AN INVESTIGATION INTO THE KNOWLEDGE & ATTITUDE TOWARDS SEX EDUCATION AMONG ADOLOSCENTS AND ITS INFLUENCE ON ACADEMIC ACHIEVEMENT AT SECONDARY LEVEL

A THESIS SUBMITTED TO THE UNIVERSITY OF KALYANI FOR THE FULFILMENT OF DOCTOR OF PHILOSOPHY IN EDUCATION

By

KALYANI MITRA (SANYAL)

Department of Education

University of Kalyani

Kalyani, Nadia

West Bengal

2013

Dr. Dibyendu Bhattacharyya
Associate Professor,
Department of Education, University of Kalyani

CERTIFICATE

This is to certify that the research work entitled **"An Investigation Into The Knowledge & Attitude Towards Sex Education Among Adoloscents And Its Influence On Academic Achievement At Secondary Level"** for the fulfilment of the requirements of the award of Ph. D. degree in Education is based on the results of research work accomplished by her. No part of this work has been submitted for any other degree. She has completed the research work under my guidance.

Date : 24. 12. 2013.

Dr. Dibyendu Bhattacharyya,
Associate Professor,
Department of Education,
University of Kalyani

ACKNOWLEDGEMENT

The researcher sincerely offers her heartiest gratitude and respect to her supervisor, Dr. Dibyendu Bhattacharyya, Associate Professor, Department of Education, University of Kalyani, for his proper guidance, concrete suggestions and helpful criticisms.

It is a great pleasure on the part of the researcher to convey equally strong gratefulness to Prof. S. Nandi, Head, Department of Education, University of Kalyani and Prof. Sumit Mukherjee, Dean, Faculty of Education, University of Kalyani.

In preparation of this thesis, the researcher is encouraged and assisted by many distinguished persons whom the researcher offer her gratitude and thanks.

The researcher also expresses gratitude to her husband Dr. Nirmal Kumar Mitra for his encouragement to complete this work.

Utmost thanks and gratitude goes to my son Shankhanil Mitra for his constant encouragement and co-operation during this period.

It is a great privilege for the researcher to record her deep sense of gratefulness to the Headmasters / Headmistresses, the teaching staff and best wishes to all the beloved students of different schools.

The researcher offers her gratitude to her beloved mother Late Ila Sanyal and father Late Manish Chandra Sanyal for their continuous silent inspiration.

The researcher is indebted to her sister Smt. Bani Banerjee, Head of the Department, Department of Bengali, Bangobasi Morning College, Kolkata for her continuous encouragement.

Sincere thanks are also extended to Shri Supriyo Roy of M/s Tendercare Computers, Kalyani, for typing, printing & statistical analysis in computer.

Last but not least, my indebtedness goes beyond measure to Late Anima Moitra, Smt. Bhadra Bhattacharyya, Kinjal Bhattacharyya, Rudradip Banerjee, my brothers Shri Prabir Sanyal and Shri Pradip Sanyal.

Above all, the researcher thanks the almighty God for everything.

Date : 24.12.2013

Kalyani Mitra (Sanyal)

Kalyani Mitra (Sanyal)

Researcher

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GENERAL INTRODUCTION

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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, Oneri. 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 w ell 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,

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 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 fincings 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 being16 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 Daniyam, 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%) (χ^2 = 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

1.24)). 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 assesse 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).

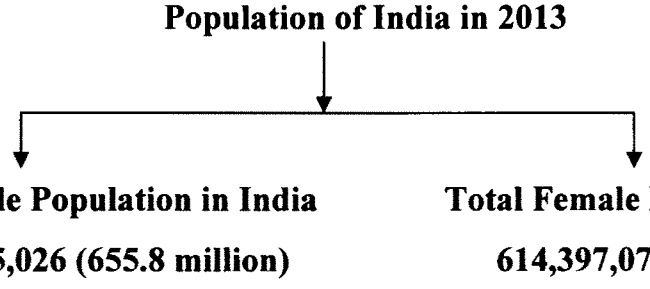
- All message areas were acceptable to at least 85% of respondents (acceptability rating range: 85% to 97%).
- More than 70% agreed that there is a need for more open discussion about STDs. Bivariate analyses identified areas where messaging tailored to specific subgroups may be helpful (e.g., 26% of 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 :

Year	Population
2011	1.21 billion
2012	1.22 billion
2013	1.27 billion

The genderwise population of 2013 is shown below :



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 psycho-social 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.

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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 only20% 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 Programmed 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 gonorrhoea, 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"**.

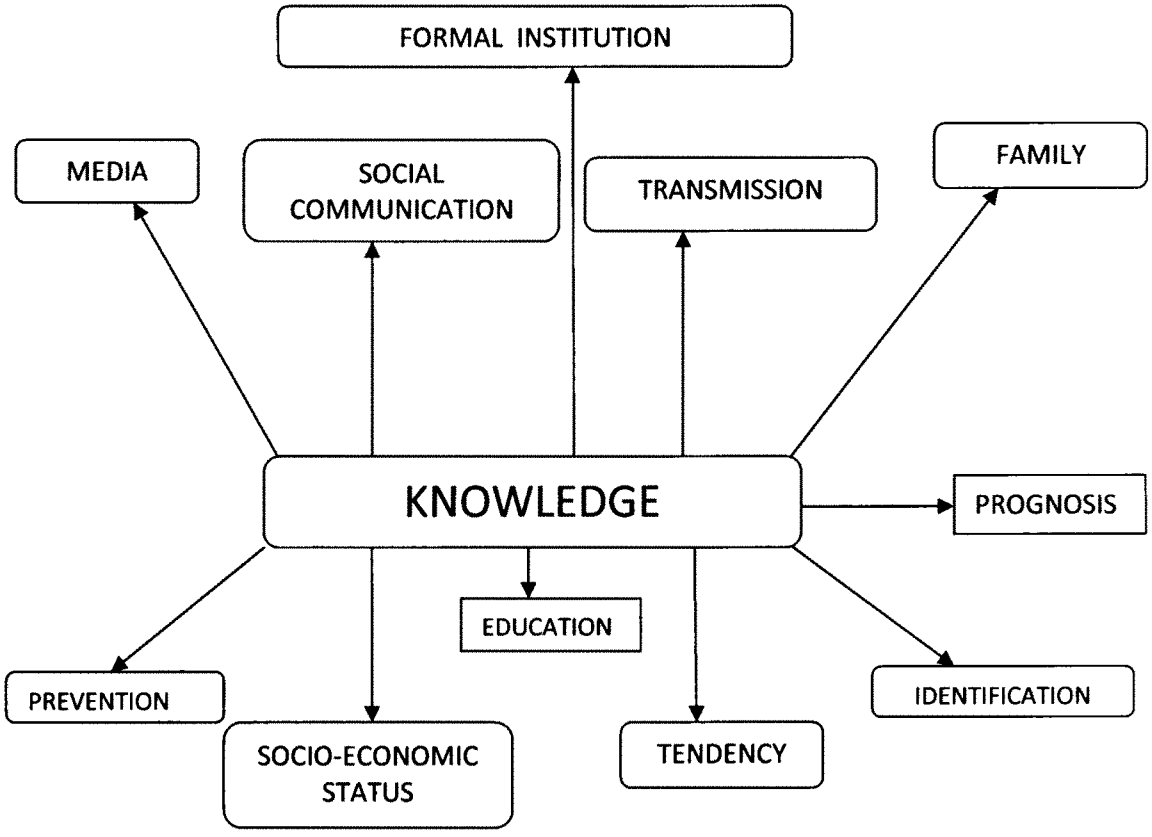
This study through its findings would create the necessary awareness among adolescent student towards sexual behavior. It will also equip the adolescents with the adolescents with some of the dangers involved in pre-marital sexual relation and therefore make them to manage their puberty with more caution.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

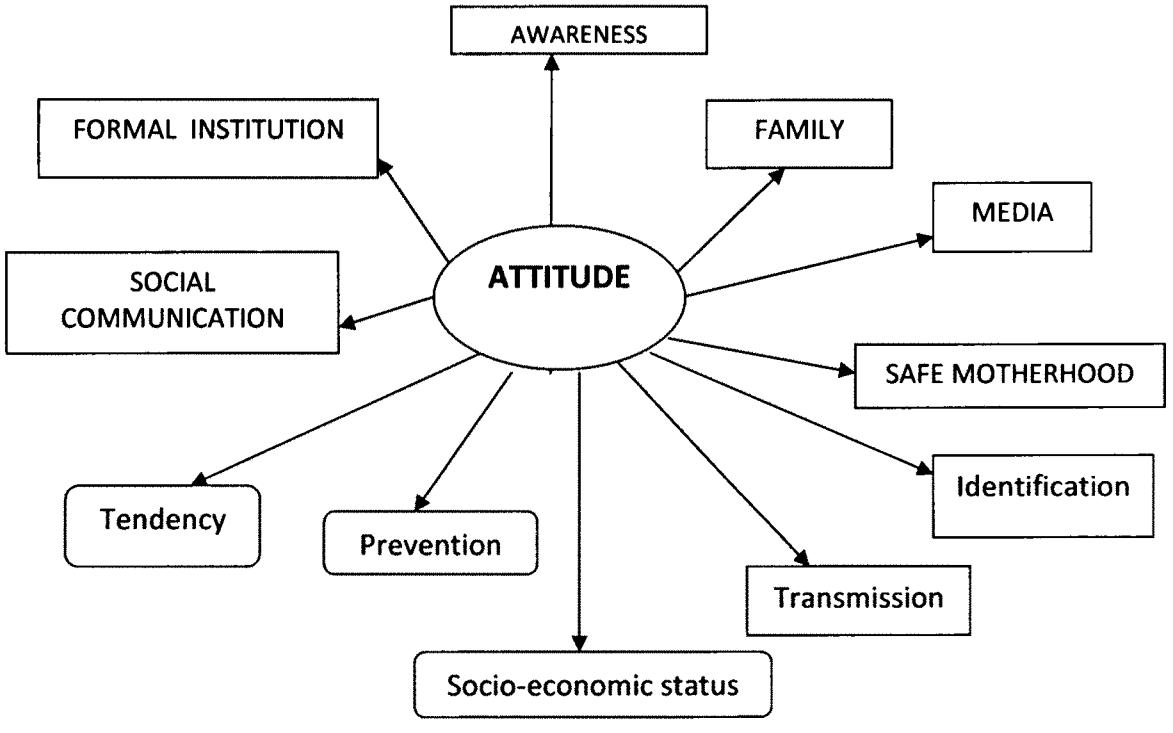
Non-Governmental Agencies in packaging effective and result oriented interventions on adolescents. Lastly, it will contribute positively to the expansion of knowledge in the area of adolescent sexual behaviour and also serve as an important reference tool for future researchers in this field.

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) :

$H0_1$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to their FORMAL INSTITUTION.

$H0_2$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to their FAMILY.

$H0_3$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to MEDIA.

$H0_4$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to their SOCIAL COMMUNICATION.

$H0_5$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to TRANSMISSION.

$H0_6$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to IDENTIFICATION.

$H0_7$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to PREVENTION.

$H0_8$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to their SOCIO-ECONOMIC STATUS.

$H0_9$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to their TENDENCY.

$H0_{10}$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to EDUCATION.

$H0_{11}$: 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) :

$H0_{12}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to their FORMAL INSTITUTION.

$H0_{13}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to their FAMILY.

$H0_{14}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to MEDIA

$H0_{15}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to their SOCIAL COMMUNICATION.

$H0_{16}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to TRANSMISSION.

$H0_{17}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to IDENTIFICATION.

$H0_{18}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to PREVENTION.

$H0_{19}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to their SOCIO - ECONOMIC STATUS.

$H0_{20}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to their TENDENCY.

$H0_{21}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to EDUCATION.

$H0_{22}$: 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) :

$H0_{23}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to AWARENESS.

$H0_{24}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to their FAMILY.

$H0_{25}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to their FORMAL INSTITUTION.

$H0_{26}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to their MEDIA.

$H0_{27}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to SOCIAL COMMUNICATION.

$H0_{28}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to their TENDENCY.

$H0_{29}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to TRANSMISSION.

$H0_{30}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to PREVENTION.

$H0_{31}$: There is no significant mean difference of urban and rural adolescent stucents for attitude towards sex education in respect to IDENTIFICATION.

$H0_{32}$: There is no significant mean difference of urban and rural adolescent stucents for attitude towards sex education in respect to SOCIO-ECONOMIC STATUS.

$H0_{33}$: There is no significant mean difference of urban and rural adolescent stucents for attitude towards sex education in respect to SAFE MOTHERHOOD.

Attitude Test (Male and Female) :

$H0_{34}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to AWARENESS.

$H0_{35}$: There is no significant mean difference male and female adolescent students for attitude towards sex education in respect to their FAMILY.

$H0_{36}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to their FORMAL INSTITUTION.

$H0_{37}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to their MEDIA.

$H0_{38}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to SOCIAL COMMUNICATION.

$H0_{39}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to their TENDENCY.

$H0_{40}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to TRANSMISSION.

$H0_{41}$: 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.

$H0_{82}$: There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to SOCIAL COMMUNICATION.

$H0_{83}$: There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to TENDENCY.

$H0_{84}$: There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to TRANSMISSION.

$H0_{85}$: There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to PREVENTION.

$H0_{86}$: There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to IDENTIFICATION.

$H0_{87}$: There is no significant relationship between academic achievement and adolescent female attitude towards sex education in respect to SOCIO-ECONOMIC STATUS.

$H0_{88}$: 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

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 32 World Association for Sexual Health (2008) 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 12-19years, 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 Heath (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 Sanhya 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 child hood could provide the key understandings overall aspects of adult behavior. If adolescent s are consider as period of great turmoil, the need for stucying 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.9 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 rel gion 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 evel 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 studen s of West Bengal Board of Secondary Education. She had not included adole..cent 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 conduting 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.

CHAPTER – II

REVIEW OF RELATED STUDIES

CHAPTER – II

REVIEW OF RELATED STUDIES

2.1 Introduction

This chapter deals with the review of related literatures and materials on the subject of this study. Review of related literature is an important step in the development of a research project. The review was done after a thorough exposition and exploration of avenues to identify literature related to the topic of investigation. It helps to determine the gaps, consistencies and inconsistencies the literature about the particular subject under the study. Review literature guides the investigator to design the proposed study in the scientific manner so as to achieve the desired result. 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.

A persons knowledge and attitude have a strong influence on his or her sexual attitude an behavior.

2.2 Review of Related Studies

Selwyn and Powell (2006) investigated how young people are using school based sources of Sex and Relationship Education (SRE) to obtain information and advice. Anonymous self completion questionnaires were administered to young people aged between 12 and 19 years in three secondary schools and 6 out of school youth settings. Follow-up focus group interviews were conducted on 12 groups of the young people from the school and out of school settings. The major findings were :

- The results of the study suggest that school lessons were the most frequent source of sex and relationship information for many young people.
- Lessons were reported to be the most useful for students who were male, younger and more educationally engaged.
- School lessons were widely criticized by young people as predominantly focusing on biological aspects of sex and relationships and lacking participatory element.
- Young people perceived a diminishing commitment to sex and relationship education by teachers as they progressed into later years.

S. L. Escobar-Chaves; S. R. Tortolero; C. M. Markham; B. J. Low; P. Eitel anc P. Thickstun conducted a study to determine of what is and is not known on t scientific basis of the effects of mass media on adolescent sexual attitudes anc behaviors. The major findings were :

- Although television is subject to ongoing tracking of its sexual content, othe media are terra incognita.
- Data regarding adolescent exposure to various media are, for the most part severely dated.
- Few studies have examined the effects of mass media on adolescent sexua attitudes and behaviors: only 12 of 2522 research-related documents (< 1% involving media and youth addressed effects, 10 of which were peer reviewed.
- None can serve as the grounding for evidence-based public policy. These studies are limited in their generalizability by their cross-sectional study designs, limitec sampling designs, and small sample sizes.

In addition, we do not know the long-term effectiveness of various social cultural, technologic, and media approaches to minimizing that exposure (e.g, V-Chips on television, Internet-filtering-software, parental supervision, rating systems) or minimizing the effects of that exposure (e.g. media-literacy programs)

P. N. Aniebue (2007) conducted a study to assess the knowledge and attitude to sex education among secondary school teachers in Enugu. The major findings were :

- Three hundred teachers, 215 females and 85 males were interviewed. The mean age of the teachers was 38.1+/-7.5 years. Sixty-nine (23.0%) had adequate knowledge of sex education and 282 (94.0%) approved the inclusion of sex education into the school curriculum.
- The commonest reason for disapproval of sex education was fear that it would lead to promiscuity amongst the students.
- Educational status and marital status of the teachers were significant determinants of positive attitude to sex education $p < 0.05$.
- The most appropriate age to introduce sex education according to the teachers is 11–15 years.

- Two hundred and thirty eight (79.3%) respondents were of the opinion that teachers needed to be trained to provide sex education to students and 244 (81.3%) admitted that sex education was not in the school curriculum.
- Secondary school teachers are in support of provision of sex education to students. However they need training and skills on how to present sex information in a positive manner to achieve the desired goal. There is need to include sex education in the school curriculum.

A study entitled "Safe motherhood : when to begin" conducted by M. Verma; J. Chhatwal and E. Mathew. Two thousand five hundred college girls were assessed for their knowledge and attitudes regarding sex, pregnancy and child rearing with the help of a pretested questionnaire. The major findings were :

- The site of menstruation was known to only 35.3% of the girls.
- The knowledge about the time and site of conception was 25.3% and 58.2%, respectively.
- Only 16.3% of the respondents knew the normal route of delivery although the duration of normal pregnancy was known to majority (87.7%).
- The girls were aware of the ideal timing of abortion (67.5%) but the safe method and legality were poorly known facts.
- Only 5% of the girls believed in pre-marital sex.
- More than half (54.9%) of the girls knew about some form of contraceptive, Copper-T being the best known.
- Nearly one fifth of the girls were either undecided or wished family members to decide about antenatal check-ups.
- The need for better diet and injections during pregnancy was well known although few (15.2%) were aware of the injections being tetanus toxoid.
- Only about 10% wanted a home delivery but one fourth felt that a Dai or a relative was suitable for conducting the delivery.
- An overwhelming majority of the students stated that knowledge about above facts was important and they would like to learn about them preferably during college education.

