanding of sex and sexuality, Danaher, Schirato and Webb (2000) describe that sex and sexuality, together, comprise a set of practices, behaviours, rules and knowledge by which we produce ourselves, and are produced, as “knowing”- ethical, social and juridical subjects. The authors state that sex is tied up with meanings and power; it is a form of knowledge as well as a physical activity; and it involves one’s relation to the self as much a one’s relation with the others.
While sexuality in humans is a learned behaviour, learning sexuality, however does not come naturally (Long and Schwartz 1977).

Adolescence is a period when one’s sexuality becomes more prominent and visible. It is a strong component of psychosocial development during adolescence. It involves a person’s sense of self as a man or woman, the ability to enter into and maintain an intimate relationship with a significant other, and the ability to relate to other people in general.

Sexuality is a complex concept that is composed of several factors:

- Biological: one’s genetic make-up and how it is physically expressed (one’s appearance)
- Familial: the role modeling provided by and the behaviours demonstrated by the closest adults to the adolescent, usually the parents
- Cultural: the roles assigned to men and women by the adolescent’s culture and the ways in which men and women are supposed to interact
- Societal: the mix of cultural norms that make up a society. Each group’s norms are modified when they encounter the norms of other groups

All of these factors are critical in creating a sexually mature man or a woman.

Adolescent sexuality is expressed differently at each of the following stages:

**Sexuality in the early adolescent**: The early adolescent is basically working on hormones and the models provided by parents and other adults close to the adolescent. These factors, combined with a new self-awareness that produces intense embarrassment,
makes up sexuality at this phase. Adolescents will have romantic fantasies about ideal partners, but they will usually remain fantasies. The phone and school are the two places where early teens generally interact, and these are relatively safe forums. A great place to watch early adolescents demonstrate their sexuality is at their school parties.

**Sexuality in the middle adolescent:** Middle adolescents have become surer of themselves. Their bodies are settling down, and they are more comfortable with mixed-sex peer groups. They still have fantasies of ideal partners, but now they can try out some behaviour at parties and in cars, which can cause considerable parental anxiety. Teenagers who wonder if they might be homosexual will really face that possibility at the middle adolescent stage. Boys who are gay will usually begin to confront the issue in this period, but girls frequently don’t acknowledge it until late adolescence or young adulthood.

**Sexuality in the late adolescent:** Late adolescents will hopefully have reached the point at which they can begin to enter into relationships giving to their partner as much as they receive the hallmark of an adult relationship. Conflicts about sexual preference are being worked out, and thoughts about more permanent relationships occur. Sexual behaviour now frequently includes physical intimacy.

Thus adolescence brings new sexual feelings and the natural need to integrate these into a sense of one self. This process become extremely difficult for an adolescent since many of these feelings has been labeled as forbidden or bad by our culture. Adolescents continue to be vulnerable because they are not equipped with correct knowledge of sex and also techniques to resist peer pressure.
Unlike many attitudes, those surrounding sex are not likely to be openly discussed, especially with parents. In itself, that may not be surprising, but adolescents also find it hard to talk openly about sex with friends. Noiln and Peterson (1992) asked mothers, fathers, and adolescents to indicate how much they talked to each other about sexuality. He found that, parents talked much more with their daughters than with their sons, and that mothers were more likely than fathers to talk with their children. As a result, sons had less opportunity than daughters to discuss sexual matters with the same sex parent.

As described earlier, the adolescent years are accompanied by increases in sexual arousal, interest, and behaviour. Increased interest in sexuality, results from biological, psychological and social factors. Hormonal changes stimulate sexual interest and motivation. They also contribute to changes in physical appearance and attractiveness to members of opposite sex. Changes in physical appearance indirectly affect sexual behaviour and this in turn affects the self esteem of the adolescents. Healthy sexual development requires:

- A positive acceptance of pubertal changes, including satisfaction with body shape size and feelings of physical attractiveness.

- A healthy acceptance and management of feelings of sexual arousal and desire.

- A healthy sexuality, which includes feeling comfortable about choosing whether to engage in individual sexual behaviours, such as masturbation and in sexual behaviours with a partner, ranging from kissing to intercourse.

- Fourth challenge is practice of safe sex.
Western literature reveals that over the past 25 years, the age of first intercourse has dropped considerably and involvement of sexual intercourse by late adolescents is becoming common enough to be considered normative (Paikoff 1993). Masturbation among both boys and girls has also increased. (Koff 1999). Adolescents are at risk for sexual victimization, including abuse from family members, friends and strangers.

During adolescence it is essential that individuals form a sexual identity and a sense of sexual well being. These processes determine adolescents’ comfort with their own emerging sexuality as well as that of others. It is important for adolescents to become comfortable with their own changing bodies, learn to make good decisions about what, if any, sexual activities they wish to engage in, and how to be safe in the process (Brooks-Gunn and Paikoff, 1997). Developing a healthy sense of one’s own sexuality and learning to express it in a safe and mature manner is one of the most frequently ignored aspects of adolescent development.

