CHAPTER – I

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1.1 Introduction

Sex education is a process of acquiring knowledge and skills, and forming attitudes, beliefs and values with regard to human sexuality. It is not limited to only a single branch of knowledge. This education focuses on a number of significant sexual matters that are offered with especially designed courses and programs. Sex education covers the education of relationships, sexual abstinence at a certain level and teaching to practice safe sex to the level of children who are thought to be sexually active. Therefore, its claim for being appropriate and guiding holds strong base.

Adolescence is one of the most crucial periods in the life of an individual, because between the ages of 10 – 19 years, many key biological, social, economical, demographic and cultural events occur that set the stage for adult life. Adolescence is the invention of technological, industrial society that is marked by a discontinuity between childhood and adulthood (Saraswati, 1999). Adolescence is a period of life that has come to be regarded as a period of intense sexual interest (Ott, Shew, Ofner, Tu & Fortenberry (2008); Ponzetti, Selman, Munro, Esmail & Adams (2009)).

Adolescence is a period for experiencing tremendous challenges in all aspects of development, especially sexuality development. Almost all of the challenges during this period are associated with puberty. These include getting comfortable with the changes of the shape of body, adjustment of thought and feeling around these changes and coping with others’ responses to their maturing body (Achibal et al., 2006). Furthermore, during this transition from childhood to adulthood, adolescents need to develop capacity for self-regulation and taking responsibility for their behaviour, making wise choice on their life’s decision and developed capacity to maintain intimate relationship for adulthood (Zimmer-Gembeck & Collins, 2006).

According to WHO estimates, one in every five people in the world is an adolescent (between 10 and 19 years of age). With an estimated 1.2 billion adolescents a live today, the world has the largest adolescent population in history. Of these, about 85% live in developing countries. Moreover, more than half of the world's
population is below the age of 25, and four out of five young people live in developed countries. Many adolescents die prematurely every year, an estimated 1.7 million young men and women between ages of 10 and 19 lose their lives to accidents, violence, pregnancy related complications and other illnesses that are either preventable or treatable. As a result, adolescent reproductive health (RH) is an increasingly important component of global health. The National Population Education Programme (2002) had a special focus on Adolescent Sexual and Reproductive Health (ARSH). In 2006 the controversial Adolescent Education Programme (AEP) in collaboration with the National AIDS Control Organisation (NACO) and UNICEF was launched. Just like the poor of the population control drives were represented as a teeming mass of irresponsible people who were the root cause of India’s under development, the adolescents in these educational materials too were represented as irresponsible, abusing drugs, sexually and morally depraved, and generally the cause of disrupting the moral and developmental values of the nation.

1.2 Emergence of the Problem

With emerging westernization, there is growing concern about sexual promiscuity and changing attitudes towards sexuality. Developing countries are now confronting what industrialized countries have faced over the last century: the emergence of “adolescence” and the social changes around sexuality that came with it.

In modern era information technology has developed rapidly. Children can easily obtain different kinds of information through different channels, for example, from the mass media and the Internet. Such information can include pornographic materials and information propagating unhealthy ideas about sex. Presently, schools lack a formal and systematic curriculum of sex education.

Violence against women and girls is a growing global phenomena and India is no exception. Sexual problems of children and teenagers have become a worry for society. These problems include indulgence in pornography, premarital sex, unwed pregnancy, casual sex, prostitution, sexual harassment / abuse and other sexual crimes. If schools carry out formal sex education, students can be provided with proper knowledge and values about sex. This will help preventing the above problems.
Therefore, we ask the government to list sex education as a compulsory subject in school. Sex education as a compulsory subject in school enables students to acquire correct ideas about sex in a guaranteed time slot, and it provides proper channels for students to ask questions and discuss topics related to sex. Listing sex education as a compulsory subject makes sure that children of this generation will have the opportunity to receive foundational sex education.

1.3 Background Study

Adolescents in India face an extraordinary lack of information about sexuality. As young people stand on the threshold of adulthood, they need authentic knowledge that helps them to understand the process of growing up, with particular reference to their sexual reproductive health needs. It is important to equip them to assist them in coping with the needs during the transitional phase from adolescence to adulthood. Unfortunately, sexuality education is denied to adolescents because the subject is considered to be culturally sensitive and controversial for discussion in the classrooms of Indian schools. Sex education are to help children understand the body structures of men and women and acquire the knowledge about birth. Teach children to establish and accept the role and responsibility of their own gender by acquiring the knowledge of sex. Understanding the differences and similarities between two genders in terms of body and mind will set up foundation for the future development in their acquaintance with friends and lovers and their interpersonal relationship. Sex education is a kind of holistic education. It teaches an individual about self-acceptance and the attitude and skills of inter relationship. It also helps an individual to cultivate a sense of responsibility towards others as well as oneself.

Accurate sexual knowledge is important for healthy sexuality development. Sexual knowledge serve as a foundation to prepare adolescents to understand their sexuality development, that later will influence their emotional and psychological well being (Lou & Chen, 2009). Researches indicated that adolescents with high levels of sexual knowledge are less likely to involve in risky sexual behavior (Jemmott & Jemmott, 1990; Ryan et al., 2007) and effective comprehensive sex education have reduce sexual risky behaviour (Bearinger, Sieving et al., 2007; Montessoro & Blixen,
Adolescents’ responses to their sexuality development are deeply affected by social and cultural context in which they live. Before attending any formal sex education, adolescents are exposed to the normative belief, value and behaviour on sexuality (Shtarkshall, et al., 2007). The sexual socialization takes place since an individual was born. For example, how parents respond to infant maturation will influence infant awareness on sexuality. Sexual socialization also takes place outside home as child or adolescents participate in community activities such as religion activities and consume mass media.

Sexuality does not only focus on sexual behavior but also covers reproduction health, sexual attitude, sexual health care and relationship which are consistent with cultural, moral and religion value (Robinson et al., 2002). However, people choose not to discuss sexual development in detail. Consistently, most of the parents will not discuss sex related topics with their child (Low et al., 2007; Mohammadi, et al., 2006). Furthermore, sex education is not a comprehensive subject in school, and it focuses on the topic related to anatomy, reproduction, contraception and sexually transmitted disease which are integrated in science subjects for lower secondary level students. As a result, this nonverbal underlying message may communicate to adolescents that sexuality is a sinful subject and inappropriate topic to discuss.

Even though this topic is perceive as taboo to discuss, adolescents are expose to many other sources of information related to sexuality. For example, with the advancement and development of technology, mass media gradually become one of the important sources on sex related information for adolescents (Davis et al., 1998; Nonoyama et al., 2005). In addition, the rapid growth of the pornography facilitates adolescents’ exposure to sexually explicit materials either intentionally or accidentally (Flood, 2007). This side of world portray that sex is a pleasure without any responsibility. This sexual value and belief contradict with local cultural norm. Adolescents who are curious on sexual topic may adopt the value and rely on this kind of sources to fulfil their curiosity and avoid the embarrassment of discussing the topic with adult. Yet, information from these sources may not be accurate and may mislead adolescents’ understanding concerning an appropriate sexuality and reproduction
health. There are limited sources on accurate sexual knowledge to support a healthy sexual development.

A gap between the amount which is invested in developing a curriculum and the actual education that is imparted to our students. Until now, most of the sex education has been scientific in nature, i.e., discussed in the biological context by teachers of science. However, for sex education to have a realistic impact, it is important that the instruction be imparted in a straightforward, easy to grasp manner, while keeping the cultural issues in mind.

A study was conducted by Tewari (1997) to identify the sexual knowledge, attitude and behavior of the school and college students aged between 15–24 years living in slums of Delhi and Lucknow. A population of 3300 respondents were chosen. A self administered questionnaire was used to collect the data. Major findings of the study were as follows:

- Majority of respondents have premarital sex at 16 – 18 years.
- The average age was 17.4 years for boys 18.2 for girls.
- About one third of respondents were found lacking awareness regarding safe sexual relation.
- Homosexuality is declared by 5% respondents.
- Majority of respondents, i.e. 86.4% did not have correct knowledge regarding sex and 70% did not have correct knowledge regarding contraceptives.

A. A. El-Sadek, M. Abdel-Hakiim, Kh. Kasim and A. S. Abd-Elhady conducted a study to identify knowledge and attitude of adolescent girls toward reproductive health among secondary school in Cairo, Egypt. The major findings were as follows:

- The student have accepted score about pre-marriage period (6.45 / 10) with no statistically significant differences between those studying science and those of literature department.
- Premarital examination and counseling achieved the highest knowledge score; it was known by 93.6%.
- Adolescents have very poor knowledge regarding marriage, conception and family
planning.

- The achieved score was 3.59 / 10 with no statistically significant differences between both departments.
- Breast feeding scored the highest score among elements of this component (known by 99.7%) of the studied girls.
- Immunization during pregnancy and knowing types of family planning scored the least scores among this component (19.7% and 31.8 respectively).
- The total knowledge score achieved by the adolescents was very poor (12.47/24) with no statistically significant difference between both departments.
- The study revealed absence of family role as a source of information in more than half of the studied sample.
- The respondents show positive attitude towards the researched items of reproductive health (84.1% show positive attitude and 15.3% show neutral attitude).

A study conducted by T. R. Jordan, J. H. Price and S. M. Fitzgerald (2000) to investigate the communication between rural parents and their teenage children about sexual issues. Participants were 374 parents of students in grades 7–12 in a rural county in northwest Ohio. The major findings were as follows:

- Parents thought that the family should play the prominent role in sexuality education with supplemental help from the school.
- Most of the rural, religious parents supported the inclusion in formal sex education of information on contraceptive methods.
- Over 50% of parents claimed that the receipt of a regular newsletter regarding teenage issues could help them to communicate with their teenagers.

These findings reveal that school health educators may have an important part to play in helping parents take the lead role in their children's sexuality education.

B. T. Coyne and V. J. Schoenbach (2000) conducted a study to investigate the attitudes and beliefs of clergy from African-American churches towards sexuality education and the provision of sexuality education in their churches in the south eastern United States. The respondents’ highest priority issues were drugs, violence, HIV/AIDS, pregnancy and alcohol.
• Many (76%) had discussed one or more of these issues in church. All respondents wanted additional health seminars for their adolescents, though some clergy (30%) excluded some sexual topics (i.e., anal sex, bisexuality, homosexuality, masturbation, oral sex).
• Only 6% would make condoms available in their churches, but all would allow contraceptive education.