It is recommended that 'Family life education' be provided during pre-adolescent and adolescent years to ensure a safe motherhood and a healthy child.

W. Liu and E. Carolyn (2003) to examine Chinese parents' knowledge, attitudes, and practices about sexuality education for adolescents in the family. The major findings were :

- **Total Knowledge of Parents :** The mean of total knowledge score for fathers was 9.51 (SD = 2.81), for mothers was 8.97 (SD = 2.82). In the regression analysis, the overall model was significant, F (2, 806) =31.60; p <.001, accounting for 7.3% of the variance. Both parental education (t = 7.47; p <.001) and parent gender (t = 2.16; p <.001) were significant predictors of knowledge about sexuality. Fathers had more sexual knowledge than did mothers.
- **The Sources of Parental Knowledge about Sexuality :** Parents' own knowledge about sexuality came from magazines (43.5%), newspapers (18.9%), friends (11.9%), schools (8.9%), radio (4.7%),television (3.9%), parents (2.6%), books (2.1%), colleagues (1.6%), self (0.8%), spouse (0.7%), and movies(0.4%). Thus, media were the main source of sexual knowledge, and schools and their own parents were not seen as an important source of information by the respondents.
- **Participants' Sexuality Education from Their Own Parents :** Among 706 participants, 30.7% ofthem said that they had long ago once asked their parents, "Where did I come from?" Most of them(68.4%) had asked their parents this question prior to age 10. Mean of the age was 7.50. Fathers (mean = 6.61, SD = 2.52) had asked this question earlier than had mothers (mean = 8.38, SD = 3.63), and significant difference existed between fathers and mother (t = 3.41; p <.01).
- **Appropriate Age to Begin Sexuality Education for Children from Parents** Almost half of the parents (47.3%) believed that the appropriate age to begin sexuality education for children from parents should be 13-15 years old. Some of them (23.9%) thought 16-18 should be the appropriate age. (Note that this is almost 10 years beyond the point that our participants had asked their parents "Where did I come from?"). Just 2.2% of parents thought the appropriate age

should be 7-9 years old. Only 0.6% of parents said the appropriate age should be 1-3 years old.

- **Attitudes toward Sexuality :** Many participants (44.4%) thought sexuality to be an embarrassing topic, but most (60.3%) also believed that sex is a basic appetite like hunger. The majority (67.2%) had negative attitudes toward masturbation but positive attitudes toward old people (55.5%) and handicapped people(86 4%) engaging in sex. In the regression analysis, the overall model was significant, F (4, 828) = 11.61; p <.001, accounting for 5.3% of the variance. Parent gender (t = 4.22; p <.001) and parental education (t = 4.68; p <.001) were significant predictors of attitude toward sexuality; child gender (t =.57; p =.57) and child age (t =.26; p =79) were not significant. T-tests showed that more fathers (69 0%; mean = 3.56; SD =.97) than mothers(54.3%; mean = 3.25; SD = 1.02) agreed that sex is a basic appetite like hunger (t = 4.33; p <.001). More mothers (73.4%; mean = 2.17; SD = 1.03) than fathers (58.4%; mean = 2.54; SD = 1.14) had negative attitudes toward masturbation (t = 4.85; p <.001). More fathers (63.9%; mean = 3.62; SD =.78) than mothers (49.5%; mean = 3.43; SD =.72) believed that old people should have sex (t = 3.52; p <.001).
- **Attitudes toward Sexuality Education in General :** Most participants (66 8%) thought sexuality education is too conservative in modern China. The majority (72.2%) agreed that children do need sexuality education as they are growing up, and disagreed (55.3%) with the idea that sexuality education should be delivered only when children are grown up and ready for marriage. Most parents (87.9%)believed that more sexuality education would help teach children to be more responsible in their sexual behavior, and most (72.8%) did not think sexuality education would result in more sexual activity for children. However, most (72.6%) parents agreed that the best way to reduce the rate of teenager pregnancy is to tell the teenager, "Don't have sex before marriage." In the regression analysis, the overall model was significant, F (4, 825) = 2.69; p <.05, accounting for 1.3% of the variance. Parental education (t = 2.26; p <.05) and child age (t = -2.07; p <.05) were significant predictors of attitude toward sexuality education in general; but parent gender (t =.04; p =.97) and child gender (t =.40;

p =.69) were not significant.

- **Attitudes toward Sexuality Education in the Family :** Most participants (80.3%) agreed that parents should be the first teachers about sexuality education for their children. The majority (73.8%) thought parents should be more responsible than schools in providing sexuality education for their children. More than half of them (55.3%) thought parents should tell children about intercourse and contraception only when children are ready for marriage. In the regression analysis, the overall model was significant, F (4, 827) = 4.21; p <.005, accounting for 2.0% of the variance. Parental education (t = 3.54; p <.001) was a significant predictor of attitude toward sexuality education in the family; but parent gender (t = -.59; p =.11), child gender (t =.30; p =.76), and child age (t = -.96; p =.34) were not significant.
- **Attitudes toward Sexuality Education in School :** The majority of the participants (62.7%) thought that teaching information about sexuality in school is as important as teaching reading, writing, and arithmetic. Most (86.2%) believed that if children were given a good sexuality education in school, they would make wiser decisions in sexual behaviors when they grow up, and 85.6% of them agreed that children should learn about how to prevent AIDS in school. However, only 37.5% of parents agreed that children should get information about contraception in school, and only 37.6% agreed that boys and girls should be combined together in classes during sex education. Fathers and mothers had different attitudes toward some items. In the regression analysis, the overall model was significant, F (4, 827) = 6.62; p <.001, accounting for 3.1% of the variance. Parent gender (t = 3.11; p <.005) and child gender (t = 2.37; p <.05) were significant predictors of attitude toward sexuality education in school; but parental education (t =.93; p =.36) and child age (t = 1.83; p =.07) were not significant. T-tests showed that more mothers (47.6%; mean= 2.83; SD =.99) than fathers (30.5%; mean = 3.21, SD =.96) disagreed that boys and girls should be together in classes where the knowledge about sexuality is taught. More mothers (45.0%; mean = 2.82; SD = 1.00) than fathers (30.3%; mean = 3.17; SD =.98) disagreed that children should learn knowledge about contraception in school. The findings showed

fathers' attitudes were more positive than mothers' toward contraception education for children in school ($t = 4.97$; $p < .001$) and boys and girls being together in sex education classes ($t = 5.45$; $p < .001$). Parents with sons had more positive attitude toward sexuality education in school than did parents with daughters.

- **Attitudes toward Sexuality in the Media :** The majority of the parents (74.2%) agreed that there is too much sex on television and movies. Only 21.7% agreed that parents should not allow children to access the internet at home because of how easy it is for children to find sexual material on the worldwide web.In the regression analysis, the overall model was significant, $F (4, 822) = 5.11$; $p < 001$, accounting for 2.4% of the variance. Parent gender ($t = 3.35$; $p < .005$) was a significant predictor of attitude toward sexual media; but parental education ($t = 1.52$; $p = .13$), child gender ($t = .55$; $p = .58$), and child age ($t = 1.79$; $p = .07$) were not significant. T-tests showed that more mothers(79.5%; mean = 2.14; SD =.85) than fathers (67.1%; mean = 2.42; SD =.98) thought there is too much sex on television and in movies ($t = 4.32$; $p < .001$).
- **Total Attitudes :** The mean of attitudes was 76.36 for fathers (SD = 8.79), 74.10 for mothers (SD = 8.73). In the regression analysis, the overall model was significant, $F (4, 828) = 6.86$; $p < .001$, accounting for3.2% of the variance. Parent gender ($t = 2.61$; $p < .005$) and parental education ($t = 3.78$; $p < .001$) were significant predictors of total attitudes; but child gender ($t = 1.25$; $p = .21$) and child age ($t = .18$; $p = .86$)were not significant. Fathers had more positive attitudes than did mothers toward sexuality and sexuality education.

Key Components of Effective Interventions are adapted from Kirby (2007) Set measurable health outcomes with specific behaviors attached.

- Discuss behaviors through a public health model of prevention and give accurate statements regarding effects of those behaviors (Meyers, Meyers, & Grogg, 2004).
- Give information regarding knowledge, risks, peer influence, and other factors associated with sexual health.
- Try to include service-learning components with voluntary/paid work in the community.

- Increase parental communication through a family systems model (Bersamin *et al*, 2008).
- Create an environment in which students feel comfortable discussing personal issues.
- Consider the characteristics of the target group when developing activities.
- Introduce activities and topics, in a sequential order, that focus on specific health behaviors identified and that have relevance to students in class.
- Make sure that teaching methods employed will not only catch the attention of the students, but will also help change their health behaviors.

Poobalan *et al.* (2009) also reviewed sexual health education programs that were implemented in both the schools and communities for youth 10 to 18 years old. The researchers noted that across 30 different review studies, successful sexual education programs considered the biological and cognitive aspects of the youth who were targeted for the program. Interventions that consisted of active involvement of participants, such as practicing negotiation skills, showed higher rates of success. Further, this review noted that programs that taught abstinence were effective only when also emphasizing other values as well as skills in contraception use.

Many studies do not have an underlying theory used to support a sexual education program; most use practical knowledge or common sense. The problem with understanding how theory is applied to sexual health education curricula is that publications often just mention the theory (if at all), and do not provide a description of how the theory was used to guide the development and implementation of the programs. Poobalan *et al.* (2009) noted that Bandura's social learning theory, which provides behavioral modeling skills to help the teen negotiate challenges of socia and peer pressure, appears more successful in creating behavioral changes in contrast to the theory of reasoned action (Fisher, Fisher, & Rye, 1995) and the Health Belief Model (Glantz & Bishop, 2010).

Although it can be time consuming to maintain, service learning components have been shown to have long-term benefits when combined with sexual health instruction in delaying sexual initiation by youth (Kirby, 2007). Service learning

involves students being placed in community organizations or businesses to gain practical experience. Students benefit not only from working at the site, but also from reflecting about the work they have performed. Further, programs should be al ered based on the needs of the population that is to be targeted. For instance, students who are already sexually active should learn about contraceptives as well as positive behavioral skills regarding their sexual practices (Fisher, Fisher, Bryan, & Miso ich, 2002; Kirby, 2007). Often, contraceptive knowledge and STI prevention prog ams show only short-term gains among those who are already sexually active (Coyle *et al.*, 2006; Fisher *et al.*, 2002). It is much more difficult to change sexual behaviors once they have begun than to delay the onset of those behaviors. Even so, it has been shown that older teens respond to the intervention by reporting increased condom usage for sex (Poobalan *et al.*, 2009). In addition, there is little known about the moderating effect of culture and ethnicity on teens' response to these programs. This is an area of needed research vis-Ã -vis program effectiveness.

Guidelines for the Sexual Health Education Component of Comprehensive Health Education (CT Guidelines) is to provide a framework to promote the sexual health and wellbeing of Connecticut's children and youth within a comprehensive health education program. The CT Guidelines offer guidance to local school districts for the development and implementation of sexual health education that reflects the values and norms of the local community. Sexual health education programs include age-appropriate, medically accurate information on a broad set of topics related to sexuality, including human development, relationships, decision-making, abstinence, contraception, and disease prevention (SIECUS, 2010). These developmentally appropriate programs start in prekindergarten and continue through Grade 12. The overall goal of sexual health education is to provide young people with the knowledge and skills to promote their health and well-being as they mature into sexually healthy adults (SIECUS, Guidelines, 2004).

The CT Guidelines contain information and resources to assist administrators, teachers and parents / guardians in :

- making the connection between sexual health and student health and education outcomes;

- implementing district and school policies that support medically accurate sexual health education programs that address the health needs of all students;
- identifying desired curriculum goals, objectives and student outcomes;
- developing an effective PK-12 sexual health education program using developmentally appropriate, medically-accurate and evidence-informed curricula and resources;
- implementing a sexual health education program using evidence-informed curricula, effective teaching strategies, and student assessments delivered by certified health education teachers appropriately trained in sexual health education; and evaluating the implementation of program goals, objectives and student outcomes.

Oladepo and Akintayo (1991) view sex education as aprocess of acquiring sex knowledge, positive attitudetowards sexual acts, male and female relationship ardthe role of parents. Sex is not limited in fact to genitalactivities. In reality, sex describes a huge range of activities. On this basis, the concept of sex education can be outlined asfollowed :

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.

In the opinion of Mba (2006) the following should constitute the content of sexuality education :

- Human growth and development.
- Relationships.
- Life skills.
- Sexual attitude and behaviour.

- Sexual health.
- Society and culture.

School-based Sexuality Education :

UNESCO (2009) argues that sexuality education has a number of mutually reinforcing objectives :

- increase knowledge and understanding (such as about sex and the law, the nature of sexual abuse and what to do about it);
- explore and clarify feelings, values and attitudes (developing self-esteem and feeling proud of one's body);
- develop or reinforce skills (saying "no", resisting pressure);
- promote and sustain risk-reducing behaviour (seeking help).

Commitment to using human rights (WHO, 2006a). Rights that are enshrined in laws and policies at international and national levels include :

- the rights to life, liberty, autonomy and security of the person;
- the right to education and access to information (including on sexual and reproductive health issues);
- the right to privacy;
- the right to non-discrimination;
- the right to be free from torture or cruel, inhumane or degrading treatment or punishment;
- the right to self-determination within sexual relationships;
- the right to the highest attainable standard of health, including sexual health.

The recent surveys conducted by the ICDDR, Centre for Health and Population.

- Research and other organizations in Bangladesh among adolescents have consistently documented their generally poor knowledge of sexual and reproductive health. Furthermore, what is _known' is often incorrect and derived through communication with friends who are equally not knowledgeable.A needs assessment' study carried out by ICDDR,B has also documented that adolescents

in Bangladesh rarely discuss sexual and reproductive issues neither with their parents nor with their teachers. This study explored whether adolescents desired to have reproductive health information and from what source they preferred to have this information. Findings of the study showed that easy-to-read information materials were the most preferred sources. This study also found that there exist widely-varied opinions among parents, teachers, and decision-makers about the desirability of providing adolescents with sexual and reproductive health information (UNICEF, 2010).

- A recent survey in Nigeria by the Ministry of Health stated that through purposive sampling technique,41 volunteers(respondents)participated in the study. Through in depth interview during focused group discussions, it was revealed that 87% of the respondents were aware of gonorrhea and AIDS but majority were not aware of other STIs.Another recent survey by the Action Health incorporated (1995) on sexual behaviour, STIs awareness showed that among some sexually active persons interviewed, 17.43% women could not resist having sex with their boy friends, while 40.4% of the men had sex with girl-friends or concubines within the two immediately preceding months. The most sexually active groups are 18-24 years. The result of the survey also showed that 3.1% of the responcents experienced some symptoms of sexually transmitted infections (STIs) within two months of relationship (Susan, 2001).

Kirby, Laris and Rolleri (2006) have carried out a detailed analysis of the different elements in the development, content and implementation of effective programmed in an effort to capture the features that make them successful. They have concluded that the large majority of effective sex education programmed include a core set of characteristics that are not always part of programmed that had only a limited impact on sexual behaviour. The characteristics of effective sex education programmed are summarized below. During the development of the curriculum the development team should :

- involve experts in research on human sexuality, behaviour change and related pedagogical theory.

- consult with young people.
- assess young people's reproductive health needs, their behaviours, their beliefs and perceptions of risk, their attitudes and skills, and their intentions regarding sexual behaviour, condoms and contraception.
- use a logic model approach that specifies the reproductive health goals the programme wants to achieve, the specific sexual behaviours that would lead to those goals, the cognitive risk and protective factors affecting those behaviours, and activities involved in changing those cognitive factors.
- design activities that are sensitive to community values and consistent with available resources including staff time, staff skills, the space available for group activities and access to supplies.
- test the programme using a pilot programme and obtain on-going feedback from the learners about whether and how the programme meets their needs.

Wenli Liu and Carolyn Edwards, 2003 conducted a study on Chinese parents' knowledge, attitudes, and practices about sexuality education for adolescents in the family to examine Chinese parents' knowledge, attitudes, and practices in the area of sexuality education for adolescents.

Social Problem related to Sexuality :

- **Teenage pregnancy :** In developed countries, teenage pregnancies are associated with many social issues, including lower educational levels, higher rates of poverty, and other poorer life outcomes in children of teenage mothers. Teenage pregnancy in developed countries is usually outside of marriage, and carries a social stigma in many communities and cultures. Many studies and campaigns have attempted to uncover the causes and limit the numbers of teenage pregnancies.
- **Infertility :** A woman is usually blamed and looked down upon for not being able to give birth to a child. The cause of infertility could be in the males as much as in the females; or could be in both. Many infertile couples resort to religious rituals only to experience disappointments. Adopting a child is the surest way to become parents.

- **Gender discrimination :** The birth of a female child is not so welcome as that of a male. The female child receives a second grade treatment throughout her life in matters such as education, nutrition, job opportunities, pay and health care facilities. She is conditioned to be submisseve, non-decisive and dependent.
- **Amniocentesis and female foeticide :** Examination of amniotic fluid from pregnant mother to detect the sex of the foetus (Amniocentesis) and aborting the same if female, is a criminal act.
- **Horoscope matching for marriage :** There is no scientific evidence proving the credibility of horoscope-matching for marriage. Such marriages may or may not be happy. Though there are no perfect methods for selection of a partner, the horoscope-matching should not be entirely relied upon.
- **HIV/AIDS :** The highest price man has to pay for his sexual lust is death through HIV/AIDS. There is no cure for this disease. Education and prevention are the only ways out.
- **Sexual Abuse:** Sexual abuse mostly of women and children are ghastly, cruel and inhuman acts. All individuals are equal and everyone should be treated with dignity and respect. The culprits of sexual abuse should be strictly dealt with.
- **Pornography :** Pornography and blue films depict pervasive sexual behaviour and may bias the minds of adolescents leading to false beliefs and wrong attitudes in them.
- **Child Marriage :** In some some parts of India the child marriages are still in vogue. Teenage parenthood is harmful for the parents as well as to the child.
- **Dowry :** Many young women fall victims to the social evil of dowry. They are tortured, deserted or killed.
- **Devdasees :** In some cultures the female child is "married" to God or given to Godess to fulfill the vow by the parents. The female when grown up finds no way out other than prostitution.