2.5. Adolescents Sexuality and Its Importance

Sexuality has a multi dimensional nature. It involves sexual attitudes, behaviour, practices and activity and its definition encompasses the whole person, including sexual thoughts, experiences and values being a male or female. Feelings about one’s sexuality define one’s role in society and influence one’s feelings about relationships. Sexuality is influenced by many factors including age, disease and hormones; it is shaped by parents, family, culture and society. The World Health Organization (WHO) lists three key elements of sexual health as follows:
1. a capacity to enjoy and control one’s sexual and reproductive behaviour in accordance with a personal and social ethic

2. freedom from fear, shame, guilt, false beliefs and other psychological factors inhibiting sexual responses and impairing sexual relationships

3. freedom from organic disorders, diseases and deficiencies that interfere with sexual and reproductive functions

Adolescents comprise 20 per cent of the global population, 85 per cent of whom live in the developing countries. Further more, the adolescent population in developing countries is expanding with the number of urban youth growing to a projected 600 per cent of India’s population is in the age group of 10-19 years. Sexual development is a normal part of adolescence. Fortunately, most adolescents go through these changes without significant problems. Nonetheless, all adolescents need support and care during this transition to adulthood, and some need special help.

The advent of AIDS and the threat of an epidemic that has the potential of wiping out a whole society have brought adolescents/ youth into the forefront because they constitute a large percentage of the total population in India. Recent research on adolescents has largely focused on their sexual behaviour with a view to assess the extent of “risk behaviour” as measured in terms of the potential for contracting and transmitting the HIV virus.
In India, the experience of the adolescence by boys is almost diametrically opposite to that of girls. The experience of girls and boys are largely shaped by the construction of gender, class, caste and community norms. The institution of marriage underlies and strongly determines the gender differential norms that govern Indian youth, such as the taboo on premarital sex. With the onset of puberty, the norms of sexuality underlying the general social norms come to forefront. The attempt to understand adolescent sexuality must engage itself with the changing construction of sexuality in general and specifically with the asymmetrical power relations of gender, caste, class and community within which sexualities are constructed and experienced.

Every individual’s sexuality is a unique composite experience born out of a history that reaches back into the early childhood. Sexuality is closely linked to one’s own self-perception and sense of self, and personhood. Therefore, it is fashioned by personal experiences of gender, body image and experiences of the body, intimacy, love, family relationship, trust, abuse, pleasure seeking, emotions as well as larger sociological systems such as family, culture religion and society. The language of sexuality reflects a deep collective discomfort, because it oscillates between extremes of obscenity and medical sterility; there is hardly any personal or public discourse around sexuality that spans the realms of emotional, sensual, erotic and other personal experiences.

Sexuality is also shaped by negative influences and experiences such as gender violence and discrimination, sexual double standards, negative perceptions of body, shame and guilt associated with any form of pleasure and child sexual abuses. These experiences are far more prevalent in our notions of sexuality for it is rarely discussed or given any
positive expression. Sexuality has been equated with procreative sex, thereby outlawing a range of sexual expressions, limiting the scope of language and experience.

Adolescent’s need to be equipped with sexual health awareness, a broad category of critical information, that may enable adolescents to become sexually healthy individuals.

2.6. National Initiatives for Adolescent Sexuality Education

Some of the national policies and programmes related to adolescent sexuality education are described below.

2.6.1. National Youth Policy, 2003 (Ministry of Youth Affairs and Sports)

The National Youth Policy has identified five areas of focus related to health: (i) general health; (ii) mental health; (iii) spiritual health; (iv) HIV/AIDS, sexually transmitted diseases, substance abuse; and (v) population education. General health focuses on nutrition, iron deficiency, anemia, hygiene and sanitation, and physical exercises. Recognizing the vulnerability of adolescents to high-risk behaviour affecting their reproductive and sexual health, education and health services have been stressed. The need for delaying age of marriage and understanding responsibility in checking the high rate of population growth through responsible sexual behaviour has been emphasized in population education. Youth in the age group of 13-35 years covered with sub-groups 13-19 years (adolescents) and 20-35 years.
2.6.2. National Health Policy 2002 (Ministry of Health and Family Welfare)

Goal - Provision for an acceptable standard of good health amongst the general population of the country through equitable access to health services. Female adolescents are not identified separately but grouped with children and pregnant women within Maternal and Child Health services. Nutritional needs of adolescent girls are recognized. Need for health and population education is also recognized in the policy.


Goal - Population stabilization at a level consistent with the requirements of sustainable economic growth, social development and environmental protection. Mentions adolescent’s in information, nutrition, contraceptive use, STDs and other population related issues. Adolescents are recognized as an under-served population group with special sexual and reproductive health needs. Critical role of adolescents in population stabilization recognized. Health package for adolescents recommended as operational strategy but not spelt out. Problem of early marriage, teenage pregnancy and spacing addressed. Promotional and motivational measures considered for couples below the poverty line which marry after the legal age of marriage.