C. DiIorio, K. Resnicow, W. N. Dudley, S. Thomas, W. D. Terry, F. V. M. Deborah, B. Manteuffel and J. Lipana (2000) conducted a study to examines the role of self-efficacy and outcome expectancies in explaining sex-based communication in the United States. The following conclusions were drawn:
• mothers who expressed higher levels of self-efficacy and more favorable outcomes associated with talking to their children about sex were more likely to do so.
• In a regression analysis, the mother's degree of efficacy beliefs, along with her expected outcomes associated with talking about sex, the importance of religious beliefs to her, and the age and sex of her adolescents were important factors associated with talking with them about sex.

L. Fernández, L. Bustos, L. González, D. Palma, J. Villagrán and S. Muñoz (2000) conducted a study to compare the knowledge about sexuality among adolescents coming from private and public schools, with and without sexual education programs. The major findings were:
• Adolescents coming from private schools had a better performance than those coming from public schools.
• Sexual attitudes were not influenced by sexual education programs. Adolescents coming from private schools have a better sexual knowledge level and more conservative attitudes towards sexuality. Overall knowledge is inadequate albeit overvalued.
• These teenagers are high risk group for unwanted pregnancies and sexually transmitted diseases and require efficient sexual education programs.

A. Kapamadzija, T. Vejnovic, A. N. Mikic, J. Vukelic, V. Kopitovic and A.
Bjelica conducted a follow-up study from 2000–2008 to compare adolescents’ sexual knowledge, attitudes and practice in North Serbia presently and eight years ago with the aim of establishing the progress in education and plan further actions for improving reproductive health of our adolescents. The major findings are:

- Almost half (44%) of the high school adolescents are sexually active, the mean age of first intercourse being 16 years.
- Only 57.3% of adolescents use contraception regularly, 40.7% use it sometimes and 2% have never used it.
- Majority (58.1%) of adolescents used condom and one quarter (26.1%) used a combination of several means of contraception.
- There is not enough knowledge about significant STIs (Chlamydia, HPV, herpes).
- Half of adolescents want more education on sexuality, STIs and contraception, in school from experts.

There are actions being conducted in Serbia with the aim of improvement of reproductive health of young people, but organized.

N. H. Golden, W. M. Seigel, M. Fisher, M. Schneider, E. Quijano, A. Suss, R. Bergeson, M. Seitz and D. Saunders (2001) conducted a study to assess the knowledge, attitudes, and opinions of practicing pediatricians regarding the use of EC in adolescents. The major findings were:

- A minority of respondents (17%) believed that adolescents should have EC available at home to use if necessary and only 19.6% believed that EC should be available without a prescription.
- The vast majority (87.5%) were interested in learning more about EC.
- Despite the safety and efficacy of EC, the low rate of use is of concern.
- Pediatricians are being confronted with the decision to prescribe EC but do not feel comfortable prescribing it because of inadequate training in its use.
- Practicing pediatricians are aware of their lack of experience and are interested in improving their knowledge base.

Dr. B. A. Omoteso conducted a study to investigate the knowledge of and the disposition of adolescents to sex education in a local government area in Nigeria. It
also examined the influence of sex and religion on the knowledge and attitude of the adolescents. The major findings were:

- The knowledge of the adolescents about sex education was inadequate.
- 40% did not know that sex education educates one about the function of sex.
- The adolescents were favourably disposed to sex education being introduced into schools (98%) and 76% of the adolescents wanted good books on sex education in their libraries.
- There were also significant sex differences in the knowledge of and attitude of the adolescents to sex education.
- Religion was found to have no significant influence on the knowledge and attitude of the adolescents.

A. Sinhababu and B. S. Mahapatra (2004) conducted a survey entitled “The level of awareness about the consequences of sex act among adolescent girls in Bankura, West Bengal”. The objectives were (i) to find out the age at awareness of late adolescent girls about the risk of pregnancy and diseases associated with sex act, (ii) to know their source of knowledge and (iii) to ascertain their views and opinion towards getting reliable knowledge in this regard. The major findings were:

- A total of 348 girl students aged 18–21 years were studied. Majority of them (76.7%) started menstruation sometime between 12–14 years of age.
- The median age of menarche was 13 years. As for the risks from sex act, most of the girls (65.9%) became aware, for the first time, of the risk of pregnancy following sex act at the age of 16–18 years.
- The median age of such awareness was 17 years which happened to be 4 years higher than the median age of menarche.
- The earliest age of awareness about the risk of disease as a consequence of sex act was seen in slightly higher age.
- 62.2% of the girls became aware of this risk for the first time at the age of 17–19 years with the median age being 18 years.
- The difference from the median age of menarche in this case was 5 years.
According to SIECUS (2004), sexual health education has four main goals:

- To provide accurate information about human sexuality.
- To provide an opportunity for young people to develop and understanding their values, attitudes and insights about sexuality.
- To help young people develop relationships including addressing abstinence, pressures to become prematurely involved in sexual intercourse and a use of contraception and other sexual health measures.

H. L. Kang (2005) conducted a study entitled “The influence of sexuality education on the sexual knowledge and attitudes of adolescents in Busan, Korea”. The major findings are:

- The effect of the sexuality education programme obviously increased the sexual knowledge adolescents and brought about a positive change in their sexual attitudes.
- It is therefore recommended that the sexuality education programme for adolescents with its comprehensive content should be presented in an interactive style to learners by a skilful sexuality education educator.

The recommendations of this study focus on adolescents as the object of education.

A. M. Alquaiz, M. A. Almuneef and H. R. Minhas (2009) conducted a study to investigate the knowledge and sources of knowledge among Saudi female adolescent students, attending public and private schools in the city of Riyadh with regard to sexuality and reproductive health. The major findings are:

- Forty two percent of the participants reported that they discussed sexual matters with their friends.
- Only 15.8% discussed these matters with their parents (mothers). Interestingly, 17.3% discussed sexual matters with the domestic helper.
- Most (61%) reported that their teachers had negative attitudes toward questions related to sexual issues. Only 33.3%, 37.9% and 14.5% knew that syphilis, gonorrhea, and hepatitis B, are sexually transmitted diseases.
• No significant differences were found between students in private schools and public schools.

N. Y. Siti, F. P. Wong, B. Rozumah, M. Mariani, J. Rumaya and A. T. Mansor (2010) conducted a study about factors related to sexual knowledge among Malaysian adolescents. The objectives of this study were (i) to determine the level of sexual knowledge among adolescents in Malaysia, (ii) to determine differences in sexual knowledge by gender and race, (iii) to investigate the association of age, personal belief and attitude toward sex related source with sexual knowledge and (iv) to determine unique predictors for sexual knowledge. The major findings were:
• Sexual knowledge among adolescents is relatively low.
• Given the reason that the items were derived from lower secondary school science subject and physical health education subject, about 76% of respondents are between the ages of 15 to 18 years.
• This group of students has been attending the related subjects in school.
• It reveals that respondents might have difficulties in comprehending the information taught at school.
• Secondly, respondents may forget the sexual knowledge they learned before.
• The low score in sexual knowledge may imply that in general the respondents in the study need continual exposure to related curriculum in order for them to retain accurate sexual knowledge.

P. D. Joshi (2010) studies Indian adolescent sexuality in terms of sexual knowledge, attitudes and behaviors among urban youth. The major findings were:
• Sexual knowledge about physiology of sexual response, conception and pregnancy was less than other areas such as masturbation and contraception.
• Peers, books, and magazines were the most frequently used source of sex information.
• Boys reported more liberal attitudes and more frequent sexual behaviors than girls.

Implications of the results in terms of access to accurate information, communication about sexual issues and health policy reforms were discussed. The
major findings were:

- Almost 90% of students believed it important to have sex education as part of school curriculum;
- Over 60% reported prior exposure to sex education in school
- Only 45% were satisfied they had good access to advice about contraception and sexual health, particularly, females reported more limited access.

S. S. Avachat, D. B. Phalke et al. (2011). conducted a study entitled “Impact of sex education on knowledge and attitude of adolescent school children of Loni village”. The objectives were: (i) reproductive capability is now established at earlier age, (ii) but the subject of adolescent sexuality is taboo in most societies. There is widespread ignorance about risks of unprotected sex, problems among adolescents and (iii) unfortunately need of sex education is not perceived and fulfilled in India especially in rural areas. The major findings were:

- The felt need of sex education increased considerably and the knowledge regarding contraceptives increased from manifolds after the intervention.
- There was significant increase in knowledge about menstrual hygiene, sexually transmitted diseases, etc, after sex education workshop.

G. B. Slap, L. Lot, B. Huang, C. A Daniym, T. M. Zink and P. A. Succop conducted a study to determine whether family structure (polygamous or monogamous) is associated with sexual activity among school students in Nigeria. The results were that overall 909 students (34%) reported ever having had sexual intercourse, and 1119 (41%) reported a polygamous family structure. Sexual activity was more common among students from polygamous families (42% of students) than monogamous families (28%) (χ² = 64.23; P < 0.0001). Variables independently associated with sexual activity were male sex (adjusted odds ratio 2.52 (95% confidence interval 2.05 to 3.12)), older age (1.62 (1.24 to 2.14)), lower sense of connectedness with parents (1.87 (1.48 to 2.38)), having a dead parent (1.59 (1.27 to 2.00)), family polygamy (1.58 (1.29 to 1.92)), lower sense of connectedness with school (1.25 (1.09 to 1.44)), and lower educational level of parents (1.14 (1.05 to
Multistep logistic regression analysis showed that the effect of polygamy on sexual activity was reduced by 27% by whether students were married and 22% by a history of forced sex.

S. Prateek, M. D. Bobhate, R. Saurabh and M. D. Shrivastava (2011) conducted a study about knowledge of reproductive health among female adolescents and to assess their treatment seeking behavior regarding reproductive health problems in an urban slum of Mumbai. The major findings were:

- Seventy nine (32.8%) subjects had unsatisfactory menstrual hygienic practices.
- Two hundred twelve (88%) women were aware about availability of ANC services.
- Sixty six percent of women had correct knowledge of modes of transmission of HIV while only 18.7% knew about safe sexual practices.
- Education status and early adolescents age group (10–14 years) was found to be significantly associated with knowledge of adolescents regarding menstruation.
- About one third of respondents were found lacking awareness regarding safe sexual relation.
- Homosexuality is declared by 5% respondents.
- Majority of respondents 86.4% did not have correct knowledge regarding sex and 70% did not have correct knowledge regarding contraceptives.