Sex education helps the adolescent in following ways :

- The transition from the childhood to the adulthood is smooth so as adults the right attitude will be there before marriage and after marriage.

- Reproductive organs, process of birth , taking care of reproductive organs especially for the girls during the periods can be handled.
- The issues like teenage pregnancy, abortion and death during abortion, unwanted pregnancy after and before marriage, gap between children etc. can be handled
- 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.

The Role of Parents regarding Sex Education :

The role of parents in the lives and decision-making processes of youths is often underestimated. Although the transition to greater independence is the hallmark of this developmental phase, parents clearly have a role and exert significant influence in the choices young people make about sex.

- Teenagers are most likely to seek sexual information from their friends (61 percent). Although they are least likely to seek information from their parents (32 percent), a significant number of teenagers (43 percent) express a strong desire to have more information on how to talk to their parents about sex and relationships (Kaiser Family Foundation, 2000a).
- Nearly 80 percent of teenagers indicate that what their parents have told them and what their parents might think influence their decisions about sex and relationships (Kaiser Family Foundation, 2000b).
- The more that teenagers are satisfied with the mother–child relationship, the less likely they are to be sexually experienced (Advocates for Youth, 1997). Conversely, poor communication with parents about sex and safe sex practices, and parental substance abuse are also linked with risky sexual behaviors (Fraser, 1997).
- Poor parent–child relationships are associated with depression in adolescents. For young men, this may lead to more frequent use of alcohol, which is strongly linked

with early sexual activity.

- For young women, estrangement at home often leads them to seek and establish intimate relationships outside the family, seeking the warmth and support they lack at home. Also, girls experiencing sexual abuse in the family are linked to increased risk of teenage pregnancy (U.S. Public Health Service, 2001).

The Role of Peers regarding Sex Education :

The peer group is an important factor in adolescent development and has some bearing on teenagers' decisions about sex.

- Adolescents (ages 13 to 18) report that they are most likely to get information about sexual health issues from their peers (Kaiser Family Foundation, 2000a).
- Pressure to engage in sex increases during middle adolescence (Fraser, 1997) Peer group attitudes about sex influence the attitudes and behaviors of teenagers.
- Youths who resist engaging in sexual activity tend to have friends who are abstinent as well. They also tend to have strong personal beliefs in abstinence and the perception of negative parental reactions. Youths who are sexually active tend to believe that most of their friends are sexually active as well, that rewards outweigh the costs of sexual involvement, that sex overall is rewarding, and that it is all right for unmarried adolescents over age 16 to engage in intercourse (Advocates for Youth, 1997).

The Role of Media Regarding Sex Education :

The images that pervade the media (television, music videos, the Internet, and the like), are increasingly more explicit in sexual content.

- More than half (56 percent) of all television shows contain sexual content averaging more than three scenes with sex per hour. For shows with sexual content, just 9 percent include any mention of the possible risks of sexual activity, or any reference to contraception, protection, or safer sex (Kaiser Family Foundation, 1999).
- Among young people 10 to 17 years of age who regularly use the Internet, one-quarter had been exposed to unwanted pornography in the past year, and one-fifth

had been exposed to unwanted sexual solicitations or approaches (U.S. Public Health Service, 2001).

- Although media images of sex and sexuality may be socially defined as a negative influence on teenage sexual decision-making, there is considerable potential for the use of media in conveying messages about responsible sexual behavior. For example, more than one-half of high school boys and girls indicate learning about birth control and pregnancy prevention from television (U.S. Public Health Service, 2001).

The Role of Communities Regarding Sex Education :

The circle of influence on sexual decision-making extends beyond the individual and family system. Key considerations of these extended influences include :

- Impoverished communities that lack sufficient employment and educational opportunities, access to providers and medical services, and overall social disintegration are associated with higher sexual risk taking (Fraser, 1997).
- Schools have unique opportunities to provide education and information, as well as structured activities that discourage unhealthy risk taking. Greater involvement in schools is related to decreased sexual risk taking and later initiation of sex, pregnancy, and childbearing (U.S. Public Health Service, 2001).
- Young women who were the least successful in high school are the most likely to become pregnant (National Association of Social Workers [NASW], 2000). Substance use and abuse are also factors in sexual decision making. One-quarter of sexually active high school youths reported using alcohol or drugs during their most recent sexual encounter (Kaiser Family Foundation, 2000c).
- Youths often encounter barriers in obtaining needed information and services regarding their sexual health. Policies on medical confidentiality, parental involvement and consent, as well as the nature of sex education available to youths are important considerations in sexual health outcomes.
- The political focus abstinence-only sexuality education has greatly impacted the nature and scope of information and services available to youth. This focus on

abstinence-only until marriage however, contradicts the beliefs of the majority of Americans who favor comprehensive sexuality education that includes abstinence as well as information on contraception, pregnancy prevention, STDs, and HIV/AIDS (Advocates for Youth & SIECUS, 1999).

Role of School regarding Sex Education :

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 misconcepts 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 misconception.

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 makingschools 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 favorable 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 acults; however the problem is having unsafe sex and hurting people through sexual choices.

Sex education in schools is being given increasing importance to inform students about issues related to sex. It is considered important for societies that its individuals are well informed about sex, sexual practices, child sexual abuse and sexually transmitted diseases. It can help children understand the impact of sex in their lives.

Indian Adolescents :

Post 2005, in the wake of the controversy around sex education; the program was restructured as the Adolescence Education Program (AEP) that focused on enhancing life skills among adolescents to enable them to respond to real life situations effectively. Positioning AEP in the wider context of an educational approach to develop life skills to empower young people proved to be a useful strategy with a clear focus on age/ experience appropriate and culturally sensitive information. Furthermore, National Curriculum Framework (2005) that guides the school curriculum across the country recognized Adolescence Education as an important area in school education.

With National Council of Educational Research and Training (NCERT) as the co-ordinating agency; the program works through both co-curricular and curricular formats. The co-curricular approach works through the three national school systems – Central Board of Secondary Education (CBSE), Navodaya Vidyalaya Samiti (NVS) and Kendriya Vidyalaya Sangathan (KVS). The program works on a cascade training approach that has created a pool of master trainers who orient nodal teachers who are entrusted with the responsibility of transacting life skills based education (16 hours module) to secondary school students through interactive methodologies. Nodal teachers are provided guidelines and materials to facilitate the transaction process. Advocacy sessions are organized with principals of participating schools and sensitization sessions are held with parents. By end 2010, at least two nodal teachers from 3500 CBSE schools, all the 919 KV schools, and all the 583 NVS schools have received orientation on adolescence education issues.

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.

More robust and regular monitoring mechanisms have been introduced and a total of 4 consultants have been placed in different implementing agencies to ensure regularity and quality in reporting.

Concurrent evaluation of the program was fielded across 200 schools to assess the program's achievements and identify gaps for improved programming. The quantitative and qualitative data from students, teachers and school principals is being analyzed and the report should be available in April, 2011.

Kalinga Institute of Social Sciences (KISS) in the state of Orissa reaches out to 12,000 tribal girls and boys at different stages of schooling. Since 2009, UNFPA's Orissa office is partnering with KISS to provide the adolescents with accurate age appropriate and culturally relevant education and build skills on issues related to their health. Relevant resource materials have been developed and the program is working on enhancing capacities of teachers to transact the curriculum in class room settings. The institute has introduced life skills focused adolescence education in its secondary classes and is also working towards building a strong research base on issues related to adolescent health and well-being.

In the state of Bihar, UNFPA has entered a partnership with the Department of Human Resources Development, Govt. Of Bihar to reach out to young people in approximately 1000 secondary schools (across 9 districts) in Bihar with information and skills for improved health and well being. Center for Development and Population Activities (CEDPA) is the lead technical agency responsible for providing technical assistance and ensuring that adolescent concerns get institutionalized in the government system.

Curricular Approach : The NCF 2005 clearly outlines that rather than a stand-alone program the AEP should become an integral part of school education. It is noteworthy that although UNFPA's current work at the national level with the MHRD has a large co-curricular component, our larger goal is to mainstream the components of adolescence education in the larger context of education and curricular formats. In this

regard, the content analysis exercise undertaken by NCERT shows that textbooks in different parts of the country have integrated adolescent education issues in various scholastic subjects. Efforts are underway for more comprehensive inclusion of adolescent concerns in the curriculum. The Council of Boards for School Education (COBSE) is involved in advocacy efforts for curricular integration of life skills in selected state education boards in India with relevant stakeholders. *Curricular interventions* also include UNFPA's ongoing support for integration of life skills in the secondary curriculum of National Institute of Open Schooling (NIOS) that enrols approximately 400,000 learners each year. In order to maximize the reach of the integrated lessons, the most popular subjects of Home Science, Social Science, Science and Languages (Hindi and English) were identified for integration.

In 2005, life skills focused adolescence education was introduced as a separate subject in the senior secondary curriculum across approximately 4500 government schools in the state of Rajasthan and the subject is now institutionalized within the government schools.

Reaching Out-of-school Adolescents : UNFPA and the Ministry of Youth Affairs and Sports (MOYAS) have been collaborating since 2003 and have been supporting the adolescent health and Development (AHD) project with the overall objective of ensuring a healthy and safe growing up process for out-of-school adolescents. The support has also been in keeping with the focus of the National Youth Policy (currently under revision) on the "need for youth to be equipped with requisite knowledge, skills and capabilities". The partners involved in implementation of the project have been the *Nehru Yuva Kendra Sangathan* (NYKS), the National Service Scheme (NSS), and the Rajiv Gandhi National Institute of Youth & Development (RGNIYD).

In 2011, the collaboration with the Ministry of Youth Affairs and Sports has been re-strategized with the objective of consolidating teen clubs in the 5 UNFPA priority states of Orissa, Madhya Pradesh, Bihar, Rajasthan and Maharashtra for better quality and enhanced impact.

The revised strategy that will be implemented by the Nehru Yuva Kendra

Sangathan (NYKS) proposes to provide (unmarried) adolescents with life skills focused experiential learning on reproductive and sexual health issues in a gender-sensitive manner, provide them with information on education and skills building for better employability and to improve access to youth friendly and gender sensitive services in the public and private sector.

In order to achieve these objectives, UNFPA has engaged an NGO 'Restless Development' that will provide technical support to the Teen Clubs. Restless Development will facilitate capacity building of NYKS functionaries, including the District Project Officers (DPOs) placed at the district level and the Adolescent Peer Volunteers (APVs) placed at the block level and help institutionalize accountability in the system through establishment of clear monitoring protocols.

Given that teen clubs are village-based institutions, stratified plans are being proposed to reach out-of-school adolescents [in a village of approximately 1000 population, there are likely to be 25% adolescents (250). Based on recent data, nearly 60% (150) are likely to be out-of-school, hence potential target for the project] through different levels of engagement. One level of engagement is with members of the Teen Clubs, around 30 young people. It is proposed to identify 4 enthusiastic members of the Teen Clubs who will be trained to facilitate activities at the teen clubs under the close supervision of Adolescent Peer Volunteers. In order to motivate peer educators, they will be preferentially linked to education and skill building opportunities for better employability. Certificate courses to train and accredit them offered through the Indira Gandhi National Open University could also serve as an important value addition to the Curriculum Vitae of peer educators that will be explored.

The second level of engagement will be with the remaining 120 young people in the village who will be reached through mass media activities like village-based fairs that could be organized twice a year around themes related to adolescent issues. The fairs could include enter-educate activities like films, games, chat shows and stalls for youth friendly services, including health, and linkages with education and livelihood opportunities available in geographic proximity. These fairs could serve as opportunities to sensitize adolescents as well as enrol new members to the teen clubs.

It is not possible to reach out to adolescents, particularly girls without sensitizing the larger community of adults who interact with them, for example their parents, teachers, opinion leaders and others. In this context, the entire village community has been recognized as the third level for engagement. They could be sensitized through special stalls set up during the village fairs. Other existing village-based fair should be identified for sensitizing the community members at regular intervals.

In order to ensure continuing long term engagement with young people, UNFPA will explore setting up of youth centres at district or block level as a dedicated space for organizing youth friendly activities. It is proposed to involve National Service Scheme (NSS) volunteers and Peer Educators to lead these youth centres. These NSS and PEs would be trained to manage the youth centres. UNFPA is particularly interested in energizing the link between young people enrolled in colleges and those in out-of-school situations (drop outs and/or never been to school). This particular link has immense potential in terms of creating an ongoing link between young people in urban colleges and those in rural settings so that both are able to better understand each other's realities. It is proposed that NSS volunteers may be involved in organizing the community mobilization campaign as well as jointly coordinating the functioning of youth centres along with the peer educators. UNFPA will explore the feasibility of this strategy.

The above strategy will be implemented in 1860 Teen Clubs in 10 districts of the 5 UNFPA states. Thus there will be 1500 teen clubs that will be directly implemented and monitored by NYKS. UNFPA will set up 360 additional model teen clubs (120 clubs each in the states of Rajasthan, Madhya Pradesh and Orissa) through Restless Development.

The Rajiv Gandhi National Institute for Youth Development is being supported for its Masters Programme on Life Skills Development. Focus will be on building the capacities of faculty and development of a robust methodology for research in life skills. A Community Radio program, the first of its kind in the country that is being run by young people is also being supported by the CO.

In four blocks of four districts each in the state of Rajasthan, support is being

provided to an initiative for out of school adolescents that reaches out to approximately 20,000 adolescent girls with the objective of empowering them with knowledge and life skills for improved reproductive and sexual health. Adolescent girls clubs have been established in these blocks and awareness sessions are held every week through a village level animator. The programme also focuses on connecting these out of school adolescent girls to formal or non-formal education and aims to address the larger issue of early age at marriage. The programme's learnings have been utilised for the approval of the national level out of school adolescents programme (SABLA) by the Government of India. The resource material developed under the UNFPA supported programme has been nationally disseminated to all the states where the SABLA programme is being implemented.

In Sehore district of Madhya Pradesh, UNFPA is supporting a pilot (with the NGO Samarthan as the implementing partner) for empowering out of school adolescents and youth with knowledge and life skills for improved reproductive and sexual health. The pilot is being implemented from 2009 and attempts to develop the capacity of youth to better understand reproductive health (RH) issues, to engage them in demand generation of RH services and in planning and monitoring of utilization of key RH services by the clients. The pilot also aims to create a platform for youth to raise their issues and concerns during *gram sabhas* and at block headquarters through public dialogue. Initial results of the pilot are quite encouraging and there is marked improvement in regular organization of village health and nutrition days and uptake of RH services through demand generation.

Population stabilization is one of the major development challenges for India today. What happens in the future depends, to a large extent, on the decisions taken by adolescents as they enter their reproductive years. Adolescents in the age group 10-19 years constitute 21.4 percent of India's population. Within this paradigm of population and development related issues, the role of adolescents cannot be overlooked. 'Adolescents in India : A Profile' is a publication of the UN Inter Agency Working Group on Population and Development (IAWG-P&D). With UNFPA as the lead agency of the group, the other member organizations are FAO, ILO, UNICEF, UNIFEM, UNAIDS, WB,UNDCP, WHO, UNDP, UNESCO and UNHCR.

In keeping with its commitment to the International Conference on Population and Development, 1994, Cairo, the group aims at linking population concerns with development issues. It stresses a people-centred approach to development and a holistic vision of people's lives. In attempting to understand population and development related issues, it emphasizes multi sect oral linkages and coordinated interventions. Its focus is on sustainable human development. These gu ding principles provide the background canvas fort The analytical framework of the Profile.

The working group's selected theme for the year1999-2000 is 'Adolescents'. In view of the group's current priority, the Profile aims at securing a niche for adolescents and adequate visibility for them in policy and programmatic efforts of the Government,the UN System and non-governmental organizations.The Profi e is divided into four sections. The firs t section outlines the status of adolescents in India focussing on certain indicators such as demographic status, nutrition and health needs, education and literacy levels, vulnerability to HIV/AIDS and drug abuse, econ omic and employment requirements. This section of the Profile raises some pertinent issues with regard to adolescents.

It provides certain pointers to possible interventions and programming activities. Section Two proceeds to map out the various activities being carried out in relation to adolescents in the UN System. Section Three provides a brief description of government policies and programmes on adolescents. Section Four presents snapshots of selected NGO activities and programmes on adolescents.As far as the definition of the category 'adolescents 'is concerned, the importance of achieving a conceptual clarity is emphasized throughout the Profile. The Profile does not claim to produce either a comprehensive or an exhaustive account of the status of adolescents or of the policies and programmes, directly or indirectly, oriented towards them. It is,instead, an overview which aims at providing a background to adolescents in India, highlighting their major concerns, identifying gaps in current policies and programmes and suggesting indicators for future initiatives and interventions. The guiding framework in compiling the Profile has been the South Asia Conference on the Adolescent, New Delhi, 1998. The idea behind conducting a UN mapping exercise and presenting an overview of the status, policies and programmes on adolescents, has

been to elucidate possible areas for joint interventions on adolescents. The Profile presents an all-India perspective not aim at detailing state-level data regarding the status of adolescents, policies and programmes on them. The Profile draws largely on available secondary literature, besides drawing on some interviews conducted with focal persons of various UN Excerpts of the Profile will be a part of the IAWG-P&D website whereby the information provided in the Profile can be constantly updated.

It is thus expected to be an evolving document organizations, some Government officials and some NGO experts. 'Adolescents in India : A Profile' aims at sensitizing readers to the importance of recognizing adolescents as a distinct group with their own unique needs and concerns. It is indicative of the urgency to make adolescents and issues related to them the focus of government policies and programmes, the UN System's interventions and the initiatives nongovernmental Organizations.