Goal - Prevent the epidemic from spreading and reduce the impact of the epidemic not only upon the infected persons but also upon the health and socio-economic status of the general population at all levels. Street children and sex workers identified as vulnerable
groups. Risks to adolescents identified and harm minimization approach involving education and services recommended. Peer education as a strategy advocated. Specially packaged programmes for students, out-of-school youth and sexual partners of migrant workers recommended


Goal - Equalizing education opportunities in the age group of 15-35 years, free and compulsory elementary education for all children up to 14 years of age, and functional literacy to adult illiterates. Supportive services to ensure that girls do receive elementary education and adolescents receive non-formal education are proposed. Role of adolescents in population stabilization and parenthood are recognized.


Goal - Advancement, development and empowerment of women, Adolescent girls identified as a vulnerable group. Inequities recognized at the macro and micro level. Gender discrimination acknowledges, including the adolescent girl within the ambit of ICDS proposed for a safe motherhood status etc. are the important goals of this policy.

2.6.7. Reproductive and Child Health (RCH) programme

This programme is in its second phase (2005-2010), is an integrated programme that combines family welfare, women and child health services. A two-pronged strategy will be supported for adolescents under the RCH 2.
Strategy one falls within the overall scope of the RCH 2 programme in all the states. The Department of Family Welfare will incorporate adolescent issues in all the RCH training programmes and all RCH materials developed for communication and behavioural change.

Strategy Two will be implemented in selected districts (around 75 in the pilot phase). The aim would be to reorganize existing services in order to increase friendliness of services towards young people to improve access and utilization. This strategy will require the Department of Family Welfare to undertake special efforts to reorganize services at the primary health centers on dedicated days and dedicated timings for adolescents.

2.6.8. National AIDS Control programme

A number of initiatives have been taken up by the National AIDS Control Organization (NACO) to provide information on HIV/AIDS transmission and prevention to in-school and out-of-school adolescents: A toll free National AIDS Telephone Helpline has been set up to provide access to information and counseling on HIV/AIDS related issues. School AIDS Education Programme focuses on raising awareness levels, helping students resist peer pressure and developing a safe and responsible lifestyle.

Universities Talk AIDS (UTA) Project is a collaborative partnership between the National Service Scheme (NSS), Department of Youth Affairs and Sports and NACO. The project involves creating awareness among students and the youth on issues related to HIV/AIDS through workshops, seminars and written material especially designed for
them. Apart from “Youth to Youth” approach, the programme has a component called “Campus to Community”.


The Ministry of Human Resource Development, Government of India has launched the Adolescence Education Programme in collaboration with NACO and UNICEF. The Programme is aimed at providing adolescents with authentic knowledge about process of growing up during adolescence, HIV/AIDS and substance abuse, helping them inculcate positive attitude towards these issues and developing in them the needed life skills, so that they may manage the challenges of life and risky situations. The programme is being implemented in most states/Union Territories across the country through the state/UT Departments of Education in collaboration with the State AIDS Control Societies (SACS). While the curriculum change is a lengthy process and will take time, co-curricular activities are to be conducted in all the secondary and higher secondary schools using interactive methods facilitating experiential learning with a special focus on life skills development.

2.7. Sexuality Education, Need in India and Kerala

Sex education, which is sometimes called sexuality education or sex and relationship education, is the process of acquiring information and forming attitudes and beliefs about sex, sexual identity, intimacy and relationships. It is also about developing young people’s skills so that they make informed choices about their behaviour and feel confident and competent on acting on these choices (Arora and Pandya 1998). Sex
education seeks both to reduce the risks of potentially negative outcomes from sexual behaviour like unwanted or unplanned pregnancies and infection with STDs and to enhance the quality of relationships. It is also about developing young people’s ability to make decision over their entire life time. What sex education can actually do is to help these students to clear misconception about sex and sexuality. Proper guidance can not only assist in their developing a healthy attitude towards sex, but can also promote a more health conscious and responsible youth.

Sex education must cover, besides instruction about biological reproduction facts, learning of proper social and moral behaviour and inculcation of proper attitudes and values towards sex, love, family life and interpersonal relations in society at large. According to Arora and Pandya (1998), Sex education is essential because:

- Men and women do not live by their biological instincts alone. They have the capacity to differentiate between good & evil and education will help them to choose.
- Sexuality has a deep and significant value throughout the human life cycle no matter what the age, gender, economic status, state of health, nationality or religion is.
- Men and women need to be educated in order to develop responsible sexual behaviour
- Children get information about sex from sources like friends, servants, relatives etc
- Education in human sexuality helps children to understand and appropriately deal with sexual abuse.
- Education in Human sexuality helps youngsters to develop positive attitude towards human sexuality if they are given honest answer to the queries at that age
• Youngsters who are comfortable with their own sexuality and have an understanding of their bodies and their feelings would develop self-confidence and self-esteem

Ideally, sexuality education must start early before the youth reach puberty and before they have developed or established patterns of behaviour. Viewing sex education as an ongoing conversation about values, attitudes and issues as well as providing facts can be helpful. The best basis to proceed on is a sound relationship in which a young person feels able to ask a question or raise an issue if they feel they need to.