C. Lou, Y. Cheng, E. Gao, X. Zuo; R. Mark, B. Emerson and L. S. Zabin, (2011) conducted a study about media’s contribution to sexual knowledge, attitudes, and behaviors for adolescents and young adults in three Asian cities. Evidence in western countries indicates that the media have associations with adolescents’ and young people’s sexual behavior that may be as important as family, school, and peers. In this new study of Asian adolescents and young adults in the three cities of Hanoi, Shanghai, and Taipei, the associations between exposure to sexual content in the media and adolescents’ and young adults’ sex-related knowledge, attitudes and behaviors are explored in societies with traditional Confucian culture, but at different stages in the process of modernization. The major findings were:

- The contextual factors, including family, peer, school, and media, explained 30% – 50% of the variance in sex-related knowledge.
• 8%–22% of the variance in PSP, and 32%–41% of the variance in sex-related behaviors.

• Media variables explained 13%–24% of the variance in sexual knowledge, 3%–13% in PSP.

• 3%–13% in sex-related behaviors, which was comparable with that of family, peer, and school variables.

• These associations differed by city and gender.

A. A. Talpur and A. R. Khowaja conducted a study to assess attitudes and awareness regarding sexual health education and services among young individuals in Pakistan. The major findings were:

• Of the 150 participants, 94 (63%) were males and 56 (37%) were females.

• A quarter of them (n = 38; 25.3%) said sexual health services were available too far away from their area.

• Besides, they also found the staff to be ‘not competent.’ Almost one-third (n = 49; 32.7%) reported of not having matching gender choice (male or female) of professionals with whom they could feel comfortable sharing their sexual health concerns.

• Majority of the participants (n=101; 67.3%) considered trained health professionals as the primary source of sexual health education, whereas, 90 (60%), 75 (50%), and 59 (39.3%) also reported to have secondary sources, including internet, parents and telephone helpline respectively.

• Sexual health education and services for the young are barely enough or satisfactory in terms of quantity and quality in Pakistan, suggesting a case for having curriculum-based sex education implemented in academic institutions.

R. Thomas, H. McClamroch, B. Wise and B. Coles, to assess public views about the acceptability of and need for sexually transmitted disease (STD) and sexual health-related educational messaging in local campaigns. The major findings were:

• Each venue was acceptable to more than three-quarters of respondents (range: 79% for billboards to 95% for teaching STD prevention in high school).
• All message areas were acceptable to at least 85% of respondents (acceptability rating range: 85% to 97%).
• More than 70% agreed that there is a need for more open discussion about STDs. Bivariate analyses identified areas where messaging tailored to specific subgroups may be helpful (e.g., 26% of white people, 44% of African Americans and 45% of Hispanic people agreed with the statement, “I need ideas about how to talk to my partner about protection from STDs”).
• Little geographic variation was seen. Results of multivariable.
• modeling on opposition showed limited interaction effects.

1.4 Population of India

The population of India for last three years is mentioned below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>1.21 billion</td>
</tr>
<tr>
<td>2012</td>
<td>1.22 billion</td>
</tr>
<tr>
<td>2013</td>
<td>1.27 billion</td>
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</tbody>
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The genderwise population of 2013 is shown below:

Population of India in 2013

Total Male Population in India 655,875,026 (655.8 million)
Total Female Population in India 614,397,079 (614.4 million)

In 1951, Indian population was 36,10,88,000 and in 2013 we have reached to 1,21,01,93,422 (1.27 billion) from 2013 census, more than one sixth of the world population. India is the second most populous country in the world and growth rate is 1.58%. If we succeed in making the youth aware of the present situation, then we will be able to control the target of population growth. Not only by population education, but also it is important factor to introduce sex education through which adolescent get appropriate knowledge and attitude of sexual health.
1.5 Sex Education in Indian Society

In Indian society teaching our children about their sexuality can breakdown pre-existing notions of modesty and tear the moral fabric of our society. But with the alarming increase of different sex related problems it is essential that sex education should be given importance in schools.

The sexual development of a person is a process that comprises physical, psychological, emotional, social and cultural dimensions (WHO, 2002). It is also inextricably linked to the development of one’s identity and it unfolds within specific socio-economic and cultural contexts. The transmission of cultural values from one generation to the next forms a critical part of socialization; it includes values related to gender and sexuality. In many communities, young people are exposed to several sources of information and values (e.g. from parents, teachers, media and peers). These often present them with alternative or even conflicting values about gender, gender equality and sexuality. Furthermore, parents are often reluctant to engage in discussion of sexual matters with children because of cultural norms, their own ignorance or discomfort.

India Government try to introduce sex education in school as a compulsory subject but it is the most debated issues in educational system of India. Literally sex education is not a education for sex it simply teaches students about many subtle issue like sexual reproduction, sexual health, and many more hidden issues that parents most of the time feel uncomfortable to have a conversation with their children. In India sex education is quite different from in the west because it is legitimate here for student to have sex.

Now-a-days sex education is not just an option but also necessity for adolescent. Sex education is very important for teenagers as they are the ones who try to apply the concepts of human anatomy in their future.

The National Curriculum Framework for School Education–2000 (NCFSE) set up by the NCERT during the BJP rule at the centre strongly recommended introduction of sex education in schools in view of the problem we are facing in this phase of globalization, namely, teenage pregnancy, sex and drug related crimes and violence, etc. The Council of the Boards of Secondary Education prepared a package
on adolescent education and framed the new curriculum that would teach the students about human reproductive system and that includes chapters on understanding the special needs of the growing body, sexuality, vulnerability of adolescent girls, sexual abuse and violence and the way to combat it.

Effective sexuality education can provide young people with age-appropriate, culturally relevant and scientifically accurate information. It includes structured opportunities for young people to explore their attitudes and values, and to practice the decision-making and other life skills they will need to be able to make informed choices about their sexual lives.

The present study was undertaken to understand the knowledge and attitude of adolescent students towards sexuality education and its influence on academic achievement in secondary schools.

Many studies have focused on the correlates of adolescent sexual behavior in order to gain a better understanding of the factors that influence the initiation of sexual behaviors. For instance, Jerman and Constantine (2010) found that demographic variables in combination with parental comfort with sexual communication as well as the knowledge parents held about sexual health issues strongly predicted the number of topics discussed between parent and child. As parents continue to be the primary source of knowledge about healthy sexual behaviors for their adolescents (Moore, Raymond, Mittelstaedt & Tanner, 2002), the need remains to study the multiple variables related to sexual risk taking behaviors, especially since significant disparities in the amount of correct sexual knowledge held by parents were found (Gallegos, Villarruel & Gomez, 2007). Also, the timing of sexual communication seems to matter considerably, with more favorable outcomes for teenagers and their families when such communication has happened before the onset of first sexual activity (Clawson & Reese-Weber, 2003).

DeGaston et al. (1996), as well as Zimmer-Gembeck and Helfand (2008), found that males, in addition to being more sexually active, also hold more permissive sexual attitudes than females. Specifically, they found that females are more committed to abstinence and less likely to approve of premarital sex than are males. O'Donnell et al. (2005) also found that females were significantly more likely to see
premarital sex in a negative manner than did males. Recent research has rarely addressed specific age and racial / ethnic differences in terms of adolescent sexual attitudes by gender.

Sex education for the young has remained a limited and controversial issue in many countries across the world. According to the World Health Organisation bulletin 2007, many nations worldwide pledged that by 2007, more than 90% of young people in their countries would be able to correctly recognise the modes of HIV transmission and its prevention. Health education is a basic right of young people. It improves their knowledge about their bodies, gives them the opportunity to understand their responsibility in society, and helps them develop negotiating skills. However, sexual and reproductive health is entangled in complex societal stigmas, fears, misconceptions and misinformation.

1.6 Adolescents and Sex Education

Adolescents comprise 20% of the world’s total population. Out of 1.2 billion adolescents world-wide, about 85% live in developing countries. In India there are 190 million adolescents comprising 21% of India’s total population 2011 census.

In India there is no unlimited access to information on sexual topics. Since the government decided to ban sex education from public schools (cf. White, 2009) adolescents in India are dependent on external sources e.g. the internet to get information on sexual topics, but regarding those they cannot decide which information is right or wrong (Sarkar, 2008).

Although most adolescents, either in Germany or in India, “tend to be extremely unaware of their own bodies, their health, physical well being and sexuality” (R. C. Sharma, 2000) there are much higher deficits in sexual knowledge in India. Responsible sexual behavior, in the opinion of both boys and girls, is to stay away from the opposite sex and most traditional cultures allow few opportunities for interaction of girls with boys”. Sex education, which is sometimes called sexuality education or sex and relationships education the process of acquiring information and forming attitudes and beliefs about sex, sexual identity, relationships and intimacy. Sex education is also about developing young people's skills so that they make
informed choices about their behavior and feel confident and competent about acting on these choices. It is widely accepted that young people have a right to sex education. This is because it is a means by which they are helped to protect themselves against abuse, exploitation, unattended pregnancies, sexually transmitted diseases. It is also argued that providing sex education helps to meet young people’s rights to information about matters that affect them, their right to have their needs met and to help them enjoy their sexuality and the relationships that they form.

Providing sex education to the school children and youths is an emerging concept in national and international context. However, there is no single view about what constitutes life skills. It has been interpreted loosely by different people. In this regard UNICEF (2000) notes:

Several country reports pointed to topics in hygiene, nutrition, and disease prevention in the descriptions of Life Skills.

Others listed lessons in etiquette and good manners, and preserving the environment. Income generating skills such as animal breeding, organizing small businesses, and basket weaving were also mentioned.

UNICEF defines this last set of important incoming generating skills as ‘Livelihood’ Skills, and distinct from ‘Life Skills’. In contrast, Life Skills are psychosocial and interpersonal skills used in everyday interactions and are not specific to getting a job or earning income.

Hence, “the term ‘life skills’ tends to be assimilated with ‘competencies for life’ understood in a broader sense as ‘capabilities’ (i.e. knowledge, skills, values, attitudes, behaviours to face challenges of daily (private, professional and social) life and exceptional situations successfully and also to envisage a better future” (International Forum for Education, 2004). The categories of Life Skills indicate that they are not confined to any particular subject area. They are and should be common requirements across the curriculum areas. Integrating Life Skills approach into curricula involves interpersonal skills, coping and management skills, and skills for building self awareness, for critical and creative thinking, and for making decisions. Life skills approach is designed to support and build on existing knowledge, to promote positive attitudes and values, to develop specific skills and behaviours, as
well as to prevent or reduce risk behaviours (UNICEF, 2000). According to literature, if young people possess knowledge, information and motivation on safe sexual behaviour, they may change their attitudes and their behaviours (Synovitz et al., 2002; Thompson et al., 1999).