Impacts of Sex Education :

Sex education is broadly defined as any instruction in the processes and consequences of sexual activity, ordinarily given to children and adolescents. Today the term usually refers to classroom lessons about sex taught in primary and secondary school, usually as part of biology class (Microsoft Corporation, 2003). Historically, the task of educating adolescents about sex has been seen as the responsibility of the parents. However, parent-child communication in sexual matters may be hindered by parental inhibitions or by various inter-generational tensions. Moreover, studies have shown that children's rarely receive their first information on sexual matters from their parents (Microsoft Corporation, 1993).In the late 19th century, attempts by educators and social workers to supplement parental sex instruction concentrated on what was then known as "social hygiene" basically, biological and medical information about human reproduction and venereal disease (Microsoft Corporation,2003).

In the post World War II era, however, the relaxation of traditional social norms governing sexual activity, as well as the torment of sex related information available to children via mass media, made a mere sophisticated and Comprehensive

program me of sex education seem desirable to many. The subjects explained and discussed as part of sex education include the physical processes of human reproduction, the working of male and female organs, the origin, dissemination and effect of sexually transmitted infections, family roles structures, the ethics of relationships,and the emotional and psychological causes and consequences of sex(including under-age sex), marriage and parenting. Safe sexual practice is being increasingly focused on with the advent of the Acquired Immune Deficiency Syndrome (AIDS).

Frequently, however, the larger societal and ethical question stemming from sexual behaviour, being highly subjective in nature, is not regarded as appropriate to a strictly factual approach. At all levels of instruction, teaching methods may include visual aids,lectures and moderated discussions.

Although many parents approve of some type of sex education in schools, in practice there has always been some opposition to such classes. In many schools in Britain the policy is to send a letter of consent to the parents of each child before the study is embarked upon to enable the parents to remove their children from classes should they so wish. Some parents object to sex education on the grounds of religion and morality (Microsoft Corporation, 1993 and 2003).

According to World's Youth (2001) sexuality education for youth as long been hampered by adults who are concerned that such knowledge will promote promiscuity among the youths. Schools are a key location for reaching large numbers of youths. However, because many youths are not in school, community based approaches are also needed in many areas.

Elements for a Successful Sex :

- Give a clear message on risky sexual acts. Focus on reducing a few key acts that lead to unintended pregnancy or STI infection.
- Use a behaviour change framework to define and evaluate activities.
- Provide basic accurate information about the risks of unprotected intercourse and ways to avoid unprotected intercourse.
- Include activities that address social pressures on sexual act.

- Provide modelling and practice of communication, negotiation and refusal skills.
- Employ variety for teaching methods designed to involve participants and have them personalize the information.
- Use teachers and peers who believe in the program they are implementing and provide training for them.
- Incorporate behavioural goals, teaching methods, and materials that are appropriate to the age, sexual experience and culture of the students.

Guidelines for Comprehensive Sexuality Education in Nigeria (1995) explains that sexuality education is a life long process of acquiring information and forming attitude, beliefs, and values about identity, relationships and intimacy. It encompasses sexual development, reproductive health, interpersonal relationships, affection, intimacy, body image and gender roles. Sexuality education addresses the biological and socio-cultural, psychological and spiritual dimensions of sexuality from :

1. The cognitive domain.
2. The affective domain.
3. The behavioural domain.

It also includes the skills to communicate effectively and make responsible decision. The primary goal of sexuality education is the promotion of sexual health. The World Health Organization (1975) defines sexual health as "the integration of the physical, emotional, intellectual and social aspects of sexual being in ways that are positively enriching and that enhance personality, communication and love". Every person has a right to receive sexual information and to consider accepting sexual relationships for pleasure as well as for procreation.

Sex education as shown by Ariba (2000) may be regarded as a method of achieving appropriate and safe sexual behaviour by a given population through systematic persuasion. An elaborate definition of sex education is given in a paper written by Emenike (1981) who argues that it is education for effective living with an understanding of human sexuality is an integral, inseparable part of it. The creation of satisfying interpersonal relationships rather than simply the exercise of sex would be the goal, and it would involve the whole population and the total life span, going far

beyond genital behaviour to include roles and inter sex expression of love and affection. Shuyler, (1976) defines it as education which teaches the young person what he or she should know for his or her personal conduct and relationship with others.

Problems related to Teenage Pregnancy :

Adolescent pregnancy is not just a health issue; it is a development issue as well. It is rooted in poverty, gender inequality, child marriage and lack of education. It often means an abrupt end to childhood, curtailed education and lost opportunities, the experts said. They are shaping humanity's present and future. With the right skills and opportunities during adolescence, girls can invest in themselves, their families and communities, the report said.

Frederika Meijer, UNFPA Representative of India and Bhutan said : 'The greatest returns on investment come from investing in adolescent girls. Educated and healthy girls have the opportunity to reach their full potential and claim their human rights. They are also more likely to marry later, delay childbearing, have healthier children, and earn higher incomes.'

Breaking the cycle of adolescent pregnancy requires commitment from nations, communities and individuals in both developed and developing countries to invest in adolescent girls. Governments should accelerate efforts to prevent child marriage and its consequences, and promote policies that support girls' rights, she said.

Adolescents and youth must be provided with age-appropriate comprehensive sexuality education to develop the knowledge and skills they need to protect their health throughout their lives. Babatunde Osotimehin, UNFPA executive director said: 'Every young girl, regardless of where she lives, or her economic circumstances, has the right to fulfill her human potential. Today, too many girls are denied that right. We can change that, and we must.'

In developing countries early marriage is the cause of the teenage pregnancy. Child marriages end in teenage pregnancy making life difficult for mothers. Several factors such as peer pressure, drug addiction, interplay of hormones during puberty can lead teenagers to develop early sexual relationships. Following are the consequences faced by teenage mothers.

- Teenage mothers are most likely to drop out of the high schools or colleges without completing their education.
- Children of teenage mothers get minimum health care.
- In countries like India, a girl and her family are ridiculed in society.
- Getting financial security and raising their children becomes difficult for teenage mothers.
- Teenage pregnancy results in poor economic conditions and single parenting.
- Usually teenage fathers are not ready for and deny to take responsibility of their children.
- Children of teenagers are subject to abuse and neglect.
- Teenage mothers have to depend on their parents for financial and emotional support.
- Sexually transmitted infection (STIs)/Types and Symptoms.
- Sexually transmitted Infections (STI) formerly called venereal diseases, but now called STIs are spread by sexual contact. Some are also transmitted not by sexual contact alone, but blood transfusion.

These are group of infections in which the principle was of transmissions by casual contact. They were previously called venereal diseases(V.D) (Obinu, 2001). Several kinds of STIs are epidemic including gonorrhoea, infections of urethra, not caused by gonorrhoea (nongonococcalurethritis); non specific urethritis (NSV); genital herpes virus;genital warts (Candy Loma Accumineta); scabies (mites) and urethraland vaginal infections caused by the bacterium, chlamydiatrahomatis, theprotozoan trichomoas, and the yeast monillia. AIDS and hepatitis are also transmitted by unprotected sexual contact.Large numbers of infections are transmitted largely or exclusively by sexual contact. In addition to those epidemic diseases already mentioned, such diseases include syphilis, crablike (pediculosis pubis), vaginal infection caused by the haemophilus bacterium; molluscumcontagious, chanchroid (soft sore); lymphogranulema venereum and grand Loma inguiraler.

These and so many others are transmitted only by intimate contact with an infected person. A few of these diseases notably cancroids and scabies can be spread

by the infected person from one area of skin to another. Scabies, lice, genital herpes and vaginitis caused by trichomones and monilla may also be acquired by means other than sexual contact (Obinu, 2001).The epidemic nature of STIs makes it difficult to control them. Some public health officials attribute the increase in many of these diseases to increasing sexual activity. Preventing these ugly situations require among other measures of investigating the causative factors, education of the populace and specifically too, the teaching of re-education at the grassroots which includes schools, market places, organizing workshops and seminars for the people at the work place and even the parents themselves.

- Michael (1981) states that sexually transmitted infections (STIs) are simply those diseases which can be contacted from an infected person by means of sexual intercourse. Again sexually transmitted infections (STIs) are human infections that are transmissible by sexual intercourse which may be vaginal, anal or oral.
- Initially it was believed that gonorrhea and syphilis were the only infections which could be transmitted by sex hence the name venereal disease (V. D.) was given to them. As time went on, it became clear that there are more than 20 other conditions which are sexually transmissible (Michael, 1981). Although the size of the problem is unknown, particularly in Nigeria, STIs are very common and are among the top five infections for which people seek care.

STIs remain a public health problem of major significance in most parts of the work and their consequences can be devastating: these include adolescent female suffering chronic abdominal pain, entopic pregnancy, infertility or cervical cancer. Male could develop urethral stricture and infertility and infants could die from congenital syphilis or be born with severe eye infections or life threatening pneumonia.

Evidence of the manifestation of STIs in published history is poor and indeed specific general diseases were not identified in the middle ages and earlier amongst the famous people known to have suffered from STIs. According to the World Health Organization (WHO 1992), STIs are the most common diseases and the prevalence rates are particularly high in developing countries like Nigeria. Every year, there are

250 million new cases and some of these are complicated by the above mentioned complications of young women. Some STIS account for major tragedy for young women in Africa because they promote the transmission of Human Immune Deficiency Virus/Acquired Immune deficiency Syndrome (HIV/AIDS). Many STIs and in particular HIV can be vertically transmitted in pregnancy with devastating effect on the unborn child.

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 isunfortunate for two reasons – first, because a large percentage of those infected with HIV in India arebetween the ages of 15 and 24 and second, 80% of HIV infection among Indians is transmitted throughheterosexual contact, not through men having sex with men or through the use of contaminated needles, as is often popularly assumed.

Women's Health Journal (2000) states that the best prevention of sexually transmitted infections is to avoid multiple sex partners. Another method of preventing sexually transmitted pathogen is healthy living (hygiene). It is further argued that women can help protect themselves by seeking prompt treatment for all reproductive tract infections. Scientists have now shown conclusively that the risk of contracting (and transmitting) HIV increases in the presence of a reproductive tract infection. This includes a wide range of STIs such as gonorrhea, Chlamydia, cancroids', bacterial gaginosis and trichomoniasis.

Importance of Sexuality Education :

Ariba (2000) and Emenike, (1981) show that there are many reasons why sexuality education should be taken seriously since our world today has become just a global village. Events occurring in parts of the world that were previously remote are now becoming instant influences on patterns of behaviour in other parts. When these

influences are negative, their impact on the recipient population could be catastrophic unless such population are well informed and have involved appropriate behaviour to cope with such information. Through the media (both print and electronic and most recently the interment), and direct interaction with foreigners and visitors to other countries, the citizenry are becoming exposed to many sexuality problems.

Adebajo (1997) and Ariba (2000) have shown that the increasing incidents of teenage pregnancies, STIs, HIV/AIDS, induced-abortions, sexual violence, harmful traditional practices (i.e. early marriage, female genital mutilation) divorce and teenage prostitution have drawn the attention of health policy makers towards the need for more education in the area of adolescent reproductive health. It has been revealed by research conducted by the Association for Reproductive and Family Health (ARFH), Ibadan that a lot of sexual behaviour patterns and high risk reproductive practices are due to ignorance.

The research further reveals that many people, particularly youths had inadequate information regarding reproductive health, human sexuality and safe sexual practices.

- Disorders of pregnancy are more common in adolescent pregnancy than in adult.
- Psychological, social and educational problems include illegitimacy and its accompanying mental malfunctioning.
- All these predicaments could lead a girl to indulge in prostitution etc.

Sexual Abuse and Exploitation :

According to Suleiman and Dominic (2006) the vulnerable mostly become victims of sexual abuse and sexual exploitation; and once sexually abused or exploited, such victims, whether children or athletes, become even more vulnerable as they have been stripped of their selfesteem, are faced with threats to their person and humiliated by the exploiters. This is a common phenomenon all over the world. According to the Federal Government's plan of action for the protection of young children and youths (athletes inclusive) from sexual violence and exploitation (FGN, 2003). The subject of sexual abuse and sexually exploitation of children has become a far stronger focus of public interest since the mid 1980s. Various governments and

non governmental organizations have done some trend-setting work. But there is still a need for action in various sectors for the protection of youth from sexual abuse and exploitation (Ibrahim and Ogunsanwo, 2005 in Suleiman & Dominic (2006)).

The debate over teenage pregnancy and STIs has spurred some research into the effectiveness of different sex education approaches. In a meta-analysis, DiCenso (2000) have compared comprehensive sex education programs with abstinence-only programs. His review of several studies shows that abstinence-only programs did not reduce the likelihood of pregnancy of women who participated in the programs, but that abstinence-only actually increased it. The researchers conclude that four abstinence programs and one school program were associated with a pooled increase of 54% in the partners of men and 46% in women (confidence interval 95% 0.95 to 2.25 and 0.98 to 2.26 respectively).

The results of the study revealed that male adolescents had some knowledge of sexual maturity and sexual behaviour while most of the female students lacked basic and essential knowledge on these matters. About 45% – 60% of the males had some knowledge about wet dreams, masturbation and homosexuality, while most of the females did not have any knowledge, and this could be attributed to cultural factors.

It was also noted that the vast majority of both males and females knew about AIDS. This probably reflects the mass media interest in this subject. On the other hand, the vast majority of them knew nothing about other sexually transmitted infections. This highlights the need for education in this area and the role the mass media and school seminars can play.

Children and young people are affected by abuse and neglect in various ways. Outcomes of abuse may range from mild symptoms to debilitating and life-threatening conditions (Runyon & Kenny, 2002). Factors that may affect the way in which abuse and neglect affects children and adolescents include :

- the age and developmental status of the child when abuse occurred;
- the severity of maltreatment;
- the frequency and duration of maltreatment;
- the relationship between the child and the perpetrator; and
- the type(s) of abuse / neglect.

Adolecent Sexuality and Media :

Along with the examination of media usage, several researchers have attempted to explain the relationship between adolescent sexuality and media. Correlational studies indicate that exposure to sexually suggestive materials is associated with premarital sex, although whether sexually active teens seek out sexual content or whether sexual content increases sexual activity remains uncertain (Brown *et al*, 1990; Brown & Newcomer, 1991; Donnerstein & Smith, 2001; Lackey & Moberg, 1998; Malamuth & Impett,2001;Strouse & Buerkel-Rothfuss,1987). Other researchers have found sexual content in the media to have a minimal, if any, impact on sexual activity of adolescents (Peterson, Moore, & Furstenberg, 1991; Roberts, 1993).

Explanations for the varied impact of the media include the differing characteristics of adolescents discussed earlier in this paper and additional factors such as the perceived reality of the content viewed, the media's portrayal of consequences (or lack of) associated with sexual behavior, and the influence of other role models. Studies of peer group interaction suggest that learning from the media is not only an individual process, but that messages received during peer group interactions may also contribute to how adolescents learn from and interpret media messages (Durham, 1999; Milkie, 1994). According to Donnerstein and Smith (2001), research shows that parents who openly communicate and actively co-view television may help "inoculate adolescents from potentiallay detrimental effects of exposure' (p. 298). Frequency of viewing (Malamuth & Impett, 2001) appear important as well. Although the majority of research regarding the impact of the media on sexuality has focused on harmful effects, the media do appear to have some positive effect on the education of adolescents regarding sexuality, sexual behavior, and safe sex. While media campaigns that specifically target the sexual behavior of adolescents can be effective (Berne & Huberman, 2000; Strasburger, 1995), learning also takes place indirectly. Kehily (1999), through participant observation, discovered that young girls read magazines to learn about sex. Milkie (1994) conducted a study with a middle-school aged male peer group and concluded that in this group, movies were the source of learning and sharing about male sexuality. In addition to television, print media, and music, the Internet has now become a viable way for adolescents to gain

information about sexuality (Flowers-Coulson, Kushner, & Bankowski, 2000).

STDs Prevention among Adolescents :

The term 'sexually transmitted diseases' denotes disorders that are principally spread by intimate contact These diseases are not merely acute illnesses, but may lead to serious complications such as infertility, ectopic pregnancy, cervical cancer, fetal wastage, and even death. Many STDs are curable, but they can be cured only if the patients are correctly diagnosed and treated in time. Furthermore, there is no known cure for some STDs such as HIV/AIDS. The prevention of STDs is therefore of the utmost importance. In addition, the risk of contracting and spreading HIV/AIDS is reduced by the prevention and cure of other STDs. Prevention through lifestyle and behavioural modification is currently recommended as the primary protection against these diseases.

The impact of HIV/AIDS on people in Sub-Saharan African countries is more serious than in any other region of the world. This region with only 10% of the global population is where over 60% of all HIV-infected people live. In 2005, approximately 4.6% of females aged 15-24 years and 1.7% of males of the same age group in this region were HIV-infected.In terms of STDs other than HIV/AIDS, the 2004 national survey of adolescents between 12 and 19 years of age in Ghana showed that 3.6% of girls and1.4% of boys reported infections (5). The real percentage of infected adolescents might be higher because of reluctance to report infection or seek diagnostic tests.Today various sources provide adolescents with information on sexual and reproductive health issues, including STDs. These sources include family, teachers, friends, health professionals, and the mass media (3, 5, 7-10, 17, 19, 27). However, the majority of adolescents have yet to obtain sufficient accurate information on STDs.Information about HIV/AIDS quickly gained global currency due to the rapid spread of the pandemic and widespread media coverage and public information programmes. Are cent national survey in Ghana found that nearly all adolescents heard about HIV/AIDS, yet a significant percentage of adolescents could not list all transmission mechanisms of the disease. They even believed that HIV/AIDS was spread by mosquito bites, witchcraft, and toilets. Nearly 10% of

adolescents thought that HIV/AIDS could be cured by having sex with a virgin (5). Insufficient and incorrect information on HIV/AIDS persists in other African countries such as Tanzania as well (6). In a national study in South Africa, where 10% of young people aged 15-24 years were living with HIV, 1% of boys aged 15-19 years were not aware of HIV/AIDS and 9% thought that there were no preventive methods for the disease (7).