School based sex education can be an important and effective way of enhancing young pupil’s knowledge, attitudes and behaviour. There is a wide spread agreement that formal education should include sex education.

National Council for Educational Research and Training (NCERT) has recognized the need for sex education in elementary and secondary education way back in 1988. It had then recommended that this would help the youth do develop a healthy attitude towards members of the opposite sex and also help prevent the rise of the diseases. However the Government ruled out this plan, the governmental and educational agencies has started focusing their attention on college’s instead. The disagreements over introducing sex education in the school curriculum have led to one state after another banning it and they seem out of sync with the reality. It is unfortunate to note that on the issue of banning sex education, both Hindu and Muslim fundamentalists’ organizations and even Christian organizations are hand in hand.
Kerala State is the first one thrown upon sex education module prepared by NACO and UNICEF and NCERT in 2005, which teachers were supposed to use imparting adolescent education programme to the students. States like MP, Chattisgrah, Maharastra and Karnataka followed suit and has banned the project, pending revision. They are particularly against the UNICEF-NACO manual which included the picture of a human body which they argue is against Indian “culture and value”. Concerned over the opposition from the states, Union has written to the states to review the content, rather than deciding to stop it.

The review was expected to be complete in two months after which the sample copies of the redesigned material would be sent to all the states. NACO and NCERT are also in touch with the states which completely refused to implement the program. But decisions have not yet been taken regarding the issue.

It has to be noted here that nearly 20 per cent of the population in India is adolescents. They are a large heterogeneous group – male- female, rural-urban, educated- uneducated, privileged-under privileged, working and non-working, belonging to different castes and creeds, even married-unmarried.

A recent study by Ministry of Women and Child Development reveals that 26.8 per cent of the young adults (13-18 years) have had their first sexual experience in childhood. For most, it was with class mates and the situation was abusive. Also 38.5 per cent of teens were fondled by friends or classmates somewhere and sometime.
A 2007 Ministry of Women and Child Development study adds that over 50 percent of our children are sexually abused. In half of these cases, the abuse is perpetrated by persons in position of trust and majority of the children do not report it. The sex education can overturn this ritual silence, supply our young people tools to report and resist sexual abuse, negotiate with their feelings and fears.

It is indeed ironical that while sex is such an integral part of one’s life, parents and elders including teachers in India hardly play any significant role in providing scientific knowledge about sexuality. Generally, they avoid any mention to the sex in their day to day relationship with their children. This is because it is still treated as a taboo subject in Indian society and secondly as they themselves lack scientific knowledge about it. The result is that most of our adolescents learn about sex in an almost clandestine manner thereby giving rise to all sorts of myths and misconceptions (Penrod 1986).

Despite our knowledge of the importance of developing a healthy sexuality, the topic of sexuality is frequently not discussed in terms of health promotion. Much of the literature on sexuality focuses on biological and psycho social dimension of sex, STDs and how physical disabilities and illness affect sexuality and one’s sexual functioning. Values regarding sex develop over years and it takes time, experience and the opportunity for open discussion, which is possible only through educational interventions.

According to WHO, sexual health is the integration of the somatic, emotional, intellectual and social aspects of sexual beings in ways that are positively enriching and that enhance personality communication and love. It is very important that an individual
during his growing years develops wholesome, clear and positive attitudes towards human sexuality which needs education on sex and sexuality.

Furthermore, only through educational interventions, we will be able to empower our adolescent girls to cope with themselves, their sexuality and the exploitative sexual experiences which cross cultural and socio-economic lines and can occur in homes, schools, the workplace and other public places.

2.8. Review of Studies Related to Adolescent Sexuality

A brief review of the studies conducted in the area of sex and sexuality are presented in this part.

The studies are broadly categorized into:

- Studies on knowledge, behaviour and attitude towards sex and sexuality,
- Studies on self esteem and body image of adolescents
- Studies of adolescent girls’ knowledge regarding menarche and reproductive health
- Intervention studies in the area of adolescent sexuality

2.8.1. Studies on Knowledge, Behaviour and Attitude Towards Sex and Sexuality

Savara and Sridhar (1992), reported that for 80.3 per cent of the respondents, books were the primary source of sexuality related knowledge, followed by friends. Of the 686 respondents who were married, 55.5 per cent claimed to have had sex with a person
other than their spouse. Pornographic books were read by 41.6 per cent of the respondents while 25 per cent watched blue films.

The study conducted by Bhende (1994), explored knowledge regarding menstruation, physical changes during puberty, reproduction, sexual aspects of marriage, STD and HIV/AIDS. Sexual behaviour including social interaction between adolescent girls and boys, reaction to sexual harassment and premarital sexual behaviour was another aspect which study covered. It was found that majority of the girls, who had not attained menarche, hardly knew what to expect. Even those who had started getting menses were given advice without any biological explanations. Girls were never told about the physical changes that occur during the puberty period. Majority of the girls and less than half the number of boys in the survey reported that they did not know anything about married life, especially the sexual aspects. Only 29 per cent of the girls, compared to 66 per cent of the boys answered the question “how a woman become pregnant?” 56 per cent of girls and 83 per cent of boys answered the question correctly. Mass media such as films, radio and magazines were reported to be the source of information for more than half of the girls and boys who said that they knew how women become pregnant. Films and television were the most frequently mentioned source. During education intervention sessions, the girls reported many instances of sexual harassment. They also explained how they dealt with the situations.