Sex education programmes are also used commonly in treatment interventions with both adult and adolescent sex offenders. Research suggests that lack of knowledge regarding sexual matters and deviant sexual beliefs may help explain sexually offending behaviour (Davis & Leitenberg, 1987). Timms and Goreczny (2002) included “lack of suitable sex education” (p. 6) in a list of common sex offender characteristics identified from their review of the existing literature. While various studies have found relatively low levels of sexual knowledge in adolescents (Hockenberry-Eaton & Richman, 1996; Mayock & Byrne, 2004), people with learning disabilities generally have been found to have even more limited knowledge (Galea, Butler, Iacono & Leighton, 2004).

1.7 Sex Education in School Curriculum

Providing sex education to the school children and youths is an emerging concept in national and international context.

According to literature, if young people possess knowledge, information and motivation on safe sexual behaviour, they may change their attitudes and their behaviours (Synovitz et al., 2002; Thompson et al., 1999).

Sex education programmes are also used commonly in treatment interventions with both adult and adolescent sex offenders. Research suggests that lack of knowledge regarding sexual matters and deviant sexual beliefs may help explain sexually offending behaviour (Davis & Leitenberg, 1987). Timms and Goreczny (2002) included “lack of suitable sex education” (p. 6) in a list of common sex offender characteristics identified from their review of the existing literature. While various studies have found relatively low levels of sexual knowledge in adolescents (Hockenberry-Eaton & Richman, 1996; Mayock & Byrne, 2004), people with learning disabilities generally have been found to have even more limited knowledge (Galea, Butler, Iacono & Leighton, 2004).
Post-globalisation India has seen the rise of several moral panics around questions of sexuality. These moral panics, whether they are about clothing or premarital sex or something else, reflect contemporary anxieties particularly about adolescent girls.

The “UNAIDS 2011 World Aids Day” report shows that the rate of HIV infection has fallen by 56% in India, the country still has the third largest number of people with HIV/AIDS in the world. The National AIDS Control Organization (NACO)'s 2011 annual report shows that young people in the age group of 15-24 account for 31% of the HIV/AIDS burden. An older study, UNICEF's 2003-08 analysis, found that only 20% of adolescent girls and 36% of adolescent boys in India had any knowledge of the disease. This is unfortunate for two reasons – first, because a large percentage of those infected with HIV in India are between the ages of 15 and 24 and second, 80% of HIV infection among Indians is transmitted through heterosexual contact, not through men having sex with men or through the use of contaminated needles, assist often popularly assumed. In several states in India, schools are not allowed to provide sex education. In 2009, a parliamentary committee in the Rajya Sabha wrote its report on the petition seeking a national debate on introduction of sex education in schools in response to the HRD Ministry's decision to provide sex education to students from Class VI in CBSE affiliated schools.

The J. S. Verma Committee (2013) set up after the Delhi gang rape, has suggested introduction of sex education in schools which should also cover different sexual orientations.

The panel, which submitted a 631 page report to the government yesterday, said a "scientific" approach could change prevailing perceptions and bring about a sense of responsibility while dealing with the opposite gender.

It recommended that sex education be made an integral part of "each Indian student's curriculum" and delivered by trained teachers assisted by counsellors trained in child psychology.
1.8 Introduction of Sex Education in School

Sex education is intended to decrease the hazards of negative results from sexual behavior such as unwanted or unplanned pregnancies and infection through sexually transmitted diseases. It also enhances the value of relations and increases teenager's capability to take decisions relating to their relation with people of the opposite gender. The general objective of sex education is to eradicate the lack of knowledge and wrong ideas about sex by creating right attitude among the adolescents. Commonly, schools and colleges are considered as the main hub for creating awareness on sex education.

Indians have a rather regressive attitude about sex education, be it in schools or our homes. Shockingly, for one of the most populated nation in the world sex and sex education is still a taboo. Imparting sex-education in the schools of India has remained a debatable issue. While many believe that it should be taken up in schools, others feel that being a delicate subject, parents should deal with their children in this regard. The children of the 21st Century are much better informed than what their parents were at the same age, courtesy – the mass media. An interesting debate has been going on in the country (India) for some time now on the proposal to introduce sex education in schools.

While dealing with a Public Interest Litigation filled by NGO, Nari Raksha Samiti in 2003, submitted that sex education in school curricula could play a role in checking the rise in rape cases and suggested making sex education in schools compulsory, the Supreme Court had given a judgment on 16 November, 2005 decided that sex education in schools cannot be brought under the ambit of fundamental rights by making it a part of the right to education.

1.9 Right to Sexual Education

Sexuality education was proposed a few years ago by the Central Government of India. It came under criticism with many State governments such as Gujarat, Madhya Pradesh, Maharashtra, Karnataka, Rajasthan banning sexuality education for adolescents or their refusal to incorporate it into the school curriculum, stating that the study material was too explicit or was against the social and moral values of the
country. A few educationists, medical personnel and other advocates of Sexuality Education representing reputed NGOs, such as the FPAI, IPPF, etc., have in subtle ways, introduced sexuality education, with considerable criticism to their efforts, under the title “Gender Education”, “Health Education”, “Life Education” or a broader term “Reproductive Rights”, which includes:

- The right to education and access in order to make reproductive choices free from coercion, discrimination and violence.
- The right to access quality reproductive health care.
- The right to receive education about contraception and sexually transmitted infections.
- The right to legal or safe abortion.
- The right to birth control.
- Freedom from coerced sterilization, abortion, and contraception,
- Protection from gender-based practices such as female genital cutting and male genital mutilation.
- The adolescents are quite inquisitive

Sexuality education programs have been found to have beneficial impact. Thakor and Pradeep (2000) found that the sex education program resulted in knowledge gain and desired change in attitudes. The need for sex education has been perceived by various NGOs as well as international organisations working in the field of human health and education. Majority of school teachers (73%) were found to be in favour of imparting sex education to school children.

The right to sexuality education is enshrined in the Indian constitution as well as the international covenants and agreements. Article 21 which deals with right to life or personal liberty and Article 21–A of the Constitution dealing with ‘free and compulsory’ education, as well as the Directive Principle of State Policy under Article 45 of the Constitution can be interpreted as covering the right to sexuality education. Furthermore, Article 51–A (k) imposes a ‘fundamental duty’ on parents to provide educational opportunities to their children in the age group of six to fourteen years, which can also be interpreted as including the opportunity to have sexuality education. Two case laws with regard to court judgments on sexuality education are worth
noting.

The Supreme Court of India which decided that sexuality education in schools cannot be brought under the ambit of fundamental rights by making it a part of the right to education, while dealing with a Public Interest Litigation, which had suggested making sexuality education in schools compulsory. The NGO, Nari Raksha Samiti, had submitted that sexuality education in school curricula could play a role in checking the rise of rape cases. Though agreeing with the suggestion, the bench said it cannot be given the status of a fundamental right on the same footing as the right to education itself.

1.10 Government Policy on Sexual Education

There is no Government policy specifically for adolescents. However the Draft National Youth Policy 2001, which provides a comprehensive overview of youth issues and concerns comes closest to a policy on adolescents. Adolescents account for one fifth of the world’s population and have been on an increasing trend. In India they account for 22.8% of the population (as on 1st March 2000, according to the Planning Commission’s Population projections). This implies that about 230 million Indians are adolescents in the age group of 10 to 19 years. This study through its findings would create the necessary awareness among adolescent student towards sexual behavior.

It will also equip the adolescents with some of the dangers involved in pre-marital sexual relation and therefore make them to manage their puberty with more caution. The findings of this study would be very useful to governmental ministries and agencies like Ministries of Health and Education; Non-Governmental Agencies in packaging effective and result oriented interventions on adolescents. Lastly, it will contribute positively to the expansion of knowledge in the area of adolescent sexual behaviour and also serve as an important reference tool for future researchers in the field.

1.11 NCF 2005 and Sex Education

The National Curriculum Framework (NCF) 2005, which stated that its key objective was to support youth to deal with their reproductive and sexual health concerns.
The Union Government had trouble in attaining national accord on sex education since secondary education was a state related subject matter.

Majority of the State Governments were unwilling to set up sex education in their curriculum and some of the states such as Madhya Pradesh and Maharashtra which introduced it, barred it later on. The Committee on petitions, which was chaired by Venkaiah Naidu M. P., intermingled with social groups to find out the best method to pass on adolescent education programme in CBSE allied educational institutions. The chairperson of the committee said "The purpose is to elicit the views of teachers, management, students, and also the general public. We as a committee cannot express our views because the committee is made by the Parliament only to collect views under study and to make a recommendation to Parliament. Then Parliament will discuss it and the government will formulate the future programme." The committee had decided to take on wider discussions with the full segment of people including well-known educationists, sociologists, sexologists, psychologists, religious leaders, trainers and parents for creating a national debate on the topic. The Indian society is made up of diverse culture and practices; hence the government must develop a widespread plan on sex education and take up a policy to address this issue.

Sexuality education has historically emerged out of a concern for population control. Nandini Manjrekar traces a history of sexuality education in the Nirantar Report on Sexuality Education for Young People. The concern for population control emerged in the 1950s with the launch of the family planning programme, since over-population was seen as economically unviable. In 1970, the Indian government decided to have a population education programme to address what they perceived as the population problem. In 1980 the National Population Education project was launched. The textbooks made during this time propagated the small family norm. They also placed the onus of under-development on the poor, illiterate, and mostly rural population whose sexual excesses were the direct cause of this under-development.

Over-population was seen as the root cause of poverty and socio-economic backwardness and the poor were targeted as the main subjects of reform. The textbooks were one of the ways in which these ideologies were effectively propagated.
Manjrekar argues that with the International Conference on Population and Development in 1994 a paradigm shift took place, from targeting the poor to targeting adolescents. With the awareness that there was a large population of young people, between the ages of 18 and 25 and that a large section was vulnerable to HIV and AIDS, the focus of Education Policies shifted to AIDS prevention for adolescents. By 2002, the National Population Education Programme had a special focus on Adolescent Sexual and Reproductive Health (ARSH). In 2006 the controversial Adolescent Education Programme (AEP) in collaboration with the National AIDS Control Organization (NACO) and UNICEF was launched. Just like the poor of the population control drives were represented as a teeming mass of irresponsible people who were the root cause of India’s underdevelopment, the adolescents in these educational materials too were represented as irresponsible, abusing drugs, sexually and morally depraved, and generally the cause of disrupting the moral and developmental values of the nation. In 2007, after a Rajya Sabha Committee Petition report, the AEP was banned in some States, terming the content too explicit and promoting western values. UNESCO understands the importance of education. With no AIDS vaccine, UNESCO recognizes that education is the only way to prevent the spread of the deadly virus. Fortunately, the United Nations Population Fund (UNFPA) has responded by reaffirming its support for comprehensive sexuality education. From 2015 onwards, the state boards — Secondary as well as Higher Secondary have proposed to impart lessons on sex education to students in their affiliated schools across Bengal.