Less than 50% of Ghanaian adolescents have heard about STDs other than HIV/AIDS.A qualitative study conducted in Ghana and three other African countries showed that many adolescents could not list STDs other than HIV/AIDS correctly Although the increased risk of acquiring and spreading HIV if infected with other STDs has been demonstrated, Nigerian adolescents seemed not to appreciate this link between HIV/AIDS and other STDs An incorrect understanding of STDs other than HIV/AIDS appears in developed countries as well. A study in Canada showed that 28% of urban high school students identified HPV as a cause of HIV/AIDS (9).

Lack of knowledge causes low self-perception of risk of acquiring STDs (10). In South Africa, 62% of HIV-infected young people considered themselves at no or little risk of contracting HIV/AIDS (7). When adolescents do not know their own risk level, they tend not to feel that it is necessary for them to take preventive actions.

Adolescents engage in sexual activities in pursuit of pleasure, under peer pressure, in order to maintain love relations, and even for financial reasons.Nowadays, early sexual debut tends to be linked to high risk-taking behaviours (11). Sexual contact among adolescents often occurs with multiple short-term partners, or high-risk partners combined with inconsistent, incorrect, or non-use of condoms. The 2004 national survey of adolescents in Ghana found that only 22% of sexually experienced girls and 40% of sexually experienced boys reported only one lifetime sexual partner.

Adequate and accurate sex education programmes enable adolescents not only to protect themselves from STDs but also to motivate others to make safe choices The primary goals of sex education for young people are: (i) to provide them with relevant and accurate information; (ii) to provide them with the skills to abstain from sex until they are mature; (iii) to ensure that they know how to avoid unsafe sex in order to protect themselves from STDs and pregnancy and (iv) to enable them to achieve

sexual well being in adulthood. The first sex education lessons must be given to adolescents before their first sexual encounter. For sex education programmes to be effective, the content and approach must take into account differences between different groups of adolescents – boys and girls, rural and urban adolescents, younger and older adolescents.

Family Planning Recommendation :

Family Planning recommends the following components are included in sexuality and relationships programmed for primary and intermediate and secondary years, when age and stage appropriate, and spiralling through the years.

Primary and Intermediate Years :

Attitudes and Values :

- Clarification of family and own attitudes and values.
- Equality.
- Identifying that love and sex are not the same.
- Identifying stigma.
- Non-judgemental.
- Open-mindedness.
- Positive attitude toward their health.
- Positive self-esteem.
- Recognising discrimination .
- Respect for self and others.
- Sense of responsibility.

Skills :

- Ability to ask questions and seek help.
- Ability to take responsibility.
- Assertiveness.
- Being a good friend.
- Communication and negotiation including boundary setting, giving and getting consent.

- Confidence.
- Decision making.
- Developing critical thinking.
- Recognising myths and stereotypes.
- Empathy.
- Hygiene.
- Recognising peer pressure.
- Recognising yes and no feelings.

Knowledge :

- Basics of reproduction, including pregnancy and birth.
- Biological differences between sexes.
- Difference between gender and sex.
- Different types of love, friendships.
- Different types of relationships, families.
- Names of body parts.
- Pubertal changes (physical, emotional and social).
- Qualities of a good friend.
- Recognising and managing range of emotions.
- Yes and no feelings; privacy.
- Older years.
- Contraception.
- Impact of alcohol and drugs.
- Relationship violence.
- Sexual orientation.
- Sexually transmissible infections and prevention.
- Society's changing norms and values.
- Stages of intimate relationships.
- Support services.

Secondary Years :

Attitudes & Values :

- Clarification of own attitudes and values.
- Equality.
- Gender roles.
- Identifying stigma.
- Identifying that love, lust and sex are not the same.
- Non-judgmental.
- Open-mindedness.
- Positive attitude toward their health.
- Positive self-esteem.
- Respect for self & others sense of responsibility.
- Recognising discrimination.

Skills :

- Ability to ask questions and seek help ability to take responsibility.
- Assertiveness.
- Condom use.
- Confidence.
- Critical thinking.
- Critiquing the media.
- Communication and negotiation including giving and getting consent, delay and abstaining, boundary setting.
- Decision making.
- Recognizing myths and stereotypes.
- Empathy.
- Ethical by standing.
- Recognizing peer pressure.
- Recognizing unhealthy behaviours, coercion and violence.

Knowledge :

- Cultural norms and social rules.
- Contraceptive options including emergency contraception.
- Gender diversity.
- Impact of alcohol and drugs.
- Pregnancy options including abortion.
- Qualities of a good friend.
- Recognising and managing range of emotions.
- Relationship violence.
- Reproduction.
- Rights and laws, e.g. Relating to sexual diversity, consent, service access, abortion, safety and protection.
- Sexual orientation.
- Sexually transmissible infections and prevention.
- Stages of intimacy, sexual response and pleasure.
- Support services.

2.3 Healthy Society and Sex Education

There is always a wide gap between the children and the parents when it comes to sexuality. Though parents are well aware of the sexual activity but it becomes very difficult for them to realize that it is quite a normal activity of every adult and the children and youths do have some queries regarding this. Unless the children and the youths get their queries answered properly, it becomes very difficult for them to have a proper mental development and it would be tough for them to handle various sex-related incidents and crimes which are increasing day by day. All these have made the society understand the important of sex education for youths and the government along with various NGOs are is taking various measures to incorporate sex education in schools so the sex education in India and other countries could start at early stage and help the children to have a proper development both physically and mentally.

Sex education in India has given rise to various arguments and people have different views on this topic. According to some, sex education in schools will

unnecessarily make a forbidden world open in front of the children and teenagers which they will not be able to handle properly. There is another group which thinks that sex education in schools will actually help the children and youths to know various aspects of sex, improve their attitudes especially towards the opposite sex, having fair idea about their sex preferences, relationship formation etc. Sex education for youths which are imparted by the professionals will actually help in the formation of a healthy society.

Sex Education in India is done through the class lectures, banners, campaigns, television, radio and workshops. Most of the programs of sex education in schools are given in the local or the most-used language so that it becomes easier for the children to grasp and implement the knowledge.

2.4 Development of Proper Sex Attitude

The transition from the childhood to the adulthood is smooth so as adults the right attitude will be there before marriage and after marriage. The issues like teenage pregnancy, abortion and death during abortion, unwanted pregnancy after and before marriage, gap between children etc. can be handled. Reproductive organs, process of birth , taking care of reproductive organs especially for the girls during the adolescent periods can be handled.

Year 5 - 6 Sexuality Education Programme (2013)

MOE (Ministry of Education) and Sexual Issues

Sexuality Education helps students understand the physiological, social and emotional changes they experience as they mature, develop healthy and rewarding relationships, and make wise, informed and responsible decisions on sexuality matters. Sexuality Education covers the following dimensions of a person's sexuality :

Physical : Physical sexual maturation and intimacy, the physiology of sex and human reproduction;

Emotional : Sexual attitudes and feelings towards self and others;

Social : Sexual norms and behaviour and their legal, cultural and societal implications; and

Ethical : Values and moral systems related to sexuality.

Issues of sexuality would involve value judgments. Parents as the primary care-givers, are responsible for the health and moral values of their children. Hence, parents may choose to opt their children out of a school's sexuality education programme, talks and workshops. Parents may refer to the Roles of Stakeholders webpage for more information on the role of parents in the sexuality education of their children.

Children need to acquire the knowledge, values and habits which will allow them to develop healthy and responsible relationships as they grow up. While parents play the primary role in their children's sexuality education, schools have a complementary role to play in providing students with objective and reliable information on sexuality as part of a holistic education.

Our youth are growing up in a rapidly changing world, where globalisation and technological advancements expose them to a wide range of influences from around the world.

Greater Access to Information :

Our youth have access to many sources of information, such as the internet, cable TV and their friends. They are exposed to social norms of other societies and interest groups. Hence, it is important that our youth are able to receive objective and reliable information in schools, as well as guidance from their parents.

Problems related to Teenage Pregnancies :

Each year, there are about 2,000[1] teenage pregnancies in Singapore (statistical age group used is 10-19 years). Some abort their pregnancies while others go on to give birth and become teenage mothers. Both groups suffer negative consequences, either from the trauma of abortion or as a single young mother, for which they are ill-equipped.

Sexual Activity, STIs / HIV among Teenagers :

Teenage pregnancies and the rates of STIs / HIV indicate that some youths are sexually active and are having unprotected sex.

SIECUS Guidline Regarding Sex Education

The Sexuality Information and Education Council of the United States (SIECUS Guidelines, 2004) cites the following principles as fundamental to guide the development of sexual health education programs :

Parent and Community Involvement : School-based programs must be carefully developed to respect the diversity of values and beliefs represented in the community. Parents, family members, teachers, administrators, community and faith-based leaders, and students should have an opportunity to provide input into sexual health education programs.

Being a Component of a Comprehensive School Health Education Program :

Sexual health education should be offered as part of an overall health education program and can best address the broadest range of issues in the context of health promotion, social and gender equity, and disease prevention. Communities and schools should seek to integrate the concepts and messages in the *Guidelines for a Coordinated Approach to School Health* (CSH Guidelines) into their overall health education initiatives.

A Focus on All Youth **:** All children and youth will benefit from sexual health education regardless of gender, sexual orientation, gender identity, ethnicity, race, socioeconomic status, or disability. Programs and materials should be adapted to reflect the specific issues and concerns of the community as well as any special needs of the learners. In addition, curricula and material should reflect the cultural diversity represented in the classroom.

Well-Trained Teachers : Sexual health education should be taught by specially trained teachers. Professionals responsible for sexual health education must receive training in teaching human sexuality, including the philosophy and methodology of sexuality education. While ideally teachers should attend academic courses or programs in schools of higher education, in-service courses, continuing education classes, and intensive seminars can also help prepare sexuality educators.

A Variety of Teaching Methods : Sexual health education is most effective when young people not only receive information but also are also given the opportunity to examine their own and society's attitudes and values and to develop or strengthen social skills. A wide variety of teaching methods and activities can foster learning, such as interactive discussions, roleplaying, individual and group research, group exercises, and homework assignments (SIECUS Guidelines, 2004).

A more in-depth explanation of these fundamental principles is offered in Section 2 of the CT Guidelines.

UNESCO's Sex-ed Guidelines :

10th September, 2009 :

The United Nations Educational Scientific and Cultural Organization (UNESCO) recently proposed "International Guidelines on Sexuality Education." These guidelines provide educators with information on how to teach children about reproductive and sexual matters including STIs and unintended pregnancy.

The reason for these guidelines lies in the astonishing HIV/AIDS figures from UNAIDS and the WHO, which states that more than five million young people are living with HIV worldwide and 45 percent of all new infections occur among those aged 15 to 24 years old. International Planned Parenthood Federation shows that 111 million new cases of curable sexually transmitted infections occur among young people aged 10 to 24 and 4.4 million girls aged 15 to 19 seek abortions, most of which are unsafe.

Predictably, the UNESCO guidelines have stirred a strong reaction from social conservatives, who argue that the guidelines are exposing kids to sex far too early, by drawing attention to masturbation and abortion. But according to *Time,* masturbation is only mentioned 5 times in the 102 page document, "twice to explain to 5 to 8 year olds what the term means" noting that "it is not harmful, but should be done in private." The other three times it is mentioned is to 9 to 15 year olds explaining that "it does not cause physical or emotional harm and is often a person's first experience of sexual pleasure." This is hardly teaching 5 year olds how to perform such a task.

UNESCO recommends that students are provided with sex education starting at

five years old, with more detailed information as they get older. According to UNESCO, sex education at an early age helps delay sexual activity and reduces the amount of sexual partners and unprotected sex. The guidelines also provide a section entirely devoted to justifying why they have been written, drawing on information from 87 different studies from around the world reviewing curricula from 12 countries.

It is clear that 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. UNFPA's Executive Director, Thoraya Ahmed Obaid spoke out this week, saying that, "We are mandated by the Programmed 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".

Some Strategies to reduce STIs according to UNAIDS (2008) :

Provide teens with the information, skills, and support they need to practice safe sexual behaviour. This programme should be tailored to youths' needs and age appropriate, culturally sensitive and teach sexual and reproductive options. Build on current knowledge of best practices by emphasizing communication, skill-building activities, and role-playing.

Educate adolescents and young people about the risks of sexually transmitted diseases, including HIV/AIDS. Incorporate promising strategies into comprehensive STIs prevention programs including: individual and peer education, counselling, case management, after school activities, and building support systems and relationships with caring adults. Increase access to reproductive health care. Encourage all health care providers who provide care to youth to include comprehensive, age-appropriate information on sexual health issues, including prevention of STIs. Make confidential STI screening and treatment services easily accessible to teenagers along with culturally sensitive understand the knowledge and attitude among students for

introducing sexuality education in secondary schools counselling and education regarding the use of available protective measures.

The SAFE Project :

The European Commission Directorate General for Health and Consumer Protection, as part of 'The SAFE Project: A European partnership to promote the sexual and reproductive health and rights of young people'. The project is a partnership between IPPF European Network, WHO Regional Office for Europe and Lund University. They stated, *"All young people have the right to comprehensive sexual and reproductive health information, education and services, to be active citizens, to have pleasure and confidence in their sexuality, and to be able to make their own informed choices."* In order to meet these rights, we seek to promote a model of sexuality education that considers the various inter-related dynamics that influence sexual choices and the resulting emotional, mental, physical and social impacts on each person's development. This positive approach to sexuality education includes an emphasis on sexual expression and sexual full filament, representing a shift away from methodologies that focus exclusively on the reproductive aspects of adolescent sexuality. They also suggest, sexuality education must help young people to

- acquire accurate information: On sexual and reproductive rights; information to dispel myths; references to resources and services,
- develop life skills: Such as critical thinking, communication and negotiation skills, self-development skills, decision making skills; sense of self; confidence; assertiveness; ability to take responsibility; ability to ask questions and seek help; empathy,
- nurture positive attitudes and values: Open-mindedness; respect for self and others; positive self-worth/esteem; comfort; non-judgmental attitude; sense of responsibility; positive attitude toward their sexual and reproductive health,
- sex education covers a broad range of issues relating to both the physical and biological aspects of sexuality, and the emotional and social aspects. It recognizes and accepts all people as sexual beings and is concerned with more than just the

prevention of disease or pregnancy. CSE programmes should be adapted to the age and stage of development of the target group.

Sexual Rights (Canadian Guideline for Sexual Health Education) :

"Sexual rights embrace human rights that are already recognized in national laws, international human rights documents and other consensus statements. They include the right of all persons, free of coercion,discrimination and violence, to :

- the highest attainable standard of sexual health, including access to sexual and reproductive health care services;
- seek, receive and impart information related to sexuality;
- sexuality education;
- choose their partner;
- decide to be sexually active or not;
- consensual sexual relations;
- consensual marriage;
- decide whether or not, and when, to have children;
- and pursue a satisfying, safe and pleasure able sexual life.
- The responsible exercise of human rights requires that all persons respect the rights of others.

Policy Statement – Sex Education :

Guidelines :

The Governors of the school will take the responsibility for deciding its Sex Education policy and the quality of its programme of study. They will ensure its content is appropriate to the needs and ages of students it is targeted for and that it is linked to moral values.

Our Sex Education Policy will be available for all parents to view on request. A parent may also, view lesson materials and discuss methods of presentation with the relevant Head of Year. If a parent decides to withdraw their child from the programme or any part of the programme advance notice must be given to the school by contacting the Head Teacher, so that suitable alternatives and arrangements can be

made. Parents will be notified of such opportunities and their rights to withdraw their children through the future school prospectus or various correspondence. By law, parents, may not withdraw their children from material of a National Curriculum nature.

Appropriate outside speakers may be used to speak on particular topics such a menstruation, contraception and S. T. D. The suitability of such speakers will be vetted by the relevant Head of Year.

The school will review the adequacy of its training for those teachers who have the major responsibility for providing sex education.

The Head of Year will ensure that all staff, but especially those staff that have the major responsibility for providing sex education, are aware of the School Sex Education Policy by way of the Handbook.

Parents and Governors will be informed of our Sex Education Policy (by way of our future prospectus).Parents will be made aware of their rights to view in detail the School's Sex Education Policy, lesson content, method of presentation and withdrawal of their children from such teaching if desired. Interested parents will be invited to appropriate meetings in which they can contribute their views of future review of policy and practice in this area. Appropriate training opportunities will be provided for the staff who are teaching a major part of the Sex Education programme.

Parental Attitude Toward Teaching of Sex Education :

The attitude of parents towards teaching of sex education is emotional response that expresses different degrees of acceptance and rejection. In sum total, the attitude of parents determines the success of the teaching of sex education. Attitude are formed from membership of groups. Teachers, family, peer groups, religious or voluntary organizations and the mass media are some of the sources which impart sex education to the youth.

The type of attitude formed by parents can be negative or positive. A positive attitude towards the teaching of sex education will lead to the avoidance of premarital sexual intercourse while on the other hand negative attitude will lead to unwanted pregnancies and their complications. Bobak & Jenson (1989) also state that some

youths become promiscuous as a result of the negative effects of sex education.

Sexual attitude, like other attitude which generally result from frustration, are derived from unspoken and often unconscious premises and creative thoughts, which are always articulate and precise. Most of what we consider our mental activity consists of sub-articulate, half conscious semantic reflexive reactions. Study of sex education has usually been either in terms of the extent to which it is approved or disapproved of as an abstract proposition. The reason for parent's attitude towards teaching of sex education in schools is the fear of pregnancy. The traditional norms have tended to condemn sex education in schools. Variation in the findings of research into the reasons for abstaining from premarital coitus suggests that even though different techniques of investigation produce different results there may have been as actual shift in the attitude of parents in recent years. For example fear of pregnancy was cited as a much more important reason than parental influence for children not having premarital intercourse (Bromleu & Britten, 1938). For example, Caldwell *et al.*, (1989) assert that "A pragmatic attitude exists in Africa toward sex education with a fair degree of permissiveness toward premarital relations, are not the high point of sin and usually should not be severely punished, substantial educational efforts are needed to improve societal attitude towards sex education. Adeyemo's (1995),writes-up on attitude towards sex education. He explained that the attitude of parents towards sex education can be influence by the knowledge. The attitude of parents will depend on the personality of parent-attitude. Activity creates problem because the most active information obtain will help to have either negative or positive attitude towards sex education. Nass & Fisher (1988) described public attitude towards sex education swinging back and forth between valuing free domain sexual choices and valuing restriction on sexual expression which also affect the attitude of parents towards sex education. Inadequate information about sex has led to the parents forming a negative attitude towards sex education.