Sathe’s (1994) study on Introduction of sex education in Schools: Perception of Indian society reported that for sex and sexuality related matters, friends served as a major source of such information, followed by pornographic literature and blue films. The survey
also showed that girls had little chances of getting sex related information from friends, pornographic literature and blue films. When the introduction of sex education in secondary school was considered an overwhelming majority of the Principals and teachers were in favour of incorporating sex education in the routine curriculum of the secondary schools.

Kumar (1995) in his study tried to understand the extent and nature of sex myths among educated Indian youth both male and females. The male respondents accepted five of the 6 sex myths listed. They are- semen is the essence of life and its loss damages one’s health, Sexual intercourse during pregnancy harms the health of the women, Most men loss their sexual drive at around the age of 50, the size of the penis is directly related to the size of the body of the man, it is dangerous to have sexual intercourse for a man during the time of menstruation, a women ejaculate like a man when she experiences an orgasm. The women respondents have been found to believe in ten sex myths. They were; Sexual intercourse during pregnancy harms the health of the woman, semen is the essence of life its loss damage health, the size of the penis is directly related to the size of the body, most men loose their sexual drive at the age of 50, it is dangerous for a man to have sexual intercourse during menstruation, an intact hymn is the proof that a woman is virgin, conception occurs when there is simultaneous climax during sexual intercourse, absence of hymn is the proof that woman is not virgin, sexually active women have large breasts.

Sachdev (1997) studied the sexual knowledge, attitudes and behaviours of University Students in Delhi reported the following findings. The study concluded that majority of the students; both boys as well as girls have low levels of knowledge regarding
pregnancy, menopause etc. Majority of the students thought that a woman has to have an orgasm in order to become pregnant. Majority did not know that a woman can become pregnant if intercourse occurs during the menstrual period and were of the belief that menopause is the end of womanhood and lose of sex drive. Only few of the females regarded masturbation as a healthy practice. It was found that Social Work students were better informed about sexuality than nursing and Humanities students.

Regarding attitude towards sexuality most of the students considered it acceptable for a woman to engage in casual sex relations before marriage. Majority of the male respondents supported pre marital sex almost equally for both men and women, females supported premarital sex by man than by a woman. Most of the respondents found marital infidelity equally unacceptable for both the partners. There was lack of knowledge about contraception among the students. For majority of the students, the source of sex knowledge and information was their friends.

The study by Mohammadi et al. (2000), on knowledge, attitudes and behaviour in sexual matters among adolescent, Sexual experience was associated with older age, access to satellite television, alcohol consumption and permissive attitudes toward sex. Substantial proportions of respondents held misconceptions regarding condoms, sexually transmitted Infections and reproductive physiology. Attitudes toward premarital sex were more permissive among respondents who were older, were not in school, had work experience, had access to the Internet or satellite television, lived separately from their parents, or reported having used alcohol, cigarettes or drugs.
The study, by Kulkarni et al. (2000), explores the participants' perceived need for more knowledge about sexual health, and their ideas about developing a brief intervention to promote positive sexual health practices that would reflect their perspective. The analysis showed that participants were knowledgeable about symptoms, transmission, prevention, and treatment of STDs, participants identified barriers to seeking diagnosis and treatment for symptoms of STDs including cost, not knowing where to go, and lack of services specifically for females.

The study by Campbell (2000), on adolescent interest in human sexuality demonstrates a method for obtaining data on developmental changes in adolescents' interest in human sexuality. Findings revealed that younger students show more interest in the meaning of slang terms, their reproductive physiology, and intercourse. Older students show greater interest in contraception and health risks. Males were interested in slang and intercourse while females were more concerned with health risks and communication.

Abraham’s (2001) study aimed at understanding the social, cultural and ideological contexts within which the youth explore and experience sexuality and the various construction of sexuality that the youth encounter, negotiate and reshape. The study showed that college students, especially boys are sexually active while girls have reported low rates of sexual activity. Non- penetrative sexual experiences were reported by large number of boys and girls while only 26 per cent of boys and 3 per cent of girls have reported sexual intercourse. Male students explore their sexuality more than the female students. The general level of knowledge regarding anatomy, physiology, contraception and STDs among the students was very low resulting in various myths and
misconceptions. Although overall knowledge levels were low, very striking gender
difference was observed. Girls were poorly informed about both male and female anatomy,
conception and contraception.