UNFPA’s Executive Director, Thoraya Ahmed Obaid spoke out this week, saying that, “We are mandated by the Programme of Action of the International Conference on Population and Development (ICPD) to provide support to governments to protect and promote the rights of adolescents to reproductive health education, information and care.”

CHETANA, an NGO in Ahmedabad, Gujarat, started to run Sexuality Education Workshops in 1990 as a part of residential health camps for adolescents through an interactive manner using role plays, games, reading materials and small group discussions. The effort showed a positive change in many young people.
Institute of Health management Pachod, another NGO in Maharashtra, has developed a one-year training manual for adolescent girls. A school in Gujarat placed letterboxes and the students were told to drop their queries and their anonymity was assured. Later a trained counsellor answered their queries in pre-arranged group sessions. In roads can thus be made in culturally sensitive ways to address the reproductive health information needs of the adolescents. Their experiences can be sought to promote and protect the health of adolescents. But all these efforts are not adequate. Adolescents (people in the 10–19 age group) constitute nearly one-fifth of India’s population and yet their identity as a distinct demographic group has been ignored so far. It has been realised very recently that adolescents have been an ‘under-served population group’ and require urgent attention for meeting their health, needs. This group is particularly vulnerable because of rapid physical, psychological and social changes occurring during adolescence about which they lack proper and authentic knowledge, information that they should be receiving from schools, parents, service providers and peers.

Several studies have emphasised serious concerns relating to adolescents that need urgent attention. Increasing numbers of Adolescents are adopting irresponsible behaviour practising Substance-Abuse, and suffering from mental and emotional stress. They adopt risky behaviour primarily because they are not informed appropriately, lack the skills to manage their emotions and do not have youth-friendly services available to them.

In view of the above, the Ministry of Human Resource Development, Government of India has launched the Adolescence Education Programme (AEP). AEP’s school-based component meant for students of Secondary and Higher Secondary classes primarily “to enable the children to face challenges of life, completely safeguard themselves from risky situations and practice responsible behaviour for a healthy life”. The Ministry clarified that this was adolescence education and not sex education and the tool kit used was meant for teachers.

In 2010, the conceptual framework that guides the program design and implementation has been updated to recognize adolescents as a positive resource and focus on transformational potential of education in a rights framework. The training /
resource materials have been updated and address the themes of making healthy transitions to adulthood (being comfortable with changes during adolescence), understanding and challenging stereotypes and discrimination (including abuse and violation) related to gender and sexuality, prevention of HIV/AIDS and substance abuse. For better impact and quality, the program has been consolidated in 5 UNFPA priority states (rather than across 32 states in the country) to achieve a goal of one trained teacher for every 150 secondary school students.

In several states in India, schools are not allowed to provide sex education. In 2009, a parliamentary committee in the Rajya Sabha wrote its report on the petition seeking a national debate on introduction of sex education in schools in response to the HRD Ministry's decision to provide sex education to students from Class VI in CBSE affiliated schools.

1.12 Some Communicative Sources

a) HIV and Sexuality:

The lack of access to information on health and sexuality, and existing rates of sexual activity, implies that most young people are very susceptible to STDs and HIV/AIDS. According to the National AIDS Control Organization (NACO), the number of Indians living with HIV increased by 500,000 in 2003 to 5.1 million.49 HIV/AIDS primarily affects the socially and economically productive age group of 15–24 years with 34 percent of infections occurring in this age group. Within this group, young women and adolescent girls are being increasingly infected due to their vulnerable social and economic status within society. Fifty studies reveal that most women still lack basic information about HIV/AIDS.

b) Elements of Effective School Programme:

- A focus on reducing specific risky behaviours.
- A basis in theories which explain what influences people's sexual choices and behaviour.
- A clear and continuously reinforced message about sexual behaviour and risk reduction.
• Providing accurate information about, the risks associated with sexual activity, about contraception and birth control, and about methods of avoiding or deferring intercourse.
• Dealing with peer and other social pressures on young people; providing opportunities to practise communication, negotiation and assertion skills.
• Uses a variety of approaches to teaching and learning that involve and engage young people and help them to personalise the information.
• Uses approaches to teaching and learning which are appropriate to young people's age, experience and cultural background.
• Is provided by people who believe in what they are saying and have access to support in the form of training or consultation with other sex educators.

c) Sex Education for Adolescent:
With changing times it has become necessary that we impart sex education to our teenagers. In teenage the physical changes particularly so in the sex organs and hormonal changes taking place in the body makes them curious to explore these changes. Added to all this, the increased amount of exposure through television, books, internet makes them impulsive to try what is forbidden. The 'sexual arena' is a hot topic among the adolescence currently and the absence of proper supervision can result in more harm than good. Sex education helps the adolescent in following ways:
• Avoids or decreases the incidence of teenage pregnancies.
• Stresses on self-restraint.
• To decrease the incidence of sexually transmitted diseases.
• Prevent or decrease the rate of sexually transmitted diseases such as gonorrhea, non-gonococcus urethritis, pelvic inflammatory disease and syphilis.
• Control or decrease the teenage pregnancies.

In the current scenario sex education to the teens should be considered as the responsibility of every parent and teacher. It is better for the children get the right information from parents, peers or teachers than from books, magazines, pornographic websites and various other sources. This leads to miss concepts and does more harm
than actually good. Right information can enlighten a teenager regarding the hazards of sexual issues and related health problems. Sex education to the teens is important and should be considered as the responsibility of every parent and teacher. Studies have shown that effective sex education to adolescence in school can increase the age at which they experiment with sex. However in India sex education in school has not yet become an accepted part of the curriculum and comprehensive sex education in schools still remains a subject of intense debate.

Certain schools have introduced novel health and hygiene workshops that handle issues like health foods, usage of sanitary napkins, human anatomy and human reproduction. But the education system in India is still has disagreement about conducting workshops and programs within the school premises on sex education.

WHO considers that sex education should be given to all children who are 12 and above. The increasing incidence of teenage pregnancies and HIV in India makes it important that we give our children sex education so that they get the right information rather than miss concepts.

d) The Function of School to Develop Sexual Attitude:

School can play a role in the development of sexual attitudes and behaviors for adolescents is sex education within schools. In a review of over 60 studies, Kirby (2002) found that some school programs effectively decreased school dropout rates, increased attachment to schools and school performance, and reduced liberal sexual attitudes as well as actual sexual risk taking behaviors. Conversely, other studies have indicated that sex education courses did not change the frequency of intercourse, masturbation, oral-genital sex, petting, or pre-marital sex among adolescents (Ashcraft, 2008; Dailard, 2003). It is, therefore, important to continue to study this topic in an effort to distinguish which features of programs are effective in reducing risk behavior and associated outcomes. Schools can be effective in fostering healthy adolescent sexual development, whether by delaying onset of sexual behaviors or by promoting safe behaviors for those adolescents who are already sexually active.

Sex education in school is important because many parents are shy about talking or teaching their children on this subject. However, schools can only be
effective if they can ensure the protection and well-being of their learners and staff, if they provide relevant learning and teaching interventions, and if they link up to psychosocial, social and health services. Evidence from UNESCO, WHO, UNICEF and the World Bank (WHO and UNICEF, 2003) point to a core set of cost-effective legislative, structural, behavioural and biomedical measures that can contribute to making schools healthy for children. It is a fact that more and more teens these days are engaging into premarital sex. This further underscores the need for sex education to students. This will help them make better informed decisions about their personal sexual activities. Modern time is the time of internet and powerful media. Teenagers are exposed to Hollywood, TV and internet. These sources offer demonstration of sex which is highly thoughtless and casual; in this situation it is almost illogical to leave the teenagers on their sexual choices. They are young and fully excited; therefore they can not make a favourable choice. Sex education in school offers the information and knowledge they need to understand to know the responsibility that is accompanied by sexual relationships. The teacher in school helps the students to know the difference between a thoughtless and thoughtful sex. Having an urge for sex is not a problem; it is a natural process showing that the young people are developing to become adults; however the problem is having unsafe sex and hurting people through sexual choices.

**e) Internet Source of Information about Sex:**

The internet has made sexually explicit materials more accessible to youth than ever before, making it an important source of information about reproductive health. Many youth use the Internet to search for information about their bodies and bodily functions, including sex. However, only 14 percent visited a doctor based on what they found, and few of those discussed sex or other topics of greatest concern with the doctor. Consumer demand for pornography has been a key economic driver of the Internet, as it was for videocassette recorders a quarter of a century earlier. In the late 1990s, it was estimated that the online pornography industry was worth more than $1 billion and that half of all spending on the Internet was related to sex. The Internet provides a marketplace for the portrayal and sale of items related to all manner of sexual interests, including and often featuring the unconventional and bizarre. A
national survey found that 75 to 83 percent of adolescents reported having Internet access at home and that 70 percent of them reported being exposed to Internet pornography. More than half of the adolescents said they were unconcerned about it. In a recent study of 813 university students from across the United States, two-thirds of the men and one-half of the women considered viewing pornography to be acceptable; 87 percent of the men and 31 percent of the women reported seeking out pornography themselves.

f) **International Technical Guidance on Sexual Education (UNESCO, 2009)**:

Effective Sex Education Programme helps the adolescent in following ways:

- Reduce misinformation.
- Increase correct knowledge.
- Clarity and strengthen positive values and attitudes.
- Increase skills to make informed decisions and act upon them.
- Improve perception about peer groups and social norms.
- Increase communication with parent or other trusted adults.

Fortunately, the United Nations Population Fund (UNFPA) has responded by reaffirming its support for comprehensive sexuality education. UNFPA’s Executive Director, Thoraya Ahmed Obaid spoke out this week, saying that, “We are mandated by the Programme of Action of the International Conference on Population and Development (ICPD) to provide support to governments to protect and promote the rights of adolescents to reproductive health education, information and care”.