International Planned Parenthood Federation (IPPF) (1997) states that over 70% youths (girls) in Africa become pregnant between the ages of 15-19 years. In Nigeria so many youths (girls) aborted in schools.

Ciray (1993) described attitude as relating stable judgments of values which

pass certain objects of experience in things heard or found.

The IMB Model for Behaviorally Effective Sexual Health Education :

Elements of Effective Sexuality Education Programs :

The following structural elements need to be included in an effective sexual health education program :

- mandatory, comprehensive curriculum with appropriate learning knowledge, skills, beliefs/attitudes, social support, preventive health services and behavioural outcomes organized in an well-designed scope and sequence from the early primary years to senior school graduation.
- sexuality education program is part of a comprehensive health education program, which in turn, is part of a personal and social development program.
- high quality teaching/learning materials, including print, media and technology based alternatives.
- active learning and teaching methods.
- effective pre-service education for teachers.
- good in service education for teachers.
- parent involvement in instruction through good communications with the home and through take home learning activities.
- active student involvement in adapting the program to local needs and peer leadership and education in the classroom and the school.
- the instructional program is situated within a comprehensive school-community approach to promoting sexual health that includes accessible and convenient adolescent preventive health services, social support from parents and others in the community, a safe healthy physical environment in the school, convenient access to condoms by youth, etc.

Sex Education in Schools :

The importance of sex education for preventing teen pregnancy cannot be overemphasized. Somers and Surmann (2005) have found that early and comprehensive sex education is correlated with less risky sexual behavior among

teens. Specifically, those who receive sex education in school at a young age report having sex less frequently than those who received sex education post-puberty (Somers & Surmann, 2005). There are two major types of sex education currently used in schools: abstinence only and comprehensive sex education. This section describes both types in relation to teenage pregnancy prevention. Currently, states are not required to provide sex education to teens (Collins, Alagiri, Summers & Morin, 2002). However, the federal government does decide which programs will receive federal funding, and after eight years of abstinence-only sex education being the only recipient of federal funds during the Bush administration, the Obama administration has made a change in policy only to provide funds to evidence-based sex education programs (Collins *et al.*, 2002; Guttmacher, 2009).

Abstinence-only sex education teaches students that the only sure way to avoid unplanned pregnancy and sexually transmitted diseases (STDs) is to abstain from sexual activity until marriage (Collins *et al.*, 2002). Teens are not educated about contraception and condoms, and discussions of abortion are avoided (Collins, *et al.*, 2002). Students are taught refusal skills and discuss values, and they are also told that sex before marriage will likely result in negative consequences for themselves, their partners, and a baby if they were to get pregnant (Collins *et al.*, 2002).

Studies have shown that teens who have taken a pledge to be abstinent until marriage are just as likely to become sexually active as teens who have not received abstinence-only sex education, and are less likely to use protection than their peers who have received comprehensive 11 sex education (Thomas, 2009). This is likely a result of the teens not learning the effectiveness of condoms and contraception (Collins *et al.*, 2002).

The other type of sex education is comprehensive sex education, which can be described as "abstinence plus" (Collins *et al.*, 2002), where abstinence is promoted, but students are also educated about contraception and condoms. Students may have discussions about such topics as STDs, HIV, and abortion (Collins *et al.*, 2002). Comprehensive sex education recognizes that students may become sexually active at some point, and aims to equip teens with accurate knowledge about disease and pregnancy prevention options (Collins *et al.*, 2002).

Currently, schools have the option of providing abstinence-only or comprehensive sex education, which is determined by policy. Some schools that teach abstinence only use programs such as The Postponing Sexual Involvement Program (PSIP) and the Youth Asset Development Program (YADP) (Yampolskaya, Brown & Vargo, 2004). Both of these programs are aimed at improving academic outcomes, assisting teens in making education and career goals, and educating at-risk youth about the consequences of sexual activity. The idea is that teens who have long-term plans will be less likely to engage in risky sexual behaviours. Yampolskaya *et al.* (2004) found that students who participated in these programs did have better academic outcomes, particularly with the YADP. However, these were preliminary data, and the researchers did note some limitations. For instance, Yampolskaya *et al.* (2004) did not find that these programs changed students' attitudes toward teen parenting.

Monahan (2001) examined a federally-funded Adolescent Pregnancy Prevention program, which was abstinence-only based. Treatment and control groups were compared on their knowledge, dating behaviours, and attitudes (control groups did not receive the Adolescent Pregnancy Prevention program) (Monahan, 2001). No significant differences emerged regarding 12 knowledge about sex and reproduction, and dating behaviours (Monahan, 2001).

Knowledge of Reproductive and Sexual Rights :

Participants were asked 24 questions to assess their knowledge on reproductive and sexual rights, and they were categorized in to two groups based on their score in relation to the mean. The mean score was 15.7. More than half (54.5%) of the respondents were found to be knowledgeable, while a substantial proportion (45.5%) of the respondents was not. Students were asked whether a married woman should have the right to limit the number of her children according to her desire and without her husband's consent.The majority (63.7%) of them showed their disagree meant with this idea. One hundred fifty-seven (24.5%) of the study participants said that a husband should get sex whenever he wants irrespective of his wife's wish. Around half (53.7%) disagreed with the question that reflected the right of girls to autonomous

reproductive choices without their partners' consent. Four hundred nine (63.7%) agreed that parents have the right to decide on sexual and RH issues of their children. Among all, 270 (42.1%) of the respondents disagreed with the statement which said students should have the right to freedom of assembly and political participation to influence the Government to place sexual and reproductive health issues on the priority list during planning and interventions. Three hundred sixty-four (56.7%) agreed with the statement that unmarried couples have no right to use.

Sexual Content in Media

There is much sexual content in media, and this amount is increasing. According to a research study done by A. Deborah, Fisher, L. Douglas L. Hill, Joel W. Grube and E. L. Gruber (2004) on television programming in America from 2001-2002, 82.1% of television shows viewed during primetime had some form of sexually suggestive behaviour or speech, and "66.8% contained some form of sexual behaviour in at least one 2-minute interval" (pp. 538-539). This would suggest that in watching television, one will be Sex in the Media 5 bombarded with some form of sexual content, as mild as sexual dialogue, references, or innuendo, in approximately four out of five shows watched. Approximately two out of three shows will have a visual depiction of sexuality. Hopefully those adolescents who are uncomfortable talking to their parents about sex are not watching television with them.

The sexual content in media is not only increasing in quantity, but it is also increasing in severity; it is shifting from milder forms such as passionate kissing, touching, or perhaps implied sex to more explicit content such as nudity and graphic scenes depicting sexual intercourse. Pardun, L'Engle, and Brown (2005) did a study on the effect of sexual content in media on adolescents. During their study, they found that about 41% of what they considered to be sexual content in media consisted of either partial or full nudity. Something as shocking as nudity or graphic sex in media is hard to remove from the mind, and it may linger in a young person's thoughts for a long time. The more one thinks about such things, the more likely one is to be influenced by them.

Sexual content is not simply present in media, but it is presented in such a way

that it seems casual and even routine. It is not uncommon to see a couple have sex on their first date in a movie or television show. Sexual comments, jokes, and innuendo are common in casual dialogue. Sex is made to seem as if it not a big deal, and that it is done by everyone – married or not. Risks are rarely mentioned. A study done by Nabi & Clark (2008) revealed that only 14% of programs with sexual content in 2005 mentioned unwanted consequences such as unplanned pregnancies or sexually transmitted diseases or showed "sexual responsibility" such as using some form of protection during sex. Chia & Gunther (2006) believe that this depiction of sex in media can promote the Sex in the Media 6 misconception that everyone in real life is participating in such risky behavior, and if one does not participate in them, they are an exception to the norm. With more and more sexual content in media and increasingly explicit content, these ideas are becoming more widespread. Young people are influenced by what they see, and they see much sex in media.

Adolescents are exposed constantly to media images. Sexual content in the media is a reality in today's arena of entertainment. Depictions of sexual content are displayed on television in various programs, music videos, computers, and lyrics of songs. Teen magazines are a source of representations of sexual attitudes and behaviours from which adolescents get skewed perceptions of what is acceptable. A finding indicated that an average of three pages per adolescent magazine incorporated some kind of sexual content. Those between the ages of eight and 18 years old had a television in their bedroom according to a national survey in 1999.Adolescents are exposed to various forms of media six to seven hours a day in the United States (Brown & Witherspoon, 2002). Studies have provided data on just how much time adolescents spend using some form of media, and there are differences between adolescent age groups when comparing the amount of time spent with various forms of media. Adolescents between 8-13years old watched TV 44%, used audio media 17%, other non-interactive screen 15%, print 10%,computer 7% and video games 7% (Escobar-Chaves *et al.*, 2005). Older adolescents between 14-18 years old use TV 36%, audio media 34%, other non-interactive screen 11%, print 8%,computer 7% and video games 4%. The results indicate that mass media has seven different modes to supply adolescents with sexual content whether it be visual, auditory or combinations

of visual and auditory. The numerous modes of mass media are a clear indication of how accessible it is for adolescents to come in contact with sexual content. The data from Escobar-Chaves also provides data on the two age groups of adolescents regarding the amount of time utilizing specific modes of media. Television was the mode, which had the highest utilization rate in both adolescent age groups. The high utilization rate of television can be explained by results in the study indicating 65% of adolescents have a television in their own bedroom(Escobar-Chaves *et al.*, 2005).A study for the Kaiser Family Foundation in 2003 indicates sexual content was "unusually high" in the television programs viewed most frequently by adolescents (Escobar-Chaves *et al.*, 2005). The study revealed the following information regarding the sexual content viewed by adolescents, "83% of programs had any sexual content (behaviour or talk); 80% of programs had sexual references (talk about sex); 49% contained sexual behaviour, 59% of which was passionate kissing; 20% contained behaviour that was explicit or implicit intercourse"(Escobar-Chaves *et al.*, 2005, p. 311). Further analysis of indicates the amount of sexual content in the television programs viewed by adolescents was higher than the programs on prime timetelevision or television programming as a whole (Escobar-Chaves *et al.*, 2005).The Internet disseminates a large amount of information due to its ability to transmit virtually any type of information across the world. It provides a forum for the exchange of nearly any type of information especially that which is of a sensitive nature, like sex. The anonymity provided by the Internet is also another huge attraction for adolescents seeking information on sexual intercourse and sexual activities.

Kanuga and Rosenfeld's (2004) research indicated that75% of adolescents between 15-17 years, have used the Internet, and of those, 94% believe the information online is helpful and accurate. Many use the Internet as a vehicle for friendship, information on hard to discuss subjects, and as a substitute for real life. The Internet replaces talking to a parent, clinician or school educator regarding sex. In addition to closing dialogue with parents and counsellors, the Internet exposes adolescents unknowingly to pornographic sitesand chat rooms which can lead to predators seeking sexual activities with adolescents. When exploring the effects of

pornography, it is important to first note the ease with which it can be accessed. The Kaiser Family Foundation supported a telephone survey of adolescents using the Internet and found that more than half of adolescents between 15-17 years were unintentionally exposed to pornography on the Internet (Kanuaga & Rosenfelc, 2004).Various prominent organizations, such as the American Academy of Pediatrics, have joined in researching the effect media has on influencing adolescents. The results of the research advise that adolescent sexual activity may be due to the sexual content on television (Collins *et al.*, 2004). In other words, the initiation of adolescent sexual activity has to do with the amount of sexual content viewed not the amount of media viewed overall. The reoccurring concept of a relationship between the amounts of sexual content viewed or listened to by adolescents a supposed to only reviewing time spent using media devices shows substantial findings. There is evidence from Collins *et al.* (2004), regarding the sexual content in Nielsen rated teen programs, but the sexual content in all TV programs needs to be investigated. A study in 2001-2002 by Collins *et al.* examined the amount of sexual content in television programming and the sexual activity of the participants. The study was conducted by a telephone survey of 1792 adolescents between the ages of 12 and 17 years old. The survey gathered knowledge from the adolescents on what they watched on television, their attitudes, and their knowledge of sex and sexual behaviour. A total of 23 programs were used based on Nielsen ratings for television programs aired during peak hours. These programs were the most frequently viewed by adolescents in groups of males, females, 12-14-year-olds and 15-17-yearolds. The programs appeared on major networks, such as, ABC, NBC, FOX and CBS to name a few. Only sitcoms, reality shows, drama and animated programs were among those in the study There is concern that the amount of sexual content in television viewed by adolescents is occurring at a high rate. A study by the Kaiser Family Foundation in 2001-2002 regarding sexual topics in television programs frequently watched by adolescents revealed there were 6.7 scenes per hour containing sexual issues (Brody, 2006). Another finding revealed that sexual talk occurred in 61% of television programs and 32% of obvious sexual activity occurred in television programs (Collins *et al.*, 2004). A depiction of sexual intercourse whether it actually occurred or heavily suggested was in approximately

14% of television programs (Collins *et al.*, 2004).

There are tools designed to examine the sexual content viewed by adolescents. Data gathered by the tools may support research establishing a firm relationship between lengths of exposure to sexual content in mass media and an adolescent's decision to initiate sexual activity. One such tool is the Sexual Media Diet (SMD), which measures four areas of mass media, television shows, movies, music artists, and magazines. The SMD questionnaire was used in the Teen Media Study Fall 2001 through Spring 2002, which was conducted in the South-eastern United States on 3,261 seventh- and eighth grade students from three public schools. Pardon,L'Engle, and Brown (2005) stated, "The SMD measure showed a statistically significant association with adolescents' sexual content in the media, based on the combination of media consumption and content" (2005, p. 75). The study also included two other areas of the media, Internet sites and newspapers. The demographics of the students consisted of 12-14 year olds with the majority being female 55% and among them 50% were white and 41% were black(Pardun, L'Engle, & Brown, 2005).

Pardun, L'Engle, and Brown, (2005) provided information on the amount of sexual content consumed by the adolescents in general and individually in the six modes of media.When reviewing all six modes collectively, researchers determined 11% of information from the media contained sexual content. The amount of sexual content in the individual six modes of media consumed by the adolescent's was listed as: music 40%, movies 12%, television 11%,magazines 8%, internet sites 6%, and newspapers 1%. The data reveals adolescents have multiple choices to view a significant amount of sexual content in six different modes of mass media. When specific sexual behaviours were reviewed overall from the six modes of mass media t revealed a focus on viewing body parts in a sexual manner 56% and relationships 33%. Sexualactivity among consenting non-married adults overall in the six modes of mass media was at25%. All of the data continues to reveal a large portion of information on sexual activity is disseminated to adolescents. In contrast, there is a limited amount of information for adolescents on safe sex messages or puberty. Messages on responsible sexual health, abstinence, body development and condoms were in the minority at 6% of sexual information consumed by adolescents (Pardun,

L'Engle & Brown, 2005).The results from the study by Pardun, L'Engle and Brown (2005) provided informationon a link between exposure to sexual content and the adolescent's sexual behavior. "Analyses showed strong positive associations between exposure to sexual content in the media and sexualactivity and intentions" (Pardun, L'Engle & Brown, 2005). The study reported the amountof sexual content consumed has a far greater impact on the individual rather than the specific sexual behaviors observed (Pardun, L'Engle & Brown, 2005). Further analysis of the sexualcontent in the media and survey results propose adolescents are "enveloped" in media which issexual in nature. The mode of media, identified as having the largest amount of sexual content,was music, which was listed at 40%. An adolescent's decision to become sexually active orengage in sexual activity in the future may depend on the amount of sexual content viewed (Pardun, L'Engle & Brown, 2005). A substantial connection between the media and anadolescent's intent to become sexual active was established despite other significant influencesin the adolescent's life, such as peers, family, religion and school (L'Engle, Brown & Kenneavy, 2006). The SMD indicated media influences in early adolescence as a 13% variation in the irritant to have sexual intercourse in the near future (L'Engle, Brown & Kenneavy, 2006). The influence of media also seemed to cause an 8-10% variance in different levels of sexual behavioronce demographic controls were considered (Pardun, L'Engle & Brown, 2005). The study yielded some interesting findings on adolescents who are abstinent. Adolescents who are abstinent seem to be at risk for initiating sexual intercourse when they are increasingly exposed to sexual content and perceive an acceptance of adolescents engaging in sexual behaviours (Pardun, L'Engle & Brown, 2005). Another area, which may offer an explanation on the i initiation of sexual behaviour is looking at various theories and models. Theories and models have been developed which explain why individuals are influenced to engage in various sexual behaviours. The theories and models are based on perceptions from an individual's encounters with peers and social situations. Part of how adolescents learn is through socializing with peers, and from information they obtain from the media. In turn, the theories and models offer an insight into how information is perceived and processed, and eventually cause the adolescent to engage in sexual behaviour.

Sexuality Education – Human Right :

The need for sexuality education has been expressed from time to time some researchers have observed that 87.2 percent of adolescent girls from high school and junior college wanted sexuality education to be a part of the regular high school curriculum. Similarly, a survey done with 959 adolescent girls on issues of sexuality shows that regardless of age and education all the respondents expressed the need for introducing sexuality education into the academic curriculum. Easter Thamburaj *et al.* also found that students in public (63.06%) and private schools (48.80%) felt that sexuality education should be included in the curriculum. Sexuality education programs have been found to have beneficial impact. Thakor and Pradeep found that the sex education program resulted in knowledge in 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 adolescents are quite inquisitive about the changes taking place in their body and want to know about sex and sexuality. Social taboos associated with the topic restrain them to ask their parents or elders. In such a situation it is difficult for them to get correct information about the anatomy of the human body and sexuality. They often depend on their peers who are equally ill-informed. The absence of proper knowledge makes them even more curious towards sexuality and the opposite sex. Many of them try to find out about sexuality through experimentation which further worsens the situation due to incorrect knowledge. If they are given proper information regarding their body, sexuality and HIV, they would be able to take care of their health and body in a better way. Their decisions would be more mature and rational. By denying sexuality education young children grow up being ashamed, confused and uninformed about themselves and their bodies. They are also rendered far more vulnerable. 16% women aged between 15-19 years are mothers. (National Family Health Survey, 2007).