Boys were more liberal in their attitudes towards premarital sex than girls. While
they held liberal attitudes with regard to male sexual behaviour, their attitudes towards
female sexual behaviour was conservative. Although there are various misconceptions,
nearly all boys in the sample knew about condoms and their function. Girls, however, had
little or no information about condoms. For the boys the main sources of information on
the topics on sex were peers, blue films, mass media campaigns and advertisements. For
girls, the main sources were peers, Hindi films, media campaigns. Some of these sources
reinforced myths and misconceptions while others appear to have generated newer myths
and stereotypes.

In the study on sexuality of students in India, conducted by Aggarwal et al. (2000),
it was found that knowledge regarding sexual intercourse, masturbation, contraception, and
sexually transmitted diseases was satisfactory among the respondents. Common source of
knowledge about sex were friends, pornographic films, books and magazines. Only one
fifth could communicate with teachers, parents, and persons of the other gender about sex.
Sexual intercourse had been experienced by only few of the respondents. The mean age of
first sexual intercourse was 17.5 years. Majority of the respondents strongly favoured
introduction of sex education at school level.
The study by the NGO Asha Kirana Charitable Trust (2001) on “Awareness, attitudes on HIV/AIDS, sex and sexuality among Youths” with sample size of 1140 people of age group 14-18, it was found that 22 per cent of the respondents do not know how HIV spread, most of them discuss sex and AIDS related doubts with peers only, almost half of them believed that AIDS is curable and more than a quarter of them have the misconception that condom can only prevent pregnancy and not the spread of AIDS.

Deshmukh et al. (2002) have reported in their study, Knowledge and Attitude of University students', that science students have better knowledge about sex and sexuality and HIV/AIDS than Arts students.

Sathe and Sathe (2003) in their work noted that boys felt more comfortable with their friends and talk more openly with them and girls were more comfortable with their mothers and elder sisters while discussing sexuality related issues. Majority of the respondents were not aware of the sexuality related issues.

A study was conducted by Saksena and Saldanha (2003) as part of a course on Human Sexuality and Adolescence for school children, to ascertain the prior knowledge of children, source of their knowledge and whether the course was a felt need of the children. It was found that majority of class VIII, IX and X students had learnt about sex from friends, followed by movies, textbooks. Misconceptions about anatomy, childbirth, HIV was common. Almost all the tenth class students had stated that education in human sexuality was necessary.
Raffaelli and Green (2003), in their study, reported that the parents are using more indirect methods than direct methods of communication to communicate about sex and sexuality. The maternal education was positively associated with mother-son communication about sex. Premarital education and the absence of older brothers positively predicted communication with both sons and daughters.

Tiwari and Kumar (2004) found that 22 per cent of respondents (30 per cent of males and 13 per cent of females) were involved in sexual practices like dating/ kissing and caressing. Majority of male and female respondents had their first sexual intercourse by the age of 18 years in Delhi and 21 years in Lucknow. It was found that majority of the respondents disapproved of premarital sex.

The need for sex education was felt by more than 70 per cent of the respondents. Majority of the youth opined that the age to start sex education could be between 15 and 18 years. Over 70 per cent recommended sex education in appropriate and acceptable manner for better management of their sexual problems.

In the study conducted by Selvan, Ross and Parker (2004), questions were asked to assess how comfortable students were in discussing sex-related and HIV-related issues, the major difference between boys and girls was in their comfort level talking about sex with their friends. Statistically significant sex differences were reported in discussing sex related issues with parents, other family members and friends. About 30 per cent males were comfortable in discussing sex-related issues "a lot" with their friends whereas it was only 16 per cent girls.
The community based study conducted by Ali et al (2004) aimed at the understanding of puberty and related health problems among female adolescents found that majority of the participants received information related to sexuality from their mothers. Most of the participants did not know about self-breast examination. Cable and Internet were cited as a major source of puberty and sexual health related information.

Abraham (2005) argues that sexuality awareness among the youth is limited and the sources that address young peoples’ needs are few as well. Sexuality awareness among the boys is mediated primarily through peers, pornography and various erotic materials, to which they have relatively freer access. Girls, in contrast, face normative and material constraints in accessing information on sex. Boys are generally more aware of their own body and are more informed about a woman’s body as well. They gain this knowledge by self-exploration, peer discussions and erotic and pornographic materials especially movies. Their understanding about female body is largely derived from pornographic movies.

Of all the girls who participated in the study, almost half of them were not told anything about menstruation prior to its onset. Nearly all the boys know what a condom or nirodh is and almost the same number knows that condoms could be procured from chemists. Knowledge of condoms among younger girls is extremely low as compared to older girls. Study shows that boys are more informed about sex than girls and the chief source of their information is pornographic materials. Boys, from early adolescence, access pornographic sources freely in order to acquire the information. Pornography first becomes pedagogy and then a practice.
The findings of the study by Rangaiyan and Verma (2005) show that a reasonable proportion of young people in India are indulging in risk-taking sexual activity and would, therefore, benefit from addressing reproductive health needs. 27.5 per cent of the respondents in the study believed that pregnancy can be prevented by washing genitals after sexual intercourse. Only few were aware that pregnancy can be prevented by contraceptives. The misconception regarding the transmission of STDs was found to be very high. A majority of the respondents had correct knowledge regarding mode of HIV/AIDS transmission. It was found that more than half of the respondents were sexual abstainers, 31.8 per cent had only non-coital experience, and 14.7 per cent had coital experience. Sexuality knowledge is negatively related to sexual activity. That is it was found that higher the knowledge acquisition, higher would be the responsible sexual activity.