1.13 **Statement of the Problem**

The investigator during his work observed that adolescents lack basic adequate knowledge regarding various aspect of human sexuality. The investigator also observed myths and misconceptions about sex. There were no studies conducted in West Bengal to assess the sexual knowledge and attitude of adolescent and carryout intervention to enhance sexual awareness among them.
So the intention of the researcher was to conduct a study “An Investigation into the Knowledge and Attitude Towards Sex Education among Adolescents and its Influence on Academic Achievement at Secondary Level”.

This study through its findings would create the necessary awareness among adolescent student towards sexual behavior. It will also equip the adolescents with the adolescents with some of the dangers involved in pre-marital sexual relation and therefore make them to manage their puberty with more caution. The findings of this study would be very useful to governmental ministries and agencies like Ministries of Health and Education.

Non-Governmental Agencies in packaging effective and result oriented interventions on adolescents. Lastly, it will contribute positively to the expansion of knowledge in the area of adolescent sexual behaviour and also serve as an important reference tool for future researchers in this field.

1.14 Objectives of the Study
1. To compare the knowledge (dimension wise) of urban and rural adolescents towards sex education.
2. To compare the attitude (dimension wise) of urban and rural adolescents towards sex education.
3. To compare the knowledge (dimension wise) of male and female adolescents towards sex education.
4. To compare the attitude (dimension wise) of male and female adolescents towards sex education.
5. To examine the effect of sexual knowledge on academic achievement of male adolescents.
6. To examine the effect of sexual knowledge on academic achievement of female adolescents.
7. To examine the effect of sexual attitude on academic achievement of male adolescents.
8. To examine the effect of sexual attitude on academic achievement of female adolescents.
1.15 Different Dimensions of the Study
1.16 Statement of Hypotheses

This type of research is descriptive survey type. Both descriptive and inferential statistics were used for conducting the study. To conduct the study following dimension-wise null hypotheses were listed below.

Knowledge Test (Urban and Rural) :

**H0₁**: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to their FORMAL INSTITUTION.

**H0₂**: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to their FAMILY.

**H0₃**: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to MEDIA.

**H0₄**: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to their SOCIAL COMMUNICATION.

**H0₅**: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to TRANSMISSION.

**H0₆**: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to IDENTIFICATION.

**H0₇**: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to PREVENTION.

**H0₈**: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to their SOCIO-ECONOMIC STATUS.

**H0₉**: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to their TENDENCY.
\textbf{H0}_{10}: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to EDUCATION.

\textbf{H0}_{11}: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to PROGNOSIS.

Knowledge Test (Male and Female):

\textbf{H0}_{12}: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to their FORMAL INSTITUTION.

\textbf{H0}_{13}: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to their FAMILY.

\textbf{H0}_{14}: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to MEDIA

\textbf{H0}_{15}: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to their SOCIAL COMMUNICATION.

\textbf{H0}_{16}: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to TRANSMISSION.

\textbf{H0}_{17}: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to IDENTIFICATION.

\textbf{H0}_{18}: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to PREVENTION.

\textbf{H0}_{19}: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to their SOCIO-ECONOMIC STATUS.
\( H_{0\text{20}} \): There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to their TENDENCY.

\( H_{0\text{21}} \): There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to EDUCATION.

\( H_{0\text{22}} \): There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to PROGNOSIS.

**Attitude Test (Urban and Rural):**

\( H_{0\text{23}} \): There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to AWARENESS.

\( H_{0\text{24}} \): There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to their FAMILY.

\( H_{0\text{25}} \): There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to their FORMAL INSTITUTION.

\( H_{0\text{26}} \): There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to their MEDIA.

\( H_{0\text{27}} \): There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to SOCIAL COMMUNICATION.

\( H_{0\text{28}} \): There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to their TENDENCY.

\( H_{0\text{29}} \): There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to TRANSMISSION.

\( H_{0\text{30}} \): There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to PREVENTION.
$\textbf{H0}_{31}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to IDENTIFICATION.

$\textbf{H0}_{32}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to SOCIO-ECONOMIC STATUS.

$\textbf{H0}_{33}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to SAFE MOTHERHOOD.

**Attitude Test (Male and Female):**

$\textbf{H0}_{34}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to AWARENESS.

$\textbf{H0}_{35}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to their FAMILY.

$\textbf{H0}_{36}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to their FORMAL INSTITUTION.

$\textbf{H0}_{37}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to their MEDIA.

$\textbf{H0}_{38}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to SOCIAL COMMUNICATION.

$\textbf{H0}_{39}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to their TENDENCY.

$\textbf{H0}_{40}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to TRANSMISSION.

$\textbf{H0}_{41}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to PREVENTION.
H0_{42} : There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to IDENTIFICATION.

H0_{43} : There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to SOCIO-ECONOMIC STATUS.

H0_{44} : There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to SAFE MOTHERHOOD.

Academic Achievement and Male Knowledge :

H0_{45} : There is no significant relationship between academic achievement and adolescent male Knowledge towards sex education in respect to FORMAL INSTITUTION.

H0_{46} : There is no significant relationship between academic achievement and adolescent male knowledge towards sex education in respect to FAMILY.

H0_{47} : There is no significant relationship between academic achievement and adolescent male knowledge towards sex education in respect to MEDIA.

H0_{48} : There is no significant relationship between academic achievement and adolescent male knowledge towards sex education in respect to SOCIAL COMMUNICATION.

H0_{49} : There is no significant relationship between academic achievement and adolescent male knowledge towards sex education in respect to TRANSMISSION.

H0_{50} : There is no significant relationship between academic achievement and adolescent male knowledge towards sex education in respect to IDENTIFICATION.

H0_{51} : There is no significant relationship between academic achievement and adolescent male knowledge towards sex education in respect to PREVENTION
H0_{52} : There is no significant relationship between academic achievement and adolescent male knowledge towards sex education in respect to SOCIO- ECONOMIC STATUS.

H0_{53} : There is no significant relationship between academic achievement and adolescent male knowledge towards sex education in respect to TENDENCY.

H0_{54} : There is no significant relationship between academic achievement and adolescent male knowledge towards sex education in respect to EDUCATION.

H0_{55} : There is no significant relationship between academic achievement and adolescent male knowledge towards sex education in respect to PROGNOSIS.

Academic Achievement and Female Knowledge :

H0_{56} : There is no significant relationship between academic achievement and adolescent female Knowledge towards sex education in respect to FORMAL INSTITUTION.

H0_{57} : There is no significant relationship between academic achievement and adolescent female knowledge towards sex education in respect to FAMILY.

H0_{58} : There is no significant relationship between academic achievement and adolescent female knowledge towards sex education in respect to MEDIA.

H0_{59} : There is no significant relationship between academic achievement and adolescent female knowledge towards sex education in respect to SOCIAL COMMUNICATION.

H0_{60} : There is no significant relationship between academic achievement and adolescent female knowledge towards sex education in respect to TRANSMISSION

H0_{61} : There is no significant relationship between academic achievement and adolescent female knowledge towards sex education in respect to IDENTIFICATION.
H0_{62} : There is no significant relationship between academic achievement and adolescent female knowledge towards sex education in respect to PREVENTION.

H0_{63} : There is no significant relationship between academic achievement and adolescent female knowledge towards sex education in respect to SOCIO-ECONOMIC STATUS.

H0_{64} : There is no significant relationship between academic achievement and adolescent female knowledge towards sex education in respect to TENDENCY.

H0_{65} : There is no significant relationship between academic achievement and adolescent female knowledge towards sex education in respect to EDUCATION.

H0_{66} : There is no significant relationship between academic achievement and adolescent female knowledge towards sex education in respect to PROGNOSIS.

**Academic Achievement and Male Attitude :**

H0_{67} : There is no significant relationship between academic achievement and adolescent male attitude towards sex education in respect to AWARENESS.

H0_{68} : There is no significant relationship between academic achievement and adolescent male attitude towards sex education in respect to FAMILY.

H0_{69} : There is no significant relationship between academic achievement and adolescent male attitude towards sex education in respect to FORMAL INSTITUTION.

H0_{70} : There is no significant relationship between academic achievement and adolescent male attitude towards sex education in respect to MEDIA.

H0_{71} : There is no significant relationship between academic achievement and adolescent male attitude towards sex education in respect to SOCIAL COMMUNICATION.
H0_{72}: There is no significant relationship between academic achievement and adolescent male attitude towards sex education in respect to TENDENCY.

H0_{73}: There is no significant relationship between academic achievement and adolescent male attitude towards sex education in respect to TRANSMISSION.

H0_{74}: There is no significant relationship between academic achievement and adolescent male attitude towards sex education in respect to PREVENTION.

H0_{75}: There is no significant relationship between academic achievement and adolescent male attitude towards sex education in respect to IDENTIFICATION.

H0_{76}: There is no significant relationship between academic achievement and adolescent male attitude towards sex education in respect to SOCIO-ECONOMIC STATUS.

H0_{77}: There is no significant relationship between academic achievement and adolescent male attitude towards sex education in respect to SAFE MOTHERHOOD.

**Academic Achievement and Female Attitude:**

H0_{78}: There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to AWARENESS

H0_{79}: There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to FAMILY.

H0_{80}: There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to FORMAL INSTITUTION.

H0_{81}: There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to MEDIA.
\( H_{0_{82}} \): There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to SOCIAL COMMUNICATION.

\( H_{0_{83}} \): There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to TENDENCY.

\( H_{0_{84}} \): There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to TRANSMISSION.

\( H_{0_{85}} \): There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to PREVENTION.

\( H_{0_{86}} \): There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to IDENTIFICATION.

\( H_{0_{87}} \): There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to SOCIO-ECONOMIC STATUS.

\( H_{0_{88}} \): There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to SAFE MOTHERHOOD.

1.17 Methodology

The research is descriptive type survey. Both descriptive and inferential statistics were used for conducting the study.

Population of the Study

The study was restricted to male and female adolescents attending high school for the following reasons:

- Both male and female adolescents of rural and urban areas.
- Only class XI pupils were selected as sample.
Tools Used
i) Structured Knowledge Questionnaire.
ii) Structured Attitude Questionnaire.
iii) Tools were developed in consultation with supervisor in the field of education.

1.18 Definitions of Related Terms

Sex Education:

Kearney (2008) also defined sex education as “involving a comprehensive course of action by the school, calculated to bring about the socially desirable attitudes, practices and personal conduct on the part of children and adults, that will best protect the individual as a human and the family as a social institution. According to Oganwu (2003), sex is a dimorphic concept in other words, it is the structural differentiation between male and female. It can also be said as the functional activity used for procreation.

i) Knowledge of human reproduction.
ii) Misuse and abuse of sex.
iii) The spread and prevention of Sexually Transmitted Diseases (STD).
iv) Dangers of adolescent pregnancy.
v) Importance of inter-personal relationship.
vi) Choosing a partner.
vii) Family planning, importance and methods.