Over 35% of AIDS cases reported are below 25 years of age and 50% of new infections are between 15 and 24 years old. (UNICEF, 2010). Around 2.27 million people are currently living with HIV (UNGASS, 2010). In India the rate of teenage

pregnancy is any where between 8% to 14 % (Bhalerao et al 1990, Mahavarkar, Madhu, Mule, 2008). Incidence of Breast Cancer, Cervical Cancer, gynecological disorders, skin disorders are increasing among the youth. One in 22 women in India are likely to suffer from breast cancer during her lifetime. Breast cancer is the most common cancer in women in India (Khan et al 2010). A quarter to a third of India's young people indulge in premarital sex (Sharma, R, 2001).

Myths regarding sexuality issues, even among the elderly and educated people, can be seen by going through some of the popular columns in the newspapers, such as Dr. Mahendra Watsa's column in Mumbai Mirror. With easy access to internet resources,mobile and other telecommunication gadgets information about sex, sexuality and related topics is easily accessible without censorship. This information, in many cases, is misleading, unorganised, incomplete and unscientific leading to health issues and socio-legal problems. Hence, sexuality education is needed in such changing times. Sexuality education is a human rights issue as it impacts general health, adaptation to environment, quality of life and helps to live optimally by choice. It would not be an exaggeration to state that the right to life includes the right to sexuality education as well as reproductive rights. Hence, it is a human right which needs to be enshrined. Sexuality Education is a basic requirement as lack of information and/or knowledge related to sexual anatomy, its functioning, and other related details can endanger human life and health. Sexuality education is also needed to understand the impact of environment on human sexual health. A review study by Kumar and Kumar has pointed out the influence of environment on human sexual and reproductive health and highlighted the need to include the topic of "Environment and Sexuality" in courses on Environment Education and Sexuality Education in India.

Though the Government of India and its agencies have advocated sexuality education and prepared a program for its implementation, the inhibition associated with the word "sex" as well as preconceived irrational fears and increasing resistance from political opponents have scuttled the said programme. Twelve Indian State Governments had gone against the Adolescent Education Programme Introduced by the Central Government in association with the National AIDS Control Organization (NACO) and the United Nations Children's Fund (UNICEF), which provoked the

Minister for Women and Child Development, Renuka Chaudhary, to term India 'a nation of hypocrites'. One of the main reasons for banning sexuality education was that the contents of the sexuality education programme,prepared by the Government was explicit and contrary to Indian culture and morality.Critics of the programme opined that sexuality education in schools will increase risky behaviour amongst adolescents and young people. It would encourage promiscuity, experimentation, and so on.

However, such fears are irrational and far from reality. It has been observed that sex education does not encourage young people to have sex at an earlier age or more frequently (Grunseit & Kippax, 1993). On the contrary, the study revealed that sexuality education delays the start of sexual activity, reduces sexual activity among young people and encourages those already sexually active to have safer sex. Published reports of United Nations Children's Fund (UNICEF),12UNAIDS,20 United Nations Population Fund(UNFPA),21 support the effectiveness of sexuality education programmes in the US and other parts of the world.The Central Government in India has not taken any further action with respect to states banning sexuality education program proposed by it. Indian Constitution, Education and Health are both subjects that can be exclusively legislated upon and executed by State Legislatures and Governments. However,the Central Government has forgotten that under international law, federalism or any other such argument is not an excuse for the violation of international commitments. This rule has been codified by the 1969 Convention on the Law of Treaties and the 2001 Draft Articles on State Responsibility prepared by the International Law Commission. Further, the Indian Constitution empowers the Central Government to make any laws or take any executive action if it is in furtherance of its international commitments regardless of whether such a matter is a State subject under the federal structure. Lack of compulsory comprehensive sexuality education in schools, according to the Report of the United Nations Human Rights Council Report, violates the human rights of Indian adolescents and young people as recognized under international law. Broadly interpreted 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 first is the judgment of 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. The second judgment is that of the European Court of Human Rights inthe case of Kjeldsen, Busk Madsen and Pedersen v. Denmark (popularly known as the Pedersen Case,1976). The applicants were parents of children who were going to State primary schools in Denmark. As per Danish Constitution, all children have right to Free Compulsory Education in State primary schools. The State had introduced compulsory sexuality education in State primary schools as part of the curriculum.

Parliament Bill (2011) – Guidelines and Safeguards against :

- Showing pornography.
- Teachers giving sexuality education to pupils when they were alone.
- Giving information on methods of sexual intercourse.
- Using vulgar language while imparting sexuality education.

The applicants, who were parents of school going children, gave several petitions to have their children exempted from sexuality education in concerned State schools. However, these requests were not met and all of them withdrew their children from the said schools. The applicants argued that the Denmark Government had violated Article 2 of Protocol No. 1 to the European Convention on Human Rights,

which states: "No person shall be denied the right to education. In the exercise of any functions which it assumes in relation to education and to teaching, the State shall respect the right of parents to ensure such education and teaching in conformity with their own religions and philosophical convictions." The State argued that Article 2 would cover only religious instruction and not all forms of instruction. The Court rejected this argument and held that any teaching should respect parents' religious and moral convictions. However, the Court also held that Article 2 would be violated only if while imparting sexuality education, the teachers advocated sex at a particular age or particular type of sexual behaviour. Moreover, the parents still had the freedom to educate their children at home tonsil their own religious convictions and beliefs and therefore, imparting sexuality education per se was not a violation of Article 2.24 International conventions and leg instruments, to some of which India is also a signatory, have strongly, advocated the right to sexuality education as one of the important human rights.

The International Conference on Population and Development (ICPD) and Programme of Action (POA), 1994 (often known as the Cairo Declaration) – The ICPD POA was the first and most comprehensive international document to embody concepts of reproductive and sexual health and rights. India is one of the signatories to the 1994 United Nations International Conference on Population and Development (ICPD). At this conference, "Five Year Review member states" of the UN, including India, affirmed the Sexual and Reproductive Rights (SRRs) of adolescents and young people. Therefore, as a part of their commitments under the ICPD agenda, governments, including India, are obliged to provide for free and compulsory comprehensive sexuality education for adolescents and young people. Article 24, 28 and 29 of the Convention on the Rights of the Child,25 has important provisions related to education of children which can include the right to sexuality education. General Comment No.3 on HIV and AIDS of 'The Committee on the Rights of the Child' states that effective HIV/AIDS prevention requires States to refrain from censoring, withholding or intentionally misrepresenting health-related information, including sexual education and information, and that, consistent with their obligations to ensure the right to life, survival and development of the child(Article 6), State

parties must ensure that children have the ability to acquire the knowledge and skills to protect themselves and others as they begin to express their sexuality. The Committee on the Elimination of Discrimination against Women (CEDAW),25has called on state parties to take steps under the right to health, in particular to "prioritize the prevention of unwanted pregnancy through family planning and sexuality education and reduce maternal mortality rates through safe motherhood services and prenatal assistance." CEDAW further recommends that sexuality education be "widely promoted" and "targeted" at adolescent girls and boys. The Committee on Economic, Social and Cultural Rights (under the International Covenant on Economic, Social and Cultural Rights) in its General Comment No. 14 on' the right to the highest attainable standard of health' has specifically recognised the obligation of the government to provide sexuality education and information and have discussed the issue of sexuality education as a component of the rights to life and health. What sexuality information should be given to young people as well as to the elderly ? When should sexuality education start ? Who should provide sexuality education.How effective is the school-based sexuality education, are important issues that needs to be scientifically discussed and consensus on these issues should be arrived.

Appropriate balance between the eagerness and ambitious proposals of the NGOs to implement varied sexuality education in schools and restrictive approach of the politicians needs to be arrived at so that the process of imparting sexuality education to stakeholders is well regulated and less controversial.

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 and young adult women but also more generally about young people and their sexuality.

When it comes to moral panics, there is a tendency to operate in binary opposites: innocence is presumed to be the opposite of knowledge, innocence is also the opposite of wildness (which is why our children should never see us "wildly" partying-whatever that means-or even just having a good time). The quest for pleasure is often seen to be equal to hedonism and certainly irresponsible when it comes to

parenting. Since lack of knowledge equals the preservation of innocence, our children should also never be educated about sexuality, often compelling them to make uninformed choices.

Theories and Models of Sexual Behavior

Examining adolescents' decisions to initiate sexual intercourse using models and theorem help in explaining their behaviours. There are a number of models and theories, which deal with behaviours and how external information influences the decisions of an individual (Escobar-Chaves *et al.*, 2005). Theories and models regarding adolescent socialization practices, peer influence and the value of media to adolescents make Albert Bandura's social learning theory, priming theory, media practice model, and super-peer theory a good choice for explaining why they engage in sexual behaviours. Although the theories and models vary on how they explain adolescent sexual behaviours and perceptions, they share a common premise that sexual content consumed will initiate a change in adolescents' perceptions of sexuality and eventually their sexual behaviours (Escobar-Chaves *et al.*, 2005).

Social Learning Theory

The social learning theory is based on life experiences, whether direct or indirect, processing the information and then learning and possibly modelling a behaviour from the gathered information. It is the adolescent who is processing, learning and modelling the sexual behaviors from the media. An adolescent is continually growing in the physical and psychological realm. While the adolescent is growing physically and psychologically they are receiving sexual information from the media and processing it to determine their perceptions which may influence their decision to perform sexual behaviours. Adolescents can learn various forms of socialization from the media, whether it is reality or not. Research has shown televisions a large part of adolescents' lives and they often imitate what they observe. Bandura's social learning theory (1986) proposes that social influences determine what behaviours adolescents will exhibit. When the behaviour is perceived as being interesting and desired in addition to being common, trouble-free, and practical, the social learning theory proposes the behaviour can occur(Brown, 2002). The social

learning theory offers an explanation for the adolescent engaging in sexual behaviours. The media is a part of the socialization process for adolescents and the sexualbehaviors in the media make up part of their socialization experiences. The adolescent develops a perception of the sexual behaviors encountered in the media as a social encounter. Learning by imitation of a behavior even when the behavior has not occurred is the basis of Bandura's social learning theory (Bandura, 1986). The theory recognizes three specific areas which occur in learning: actually performing the behaviour, watching others perform the experience without direct contact, and the last phase using cognitive functions to accumulate and assimilate complicated information (Escobar-Chaves *et al.*, 2005). When adolescents actually perform asexual behaviour after observing it in the media they are completing the area of the theory, which states they actually perform the behaviour. The last two areas of the theory, watching others without direct contact and accumulating and assimilating information occur when the adolescents encounter sexual behaviours in the media and then compile the information to determine their perceptions of the sexual behaviours. At the time when the adolescent actually performs the behaviour, they are subjected to the possible negative consequences, such as, pregnancy, STDS, and the psychological effects. In essence, the theory leads one to believe social situations influence and can cause various behaviours to occur (Peterson, Moore & Furstenberg, 1991). Children have a tendency to learn by imitation and television is progressively influential mode of socialization (Peterson, Moore & Furstenberg, 1991). While adolescents are maturing the socialization process remains a significant part of their growth and development. The social learning theory regards sexual behaviours as social experiences which intern influence adolescents to engage in sexual activities. The social learning theory offers an explanation for sexual encounters in the media serving as a social pressure which influences adolescents to engage in sexual behaviours.

Priming Theory :

The priming theory operates on the premise that sexual content viewed in the media can provide the motivation for adolescents to engage in sexual activity shortly after it is viewed (Escobar-Chaves *et al.*, 2005). Based on this theory, adolescents are

very susceptible to initiating sexual behaviours shortly after they have viewed or heard sexual content. The frequency of sexual content in the media along with an adolescent's access to various modes of media also provides a foundation for motivating the adolescent to engage in sexual behaviours. Initially adolescents may not have any motivation for sexual behaviours, but as the theory states, exposure to the behaviours maybe catalyst for engaging in sexual activity. When the exposure to sexual content is coupled with other factors in their lives, like puberty and socialization issues, the notion of imitating sexual behaviours may seem more enticing. There is sexual content contained in almost all forms of media, and with the amount of media consumed by adolescents, it may be inevitable that exposure to sexual topics is only a matter of time. As the name of the theory suggests, "priming', is literally preparing the individual to perform a certain behaviour.

Media Practice Model :

The media practice model establishes that adolescents want to view the media and seek its a valuable source of information. The purpose of this model is to clarify how media is used in thorough relative structure (Steele & Brown, 2005). The main points of the model focus on relationship between the development of an adolescent's personality and an adolescent's selection of media, the adolescent interfacing with media and how they use the media (Steele & Brown, 2005). In essence the model assumes that an adolescent's selection of media is based on how he / she perceives him / herself or who they want to be at that time (Brown, Steele & Walsh-Childers, 2002). According to the theory, if adolescents feel they are sexual beings, they will be more interested in the sexual images and sexual content in the media. These feelings may influence them to seek media selections containing sexual information and determine to what level they participate in the behaviours (Brown & Witherspoon, 2002). If the adolescent chooses to engage in the behaviour it is a result of the adolescent's intentions, past experiences, and how they identify his / herself.

Super Peer Theory :

When adolescents experience puberty, they are often filled with many questions and substantial changes (Brown, Halpern & L'Engle, 2005). As adolescents

begin to become sexual beings the sexual content in media may become more interesting (Pardun, L'Engle & Brown, 2005). Generally, individuals will seek the information necessary to assist with explaining ongoing changes, like those seen in puberty (Brown, Halpern & L'Engle, 2005). Research has already shown the large amount of sexual information, which can be obtained from the media.

The super-peer theory operates on the premise that adolescents choose who they want to be or who they relate to in the media. This theory supports the notion that adolescents imitate the behaviours of those individuals they want to be most like (Escobar-Chaves *et al.*, 2005). When sexual depictions are displayed in the media, an adolescent may find the actions appealing if the adolescent favours the person in the media. In addition, adolescents may view the media as less embarrassing and critical of questions regarding their changing bodies and development. This non-threatening perception of information in the media may cause the adolescent to seek the media for sexual information, which transforms the media into a kind of "super peer" (Brown, Halpern & L'Engle, 2005). All of these theories establish that adolescents are influenced by mass media and that they believe the situations in mass media are real. The mass media seeks out adolescents as potential consumers for their products. The sheer number of adolescents and their spending power make them an ideal audience for advertisers to target. This could lead the mass media to tailor their marketing strategies to entice adolescents into purchasing or consuming their products. The theories and models which were discussed, i.e. social learning theory, priming theory, media practice model and super peer theory provide a framework for explaining how mass media influences an adolescent to engage in sexual behaviours. Each theory/model explores unique area of an adolescent's life. The social learning theory has a focus on social encounters of sexual behaviours in the media being an influence for the adolescent to engage in sexual activity. The priming theory states adolescents are motivated to engage in sexual activity shortly after viewing sexual content in the mass media. The media practice model indicates an adolescent values the information in media, and the information influences how they perceive the information. The super-peer theory maintains the position of the mass media influencing adolescents to imitate the behaviours of individuals they want to be most like in the media.

Childhood Sexual Development (9 – 12 Years) :

- Period of significant change.
- Enter puberty – Physical, social, emotional aspects.
- Increased peer contact.
- Increased experimentation.
- Inhibition may increase / decrease.
- Continue to learn society' expectations about gender roles and behaviors.
- Develop sense of expectations concerning adult roles and behaviors.

Family Planning Queensland (2010), Johnson (2007), Larsson (2000)

Childhood Sexual Development (13 – 18 Years) :

- Developing sense of identity and values.
- Experimenting with sexual activities.
- Puberty continues.
- Separation from family, developing relationships with peers.
- Developing sense of privacy.

SIECUS,Tepper, M. (2001)

Report on Teen Pregnancies

The phenomenon of teenage pregnancy seems to be a worldwide trend with countries like the US and UK reporting high rates along with India and others in South Asia. Latest data suggests that teen pregnancy in India is high with 62 pregnant teens out of every 1,000 women. In comparison, 24 British teens get pregnant before their 19th birthday while the figure is 42 in the US.

In India, the problems are very different grapping issues like early marriage, illiteracy and high infant mortality could be possible. causes for the high number of young girls getting pregnant between the ages of 15–19. India's neighbours Afghanistan (113), Bangladesh (125) and Nepal (115) are also plagued by similar problems with younger women getting pregnant. Interestingly, the number of pregnant teens in Pakistan is much lower at 36.