2.8.2. Studies on self esteem and body image of adolescents

Lesley and Imms (1999) found that there is a significant correlation between self esteem, locus of control and coping styles. Those with high self esteem and internal locus of control scores and were high users of the productive “problem solving” coping styles, showed significantly more positive attitudes toward school and positive perception of their academic performance. There were no gender differences in scores for tests of self esteem, locus of control or coping styles.
Hardin (2002) observes that self-esteem plays an apparent role in the loss of virginity among adolescents. Self-esteem had opposite effects on young girls and young boys. Young girls with high self-esteem were less likely to engage in early sexual activity, while young boys with high self-esteem were more likely to report being sexually active. They concluded that high self-esteem had the opposite influence on girls, who reportedly were three times more likely to remain virgins than girls with low self-esteem.

Ore et al. (2002) work had the following results; the average of the self-esteem scores for girls was significantly lower than the average for boys. There was an interaction effect between gender and coital history for self-esteem. Girls who reported having had intercourse had lower self-esteem scores than those who did not.

Ethier et al. (2003.), in their study has attempted to clarify the relationship between psychological factors and sexual behaviour. Adolescents who had lower self-esteem at baseline reported initiating sex earlier and having had risky partners. Alternatively, adolescents with more emotional distress at baseline were less likely to have had a previous STD, had more partners per year of sexual activity and a history of risky partners. Self-esteem influenced subsequent unprotected sex, and emotional distress influenced subsequent multiple partners. This model suggests that self-esteem and emotional distress have contrasting relationships with sexual behaviour and demonstrates the importance of the temporal nature of these variables.
Kaur et al. (2003), examined the relationship between body image and depression among, 150 male and 150 female adolescents. The findings reveal that male and female adolescents differed significantly on measure of depression with males scoring higher than females. On the measure of body image, significant differences were observed between two groups and females were higher than males. It was also found that body images play important role in the depression of adolescents.

2.8.3. Studies of adolescent girls’ knowledge regarding menarche and reproductive health

Basanayake (1985) observes that there are many traditional practices and myths related to menarche among the girls whom he has studied and they are puzzled and are unable to differentiate between myth and reality. For majority of the respondents, peers are the only people with whom they discuss these topics.

Geetha et al (1997) who studied the general and reproductive health of adolescent girls in rural North Arcot District of Tamil Nadu have reported very low levels of knowledge, especially of reproductive health, among majority of the adolescent girls who have participated in the study.

Padmadas et al. (1999), in their study, 'Age at menarche among Indian women', found that majority of the girls have poor knowledge regarding menarche and had a lot of misconceptions related to it. Menarche is considered as the initiation of uterine bleeding and is often marked as the potential entry into sexual relationship and reproduction by the respondents.
Oomman (2000), in his study reports that knowledge of genitals is limited, especially among girls. The presence of clitoris is not known to them and some of the younger girls could not clearly say whether the urinary and vaginal passages are common. Knowing the external genitals is a taboo for girls even when lack of awareness may compromise sexual health. It cultivates a “culture of silence” around woman’s problems such as white discharges, discomforts and a range of minor or major infections throughout their lives.

In Gupta and Gupta’s study (2001), on Adolescents and Menstruation, it was found that majority of the adolescent girls did not know about menstruation phenomenon before they had actually experienced it. It was found that mothers hardly dealt with the etiology and significance of menses, what causes menstrual bleeding etc. This was the case of mothers from all classes- the elite, educated class and the middle class with average education. It is significant to note that there was no discussion on the relationship between menarche and reproduction. There is a serious lack of knowledge among the adolescents regarding some of the vital functions and processes of their bodies.

Ranganathan (2003) studied the perceptions and descriptions about the experience of puberty, majority of the girls had negative associations and memories of puberty. The respondents who knew about menstruation discovered these phenomena either through friends or television or from women of the family whom they are close to. Most of the women focus on height and weight gain, development of adult like figures, broadening their hips and breast development. Another source of the tension and anxiety for many girls was their skin color, texture and the emergence of pimples. When the girls were asked
to describe their sexuality they initially drew blank not knowing how to respond. It was only after being probed about their feelings towards the opposite sex and their concern about their appearance that they began to share their feelings and experiences. All of them admitted to having strong personal desires to look attractive. They also said that they felt attracted towards the boys and enjoyed being in their company. They also admitted to harboring secret dreams about marriage, sex and family life.

A study, by Jamshedji et al. (2003) titled “Coping with Sexuality during Adolescence”, found that more than 75 per cent of the respondents who have participated in the study have faced sexual harassment such as eve teasing while in public places.