A critical analysis of the above concepts of sex education, indicates that sex education is a wide discipline covering the wide broad field of psychology, medicine, biology physiology and anthropology. Therefore, to be able to teach sex education effectively, the individual should have a basic knowledge of the above field of study.

According to Oganwu (2003), sex is a dimorphic concept in other words, it is the structural differentiation between male and female. It can also be said as the functional activity used for procreation.

Sex education defined by SIECUS (sex information and education council of the U. S.) is “a lifelong process of acquiring information and forming attitudes, beliefs and values about identity, relationships and intimacy. Sexuality education
Sex education encompasses sexual development, reproductive health, interpersonal relationships, affection, intimacy, body image and gender roles. Sexuality education addresses the biological, socio-cultural, psychological and spiritual dimensions of sexuality from
1) the cognitive domain,
2) the affective domain and
3) the behavioural domain, including the skills to communicate effectively and make responsible decisions.

Sex Education is defined as an age-appropriate, culturally relevant approach to teaching about sex and relationships by providing scientifically accurate, realistic, non-judgmental information. Sexuality education provides opportunities to explore one’s own values and attitudes and to build decision-making, communication and risk reduction skills about many aspects of sexuality (UNESCO 2009). Effective sexuality education is a vital part of HIV prevention and is also critical to achieving Universal Access targets for reproductive health and HIV prevention, treatment, care and support (UNAIDS, 2006). Comprehensive sexuality education can radically shift the trajectory of the HIV epidemic, and young people are clear in their demand for more and better sexuality education, services and resources to meet their prevention needs. Thus, the awareness about comprehensive sexuality education has to be implemented in schools. But for the success of any education, the knowledge and attitude of the students has to be ascertained. In this backdrop, the problem formulated for the present study was to Sex education includes all educational opportunities which help individuals understand and prepare for those experiences in life that deal with the social, physical, emotional and mental aspects of human sexuality

Burt defined sex education as the study of the characteristics of beings; a male and female. Such characteristics make up the person's sexuality. Sexuality is an important aspect of the life of a human being and almost all the people including children want to know about it. Sex education includes all the educational measures which in any way may of life that have their center on sex. He further said that sex education stands for protection, presentation extension, improvement and development of the family based on accepted ethical ideas (J. D. L. Mare, 2011).
“Comprehensive sexuality education seeks to equip young people with the knowledge, skills, attitudes and values they need to determine and enjoy their sexuality – physically and emotionally, individually and in relationships. It views “sexuality” holistically and within the context of emotional and social development. It recognizes that information alone is not enough. Young people need to be given the opportunity to acquire essential life skills and develop positive attitudes and values”.

In the recently developed International Technical Guidance on Sexuality Education by UNESCO and other United Nations organizations, sexuality education has been described as follows:

“Sexuality Education is defined as an age-appropriate, culturally relevant approach to teaching about sex and relationships by providing scientifically accurate, realistic, non-judgemental information.

Sexuality Education provides opportunities to explore one’s own values and attitudes and to build decision-making, communication and risk-reduction skills about many aspects of sexuality”.

The World Association for Sexual Health published a declaration on sexual health in 2008, this document also recognises sexual rights as essential to achieve sexual health for all. Based on an assessment of the above-mentioned definitions and others, and guided by the holistic and positive approach which forms the basis of these Standards, sexuality education in this document is understood as follows.

Sexuality education means learning about the cognitive, emotional, social, interactive and physical aspects of sexuality. Sexuality education starts early in childhood and progresses through adolescence and adulthood.

For children and young people, it aims at supporting and protecting sexual development. It gradually equips and empowers children and young people with information, skills and positive values to understand and enjoy their sexuality, have safe and fulfilling relationships and take responsibility for their own and other people’s sexual health and well-being. It enables them to make choices which enhance the quality of their lives and contribute to a compassionate and just society.

All children and young people have the right to have access to age-appropriate
sexuality education. In this definition, the primary focus is on sexuality as a positive human potential and a source of satisfaction and pleasure. The clearly recognized need for knowledge and skills required to prevent sexual ill-health comes second to this overall positive approach. Furthermore, sexuality education should be based on internationally accepted human rights, in particular the right to know, which precedes prevention of ill health.

Sex education, which is sometimes called sexuality education or sex and relationships education the process of acquiring information and forming attitudes and beliefs about sex, sexual identity, relationships and intimacy. Sex education is also about developing young people's skills so that they make informed choices about their behaviour, and feel confident and competent about acting on these choices. It is widely accepted that young people have a right to sex education. This is because it is a means by which they are helped to protect themselves against abuse, exploitation, unintended pregnancies, sexually transmitted diseases. It is also argued that providing sex education helps to meet young people’s rights to information about matters that affect them, their right to have their needs met and to help them enjoy their sexuality and the relationships that they form.

**Adolescence:**

Adolescence is one of the most crucial periods in the life of an individual, because between the ages of 12-19 years, many key biological, social, economical, demographic and cultural events occur that set the stage for adult life. The exact period of adolescence, which varies from person to person, falls approximately between the ages 12 and 19 and encompasses both physiological and psychological changes.

Physiological changes lead to sexual maturity and usually occur during the first several years of the period. This process of physical changes is known as puberty, and it generally takes place in girls between the ages of 8 and 14, and boys between the ages of 9 and 16.

Adolescence can be described as the period between the latter stage of childhood and early stage of adulthood (Health Foundation of Ghana, 2004). The
World Health Organization (W. H. O. [1975]) suggested adolescence to be the period between the ages of 10 and 19 or the second decade of life. Adolescents, therefore, refer to boys and girls who fall within this stage or period. Adolescents, therefore, refer to boys and girls who fall within this stage or period. Adolescence can be described as the period between the latter stage of childhood and early stage of adulthood (Health Foundation of Ghana, 2004). The World Health Organization (W. H. O. [1975]) suggested adolescence to be the period between the ages of 10 and 19 or the second decade of life. Adolescents, therefore, refer to boys and girls who fall within this stage or period.

The World Health Organization (WHO) defines puberty as a period between the ages of 10 and 19. It is also known that one out of every five people throughout the world is an adolescent (Sexual Health/Reproductive Health (SH / RH, 2005), and the majority of these adolescents (87%) live in developing countries. Youth throughout the world are exposed to many risk factors, especially in countries where sexual activity starts at an early age.

In puberty, the pituitary gland increases its production of gonadotropins, which in turn stimulate the production of predominantly estrogens in girls, and predominantly testosterone in boys. Estrogens and testosterone are responsible for breast development, hair growth on the face and body, and deepening voice.

These physical changes signal a range of psychological changes which manifest themselves throughout adolescence. Psychological changes generally include questioning of identity and achievement of an appropriate sex role; movement toward personal independence; and social changes in which, for a time, the most important factor is peer group relations (Hine, 1999 : 36). Adolescent constitute 22.8 % of population in India as on 1st March 2000.

Sathi and Sathi, in a study (2000) among school going adolescents in Pune, revealed that though they lack adequate knowledge on matters related to human sexuality, yet up to 22% boys and 5% girls had premarital sex.

The reproductive and sexual health needs of adolescents are different from those of adults and are still poorly understood in most of the world. It is also true that the reproductive health needs and sexual behaviour of adolescents vary with sex,
marital status, class, religion and cultural context (WHO, 2003, Pacahuri and Santhya, 2002).

World health organization defines adolescence as:

- Progression from appearance of secondary sex characteristics (puberty) to sexual and reproductive maturity.
- Development of adult mental processes and adult identity.
- Transition from total socio-economic dependence to relative independence.

Notions of adolescence are defined by biology and culture and are best understood in a social-historical context. The most longstanding definition of the onset of adolescence links it to puberty, when hormone activity produces the development of secondary sex characteristics (pubic hair and voice change in males; breast development and menarche in females). However, while these biological changes are evidence of the transition from childhood to adolescence, the transition out of adolescence is less well defined. The adage that “adolescence begins in biology and ends in culture” reflects the variable understanding of when adolescence ends. However, theories and models have emerged to explain the transition out of adolescence into early adulthood (Arnett, 2000).

Culturally, definitions of the timing and meaning of adolescence have changed over the years as expectations of youth shifted. A hundred years ago, notions of adolescence were scarcely understood, since teens did not attend high school and most assumed adult roles of providing for their family and getting married at average ages of 14 and 15. Expectations that teens assume adult roles at young ages precipitated the transition into adulthood at much earlier ages than is the case in the 21st century.

However, during the twentieth century expectations of youth began to shift in response to the demands of a changing economy. The need for a better-educated workforce, along with the child welfare movement, propelled youth out of the workforce and into high schools, thus delaying their entry into adult roles. This trend has continued into the present. Now, young people are expected to stay in school much longer, which means they spend more time with same-age peers and enter adulthood later than ever before. These shifts have influenced views of what it means to be an adolescent (Nichols & Good, 2004).
As a result of these economic and cultural shifts, the time period of adolescence has been extended to include the ages of 10 through the mid twenties, with most researchers dividing the age span into early (10–13), middle (14–17) and late (18–mid twenties) adolescent (Smetana, Campione-Barr & Metzger, 2006). This division corresponds to American school structures, allowing analyses of development and context according to middle school, high school, and college.

**Knowledge:**

It is an important objective of learning. Acquaintance with reality depends upon the amount of knowledge. It is also found that there is a positive relation between increase in knowledge and increase in maturity. Knowledge is also considered an important criterion of brightness or intelligence. A wide range of information and its comprehension. To pass on knowledge, teachers can combine comments about various facts with explanations of how these facts relate to each other. Knowledge refers to those item of fact and procedure by which an individual learns what to do or not to do in a given situation and enough about why it is done or should be done to make the procedure meaningful in so far as she / he is able to understand it. Knowledge according to the illustrated Oxford Dictionary (1998 : 448) refers to a person’s range of information; a theoretical or practical understanding of a subject; the sum of what is known knowledge in this study denotes the accumulation of factual information. Actually knowledge is a relative term and there is no exact and universal definition about knowledge. It is a complex process. Knowledge is related terms, events, persons, places, sources of information, facts, definition, concepts, principles, process etc. So many test involving knowledge requires some organization and reorganization of the problem forgetting appropriate signals about the knowledge of the individual.