Reddy et al. (2005) in their study of the adolescent girls found that only 13.8 per cent of the girls had prior knowledge of menses. Consequently, nine out of every ten girls were not at all aware of what happened on the attainment of menstruation. Knowledge about the process of menstruation was observed in only a quarter of the menarche girls. Mother was the first source of information about menses for majority of the girls. For one-tenth of the adolescents peers were the first source of information followed by sister/sister-in–law in case of one-tenth of the respondents. Books and grandmothers also served as the source of information. When enquired “how did you feel about first menstrual flow”, Majority of the girls stated being frightened. The study reveals that only one in every seven of the adolescent menstrual girls has knowledge of menses prior to its onset. Another observation is that knowledge of the process of menstruation exists in only a quarter of the girls, although majority of them were studying in tenth standard. Further, it was found that the adolescent girls have a desire to remain slim from the time of onset of
the menarche till marriage and hence exercise dietary control, ignoring the adverse effects on their present and future health status.

Kamalam and Rajalakshmi (2005) in the study made an attempt to find out the awareness about reproductive health issues among girl students undergoing post-graduate and professional courses in some colleges in Trivandrum city, Kerala, by using a structured questionnaire. The study found that majority of the students have no idea regarding menstruation, its onset, the reasons for irregular periods, and what to do for discomfort during the period’s. The majority of the students had unfavourable attitudes towards premarital sex. Only some of the post graduates and professional students were not aware about HIV/AIDS and STD, its causes and consequences, as well as precautions to be taken against getting infected from such diseases.

2.8.4. Intervention studies in the field of sex and sexuality

Moses and Praveena (1983), in their study, observe that Books formed the major source of sex information for the group exposed to sex education as well as the unexposed group; this was followed by friends and films in general. A majority of the boys and girls in both the groups felt that sex education was essential with more respondents from the unexposed group than the exposed group expressing usefulness in terms of meeting present and future needs. The sources from which the adolescents received sex information regarding sex were largely impersonal such as films. Knowledge level and attitude towards sex was higher in the respondents from exposed group as against their unexposed counterparts though in the former group, more boys than girls had correct knowledge.
Evaluation of a sexual education intervention among Swedish high school students, conducted by Larsson et al. (1999) to evaluate the effectiveness of an intervention aimed at improving knowledge of, attitudes to, and practices regarding healthy sexual practices, positive self-body image etc. found that, majority had used contraceptives, mostly condoms even at first intercourse. The students already had good knowledge of condoms with no change after the intervention, but attitudes improved and condom use increased. The most important source of information about condoms changed from "friends" to "school" after the intervention.

Shetty and Kowli’s study on Family Life education for Non-School going adolescents: An experiment in urban slum (2001), was undertaken with the aim of developing an IEC package and assessing its effectiveness in improving the knowledge and attitude regarding sex education, STDs and AIDS and nutrition of non-school going adolescent girls. The methodology for imparting education included lectures, games, group discussions, role-plays; case situation analysis and question answer sessions. A significant change in knowledge and attitude of the participants was observed in all the aspects of family Life Education. 51.11 per cent in the pre-test as compared to 18.75 per cent in the post-test replied incorrectly the age of attaining puberty. The percentage of participants who answered correctly in the post test increased by 52.27 per cent.

Regarding the physical changes occurring during adolescence 69.63 per cent of the participants in the pre-test as compared to 5.36 per cent in the post test responded as “don’t know”. The physical changes in girls mentioned in the post-test are development of breasts, growth of auxiliary hair, and menstruation. Many of the participants in the post
test compared to the pre-test referred to emotional changes occurring during adolescence. 88.39 per cent of the participants in the post-test compared to 37.04 per cent in the pre-test knew that there were different openings for urine and menstruation. Knowledge amongst the participants regarding the conception, site of development of fetus, duration of pregnancy, signs of pregnancy improved significantly after the post test.

Saroj et al. (2005) in 'The effectiveness of a reproductive health education intervention program in improving the knowledge of the adolescent girls' gave a reproductive health education package prepared after the consultation with parents, teachers, and adolescents, to randomly sampled classes of two senior secondary schools and one school was selected as control. Teachers, parents and the adolescent students overwhelmingly favoured the reproductive health education program. 5 per cent of the respondents reported that their class mates have sexual relations 13 per cent of the girls approved premarital sexual relations. Reproductive health knowledge scores improved after the intervention. It was found that peer education strategy was more effective in improving reproductive health knowledge of adolescent girls.

The conceptual and empirical literature pertaining to adolescent sexuality presented above has come up with similar findings all over the country. All the studies, irrespective of regional differences have found that adolescents in the country especially female adolescents lack adequate knowledge regarding the intricacies of growing up such as puberty, menarche, sexual behaviours, practices, STD’S etc. Even in issues like sexual abuse; our adolescents are poorly informed even to recognize an abuse or to handle it. The studies also highlight the existence of lots of misconceptions related to sex and sexuality.
among adolescent girls. An extensive review of the empirical literature related to sex and sexuality among adolescent shows that there is scope for further research especially Intervention research on area such as knowledge, attitude, self esteem and body image perceptions among adolescents.