Here the investigator had delimited the domain of knowledge only recognition, recall, definition relating to different terms, concepts principles and processes were considered as the domains of knowledge in this study.

**Attitudes:**

Attitudes have generally been regarded as either mental readiness or implicit
predispositions, which create an influence over a large class of evaluative responses. These responses are usually directed towards some object, person or group. In addition, attitudes are seen as enduring predispositions, which are learned rather than innate. Thus, even though attitudes are not temporary, they are capable of change (Zimbardo and Ebbesen, 1970). Attitudes have generally been divided into three components: affect, cognition, and behavior.

The affective component consists of a person's evaluation of liking or emotional response to some object or person. The cognitive component contains person's beliefs about, or factual knowledge of the object or person. The behavioral component involves the person's overt behaviour directed towards the object or person. (Zimbardo and Ebbesen, 1970). The expression of a certain opinion, behaviour, or reaction to something in accordance with one’s personal beliefs, biases, preferences, and subjective assessments. An attitude toward something is expressed by whether people find it likeable or not, bad or good, important or unimportant, worthy or unworthy.

**Puberty:**

Puberty is the process of physical changes by which a child's body becomes an adult body capable of reproduction. Puberty is initiated by hormone signals from the brain to the gonads (the ovaries and testes). In response, the gonads produce a variety of hormones that stimulate the growth, function, or transformation of brain, bones, muscle, blood, skin, hair, breasts, and reproductive organs. Growth accelerates in the first half of puberty and stops at the completion of puberty. Before puberty, body differences between boys and girls are almost entirely restricted to the genitalia. During puberty, major differences of size, shape, composition, and function develop in many body structures and systems. The most obvious of these are referred to as secondary sex characteristics.

In a strict sense, the term *puberty* (derived from the Latin word *puberatum* (age of maturity, manhood)) refers to the bodily changes of sexual maturation rather than the psychosocial and cultural aspects of adolescent development. Adolescence is the period of psychological and social transition between childhood and adulthood.
Adolescence largely overlaps the period of puberty, but its boundaries are less precisely defined and it refers as much to the psychosocial and cultural characteristics of development during the teen years as to the physical changes of puberty.

**Reproductive Health:**

Within the framework of the World Health Organization's (WHO) definition of health as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, reproductive health, or sexual health / hygiene, addresses the reproductive processes, functions and system at all stages of life. Reproductive health, therefore, implies that people are able to have a responsible, satisfying and safer sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. One interpretation of this implies that men and women ought to be informed of and to have access to safe, effective, affordable and acceptable methods of birth control; also access to appropriate health of sexual, reproductive medicine and implementation of health education programs to stress the importance of women to go safely through pregnancy and childbirth could provide couples with the best chance of having a healthy infant. On the other hand individuals do face inequalities in reproductive health services. Inequalities vary based on socioeconomic status, education level, age, ethnicity, religion, and resources available in their environment. It is possible for example, that low income individuals lack the resources for appropriate health services and the knowledge to know what is appropriate for maintaining reproductive health.

According to the WHO, “Reproductive and sexual ill-health accounts for 20% of the global burden of ill-health for women, and 14% for men”. Reproductive health is a part of sexual and reproductive health and rights.

WHO has been working in the area of sexual health since at least 1974, when the deliberations of an expert committee resulted in the publication of a technical report entitled “Education and treatment in human sexuality” (WHO, 1975). In 2000, the Pan American Health Organization (PAHO) and WHO convened a number of expert consultations to review terminology and identify programme options. In the course of these meetings, the working definitions of key terms used here were
developed. In a subsequent meeting, organized by PAHO and the World Association for Sexual Health (WAS), a number of sexual health concerns were addressed with respect to body integrity, sexual safety, eroticism, gender, sexual orientation, emotional attachment and reproduction (see Annex 1 for further explanations of these terms).

According to the current working definition, sexual health is:
“...a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled” (WHO, 2006a).

1.19 Significance of the Study

Current information show that adolescents are inadequately informed regarding their own sexuality, physical well being and their health, the major source of information being the media and peers. Whatever knowledge they have is incomplete and confused. Low rate of educational attainments, limited sex education activities, and inhibited attitudes towards sex, attenuate this ignorance leading to unwanted pregnancy, illegal abortion, mortality and morbidity among young girls. Knowledge differs based on gender, education, and place of residence with uneducated rural girls having the least information.

Adolescents need the opportunity to express positive relationship and constructive behaviours and to learn skills and acquire knowledge. They need access to information, counselling and services that will help them to establish healthy relationships and protect them from unwanted pregnancy and STDs.

Adolescent is one of the most fascinating periods of human life that marks the transition from being a dependent child to an independently functioning adult. Indian youth in the absence of systematic and correct information and matters related to basic terms of meaning of sex or sexuality, face a dilemma between the traditional Indian norms and the western patterns of expression. According to the report by the United
Nations, young people in this country are faced with extreme lack of information which makes them vulnerable to risks and disease. Generally adolescents are not viewed as a target group because it is believed that they are not sexually active the need for studying this group however needs to be recognized because adolescents just like childhood could provide the key understandings overall aspects of adult behavior. If adolescents are consider as period of great turmoil, the need for studying this group becomes even more significant our present concern, is therefore to assess the amount of basic information the adolescents must have, the lacunae in their knowledge bank and to see if there is a need which can correctly their problem before they become a full blown social epidemic.

An adolescent is in a confused state of mind as far as his/her behaviour is concerned, because the messages from outside the family contradict the messages s/he receives at home. The psycho-sexual development and the physical changes, coupled with a lack of formal channels of the communication on sex-related matters, occasionally results in risky behaviour, which could have long lasting physical, emotional and psychological effects. Sex education addresses the biological, socio-cultural, psychological and the spiritual dimensions of sexuality through the cognitive domain (information), affective domain (feelings, values, and attitudes), and the behavioural domain (communication and decision making skills) Such an education enables a young person to know himself / herself and hence to relate comfortably with others. There is enough evidence to suggest that child sexual abuse, teen sex and teen pregnancy continue to remain as major threats to the adolescent health in India (Govt. of India 2007 Report : 53.22% on children who were reported to have faced sexual abuse), and it is expected that sex education will go a long way in solving such violence to a great deal. A gap between the amount which is invested in developing a curriculum and the actual education that is imparted to our students. Until now, most of the sex education has been scientific in nature, i.e., discussed in the biological context by teachers of science. However, for sex education to have a realistic impact, it is important that the instruction be imparted in a straightforward, easy to grasp manner, while keeping the cultural issues in mind.

Thus, it is necessary to investigate the adolescent knowledge and attitude
towards sex education and its influence on academic achievement at secondary level.

Adolescents in India face an extraordinary lack of information about sexuality. As young people stand on the threshold of adulthood, they need authentic knowledge that helps them to understand the process of growing up, with particular reference to their sexual reproductive health needs. It is important to equip them to assist them in coping with the needs during the transitional phase from adolescence to adulthood. Unfortunately, sexuality education is denied to adolescents because the subject is considered to be culturally sensitive and controversial for discussion in the classrooms of Indian schools.

Sex education are to help children understand the body structures of men and women and acquire the knowledge about birth.

Teach children to establish and accept the role and responsibility of their own gender by acquiring the knowledge of sex. Understanding the differences and similarities between two genders in terms of body and mind will set up a foundation for the future development in their acquaintance with friends and lovers and their interpersonal relationship. Sex education is a kind of holistic education. It teaches an individual about self-acceptance and the attitude and skills of inter relationship. It also helps an individual to cultivate a sense of responsibility towards others as well as oneself.

Accurate sexual knowledge is important for healthy sexuality development. Sexual knowledge serve as a foundation to prepare adolescents to understand their sexuality development, that later will influence their emotional and psychological well being (Lou and Chen, 2009). Researches indicated that adolescents with high levels of sexual knowledge are less likely to involve in risky sexual behaviour (Jemmott and Jemmott, 1990; Ryan, et al., 2007) and effective comprehensive sex education have reduce sexual risky behaviour (Bearinger, Sieving, et al. 2007; Montessoro and Blixen, 1996; Sanderson, 2000).

Adolescents’ responses to their sexuality development are deeply affected by social and cultural context in which they live. Before attending any formal sex education, adolescents are exposed to the normative belief, value and behaviour on sexuality (Shtarkshall et al., 2007). The sexual socialization takes place since an individual was born. For example, how parents respond to infant maturation will
influence infant awareness on sexuality. Sexual socialization also takes place outside home as child or adolescents participate in community activities such as religion activities and consume mass media.

Sexuality does not only focus on sexual behaviour but also covers reproductive health, sexual attitude, sexual health care and relationship which are consistent with cultural, moral and religion value (Robinson et al., 2002). However, people choose not to discuss sexual development in detail. Consistently, most of the parents will not discuss sex related topics with their child (Low et al., 2007; Mohammadi et al., 2006).

Furthermore, sex education is not a comprehensive subject in school, and it focuses on the topic related to anatomy, reproduction, contraception and sexually transmitted disease which are integrated in science subjects for lower secondary level students. As a result, this nonverbal underlying message may communicate to adolescents that sexuality is a sinful subject and inappropriate topic to discuss.

Even though this topic is perceive as taboo to discuss, adolescents are expose to many other sources of information related to sexuality. For example, with the advancement and development of technology, mass media gradually become one of the important sources on sex related information for adolescents (Davis et al., 1998; Nonoyama et al., 2005). In addition, the rapid growth of the pornography facilitates adolescents’ exposure to sexually explicit materials either intentionally or accidentally (Flood, 2007). This side of world portray that sex is a pleasure without any responsibility. This sexual value and belief contradict with local cultural norm.

Adolescents who are curious on sexual topic may adopt the value and rely on this kind of sources to fulfill their curiosity and avoid the embarrassment of discussing the topic with adult. Yet, information from these sources may not be accurate and may mislead adolescents’ understanding concerning an appropriate sexuality and reproductive health. There are limited sources on accurate sexual knowledge to support a healthy sexual development among Indian adolescents.
1.20 Delimitation of the Study

1. The researcher had limited her attention of the study only to adolescent students of West Bengal Board of Secondary Education. She had not included adolescent students of ICSE, CBSE or other Boards in the study.

2. Only class XI adolescent students were taken as sample.

3. Only some schools from few selected district were taken as samples for conducting the study.

4. Both qualitative and quantitative approaches could have been applied for the present research but only descriptive survey type research was applied for methodological practices.

5. Only knowledge and attitude were measured regarding sex education.