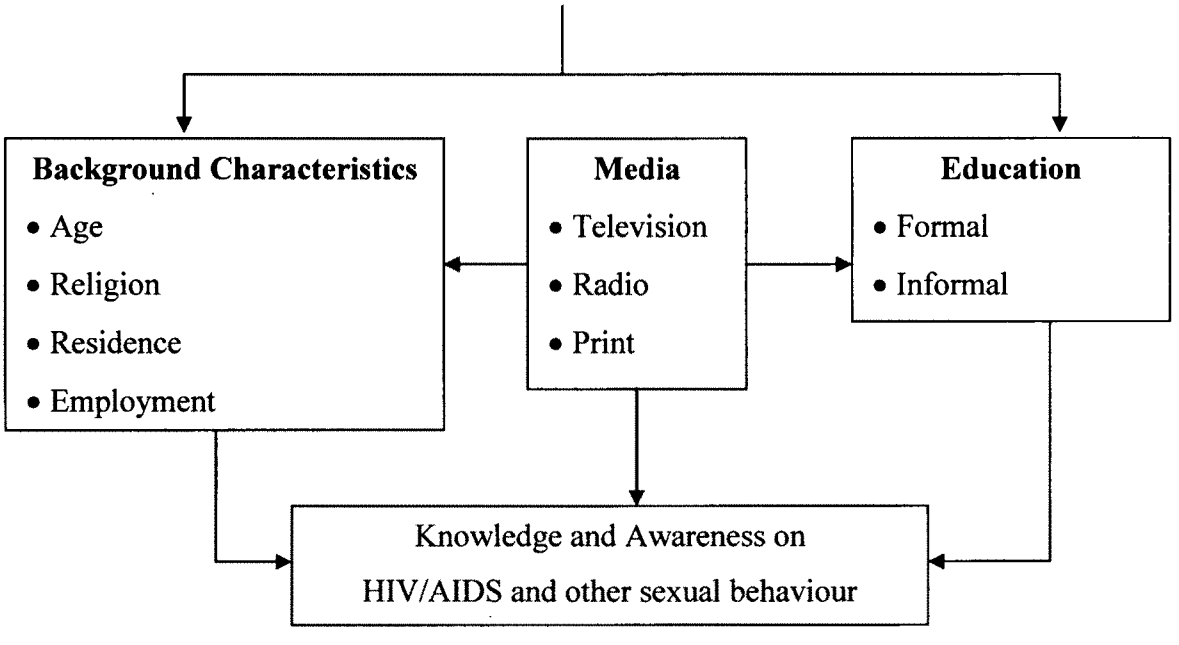
The report points out that the number of women dying as a consequence of pregnancy and childbirth are unchanged since the 1980s, at about 5,36,000. Many

times that number, between 10–15 million, suffer injury or illness. Lower maternal mortality, and avoiding injuries such as obstetric fistula, depends on better care in pregnancy and childbirth, emergency services in cases of complications and access to family planning. It adds that while some poor women do want fewer children, cultural constraints hold them back.

The report suggests accepting cultural constraints of each country and working in tandem with it. "The key to reproductive health is making motherhood safer through access to family planning to reduce unintended pregnancies and to space intended pregnancies and provide skilled care for all pregnancies and births," it says. Teen pregnancy in India is high with 62 pregnant teens out of every 1,000 women. In comparison, 24 British teens get pregnant before their 19th birthday while the figure is 42 in the US.

In India, issues like early marriage and high infant mortality are possible causes for high number of young girls getting pregnant between the ages of 15–19 (The Times of India, New Delhi, Nov. 14, 2008, Section : Times Nation,p. 18).

Conceptual Framework of Interplay between Explanatory and Outcome Variables Studied by Wouhabe Maria



From background study it reveals the following aspects :

1. Real situation of sex education in West Bengal.
2. The true picture of introducing sex education in school curriculum in West Bengal school.
3. Review of literature provided adequate content area for the tool preparation.

CHAPTER – III

RESEARCH DESIGN AND METHODOLOGY

CHAPTER – III

RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design of the Study

In this chapter the researcher gives an overall picture of how the research was conducted in terms of the research design, method of data collection, population and sample, method of scoring, sampling method, instrumentation, data collection and data analysis procedures. This chapter also describes the rationale behind the methodology used.

- Research design refers to the plan or blueprint of conducting a research.
- In order to achieve the intended objectives it is vital that the design be decided on because the resources need to be prepared before hand.
- A research without preplanning cannot be judged objectively in the end.
- Various authors and researchers (Denzin & Lincoln, 1994; Lee, 1999; Miles & Huberman, 1994; Swanbom, 1996 & Verschuren, 2001) accept the categorization of research into qualitative and quantitative types.
- In general if in research a study requires responses that require numeric responses, it is called a quantitative study while that which requires non-numeric responses is called a qualitative study (Clarke & Dawson, 1999; Hatton, 2004;Smith, 199(& Winter & Munn-Giddings, 2001).
- Thus, this study required a qualitative approach attempting to provide a description of the knowledge and attitudes of adolescents towards sex education.
- In this case some subset of the population is used for the study. A subset of the population that is used for the study is called a sample (Crombie & Davies, 1996).
- It is quite common in research that a useful sample is studied because the population could be too large that it may be difficult to study it, or it may be inaccessible.
- On the other hand a sample is usually convenient, easy to handle and can be made available for the study with relative ease as compared to a population.

3.2 Common Characteristics of Survey Research

1. The fact that data is collected from a group of people in order to describe some aspects or characteristics (such as attitudes, beliefs, abilities) of the population of which that group is part.
2. The main way in data collection is through asking questions.
3. Data is collected from a sample rather than from every member of the population (Fraenkel and Wallen, 1993).

Both quantitative and qualitative research methods were used in this study. According to Strauss and Corbin (1990) these two types of methods can be used effectively in the same research project. Qualitative data can be used to illustrate or clarify quantitatively derived findings and can give the intricate details of phenomenon under study that are difficult to convey by quantitative methods. As noted by Gerard. (2003), quantitative methods produce quantifiable and reliable data usually generalized to a larger population.

3.3 Sampling Procedure

Sampling Design :

The sample was drawn from a population of higher secondary school (H. S.) learners from 12 schools in West Bengal. Purposive sampling was used in this study. Purposive sampling according to Fraenkel and Wallen (1993) can be referred to judgment sampling. In purposive sampling, the researcher judges which sample to select. A sample that can provide the needed data. Defining purposive sampling Fraenkel and Wallen (1993) say that it is choosing a sample which is representative with respect to certain known characteristics of the population.

In knowledge test, a sample of 300 adolescent students (boys) and 300 adolescent students (girls) was selected from schools in urban & rural areas of Nadia, South 24 Pgs.,North 24 Pgs.,Murshidabad,Jajpaiguri, Howra and Midnapur districts.

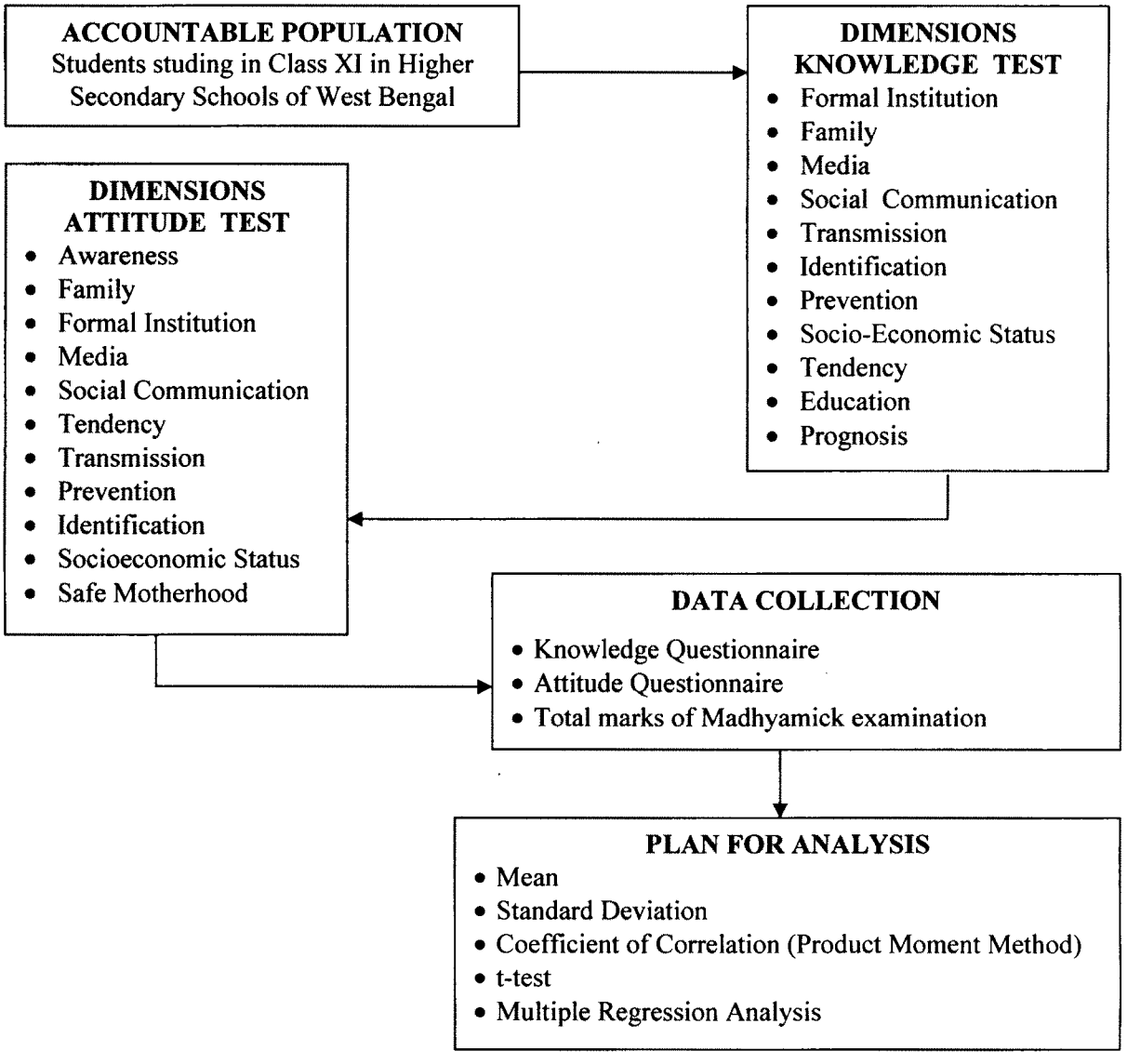
Type of School	Gender	Number of Participants	Total
Urban	Boys	150	300
	Girls	150	
Rural	Boys	150	300
	Girls	150	

In attitude test, a sample of 300 adolescent students (boys) and 300 adolescent students (girls) was selected from schools situated in urban & rural areas of Nadia, South 24 Pgs.,North 24 Pgs.,Murshidabad, Jajpaiguri, Howra and Midnapur districts.

Type of School	Gender	Number of Participants	Total
Urban	Boys	150	300
	Girls	150	
Rural	Boys	150	300
	Girls	150	

This study was developed to investigate higher secondary school (H. S.) learner's knowledge and attitudes towards sex education in West Bengal. Using the following diagram the researcher developed the research design.

RESEARCH DESIGN



3.4 Population

In this study the target population refers to Indian male and female adolescents attending high school. The study was restricted to this population group for the following reasons :

- Both male and female were included on the basis that both genders are equally responsible for the occurrence of sexual activity.
- In order to control variations in age and standards of education only class XI pupils were selected as sample.

3.5 Data Collection Technique and Instrument

The data collection instrument utilized in this study was a questionnaire (see appendix). In view of nature of the research topic, the researcher decided that data collection instrument would be more effective in eliciting honest responses than other research instrument such as face to face interviews which could be too threading .

The main research tool used to collect data was a questionnaire that the researcher constructed. The knowledge based questionnaire consisted of 61 items. The attitude based questionnaire consisted of 60 items.

In a Likert Scale, statements that express an opinion or feeling about an object are written. The statements are listed and to the right of each statement is a space for the respondent to indicate the degree of agreement or disagreement. The Likert Scale was therefore used to provide an attitude continuum for each statement ranging from Strongly Agree (SA), Agree (A), Partially Agree (PA), Neutral (N), Disagree (D) and Strongly Disagree (SD). The respondents had to indicate their responses to the particular items by means of a (✓) mark. The Likert scale gives a wider range of responses than the agree/disagree types of responses. The advantage of the Likert Scale is that it provides precise information about the respondent's degree of agreement or disagreement to the detail that the researcher requires. The data were collected by administering the tools individually to the adolescents of selected composite H. S. schools in West Bengal.

The questionnaire was piloted on two higher secondary schools, situated in Halisahar (North 24 Parganas). It was then finalized after receiving feedback from the

pilot sample.

Questions have to be simple and straight forward enough to be understood with the help of printed instructions and definitions. Questionnaires have some disadvantages like a low response rate, the researcher depends on the mercies of the respondents, lack probing and some answers tend to be superficial.

In this study, the respondent rate problem was addressed when the researcher approached the sampling units and requested them to respond. They were fully informed about the aimsand objectives of the study. They were informed of their right of refusing to respond when they liked. The other right that they were informed was of not completing items that they felt to be sensitive or too personal. The other initiative to enhance more responses was to make the questionnaire simple and straight forward. The pilot phase was intended for this. The fact that questionnaires could be given to a large number of respondents and that the respondents would have to respond to the same set of items was the greatest advantage of questionnaires for this research.

Data Collection Instruments :

i) Structured Knowledge Questionnaire.

ii) Structured Attitude Questionnaire.

iii) Tools were developed in consultation with supervisor in the field of education.

3.6 Causes for Selection of Questionnaire

- The number of respondents available made it impractical to carry out individual interviews.
- It was economical considering the time factor. A large groups of respondents were able to complete the questionnaire in limited sitting.
- The relative anonymity that resulted when whole classes completed the questionnaire should reduce the refusal rate and ensure honest answers.

Rubin and Babbie (1997) believed that self-administered questionnaires are more appropriate in dealing with sensitive issues if the questionnaire offer complete anonomity. Respondents are sometimes reluctant to report controversial or deviant attitudes or behaviours in interviews but are more withing to responds an anonymous self-administered questionnaire.

3.7 Development of the Tools

Data collection tools are the procedure or instruments used by the researcher o observe or measure the key variables in the research problem.

The following steps were adopted in the development of the tool :

- Review of literature provided adequate content area for the tool preparation.
- Consistent discussion with experts.
- Personal experience and discussion with supervisor for reduction of data (if required), data coding and graph plotting.
- For this study, data handling involved arranging of facts from the various sources according to the themes in line with the literature review.
- The main purpose was to enable comparison of the current situation of feelings and attitudes of teachers regarding the teaching of sex education in schools.
- The data were edited and reduction was not necessary.

Preliminary data analysis refers to the initial stages of data analysis that involves finding out the indications of what the main findings would entail. It may start in an informal pattern, and this makes a research 'reflective' diary necessary to establish and use (Kemp, 2001). The reflective diary is usually used to record personal assessment, feelings, reflection and interpretations. Preliminary data analysis assists in determining the optimal approach to undertake the main data analysis. After the main data analysis, the records from preliminary data analysis would then be incorporated and consolidated with the main data analysis records to compile a complete report. The worth of preliminary data analysis was evident in this study. When the initial questionnaires were returned, preliminary analysis indicated some differences between the data of female and male respondents that had been collected. This led to the decision to analyze the two genders separately and then compare them. The phase of analyzing the consolidated version was the original intention because the idea was to understand the feelings and attitudes of adolescent towards sex education. Data analysis methods was to examine, categorize, tabulate or recombe the evidence to address the initial proposition of a study (Yin, 1994). Winter and Munn-Giddings (2001) pointed out that inaction research, data analysis takes the open-ended critical reflection form which involves questioning the spontaneous interpretations of events,

sharing and then comparing interpretations and questions to create the maximum opportunity for challenge, surprise and mutual learning.

Holland, Daymon and Holloway (2002) enlightened that data analysis does not take place in a single stage after data collection. In their description, it is a continuous, systematic process which runs simultaneously with data collection. It is in this sense that data analysis for this study started as preliminary stages since idea generation, advanced more during literature review and reached its formal form when the empirical study was conducted.

3.8 Sampling Procedure

a) Area : The test was applied on 600 students living in urban areas and 600 students living in rural areas.

b) Class : The test was applied on the adolescent students (class XI) who completed the Madhyamik examination of West Bengal Board of Secondary Education.

c) Number of Schools : Twelve schools were selected from North 24 Parganas, South 24 Parganas, Nadia, Murshidabad, Howra, Jalpaiguri and Midnapur districts of West Bengal as samples of the present study .

d) Number of Students : The test was administered on 1200 students. Out of them, 600 students were selected for knowledge test and 600 students were selected for attitude test.

e) Sex : Out of 1200 students, 600 students were boys and 600 students were girls.

A sample design is a definite plan completed and determined before any data are collected for obtaining a representative sample from a given population. To study a whole population in order to arrive at generalization would be impracticable. The process of sampling makes it possible to draw valid inferences or generalizations on the basis of careful observation of variable within a relatively small proportion of the population. sampling tools save an investigator's time, money, energy and enable him or her to prove problems that are too unwisely to be talked by conventional methods to obtain a sample representative of its population.

Nature of Sample : The sample under the investigation is a purposive sample. The investigator considered two stratifications in terms of rural, urban areas and in

selection of males, females adolescent students.

The schools also were not selected at random. As the schools situated in semi-urban and semi-rural were not available in due time period. The schools of urban and rural areas were considered for the sake of working facilities.

Size of Sample : In order to make a study comprehensive and to avoid sampling error, i.e. variation, which may be attributed to chance elements, a large sample is necessary but as time is short and work is survey in nature, the investigator had to remain satisfied by taking 1200 students only.

3.9 Tool Construction

A Self-administered Questionnaire (SKAQ) in simple Bengali language was constructed and standardized for assessing the knowledge and attitude of West Bengal higher secondary (10 + 2) schools. The preliminary constructed knowledge and attitude test of the questionnaire was administered on 131 adolescents age group students of class X of North 24 Parganas district, to find out the difficulties of the people in responding to the items and understanding the language .

There are 121 items questionnaire splitted into two parts. 61 items knowledge part and 60 items attitude part were both measured in 5-point Likert scale. Each statement of the knowledge and attitude test of questionnaire is associated with five possible responses viz., agreed, partially agreed, neutral, partially disagreed, disagreed. All favorable statements were scored from maximum to minimum as 5, 4, 3, 2, 1. All unfavourable statements were scored from minimum to maximum as 1, 2, 3, 4, 5. After this preliminary administration in knowledge test towards sex education among adolescents, among 61 items all except item numbers 1, 3, 15, 16, 41 were significant. In attitude test towards sex education among adolescents, among 60 items, all were significant except item numbers 5, 14, 32, 54. Efforts were taken to improve the language in understanding the items and necessary changes were incorporated with the help of experts in the final questionnaire.

3.10 Design of the Questionnaire

The knowledge dimensions were formulated by combining 61 knowledge questionnaire items divided into 11 dimensions given as follows :

Dimensions	Items of Questionnaire	Total Items
Formal Institution (D_1)	1, 10, 13, 25, 37, 51	6
Family (D_2)	2, 14, 26, 38, 50, 52	6
Media (D_3)	3, 15, 27, 39, 53	5
Social Communication (D_4)	4, 12, 16, 24, 28, 40	6
Transmission (D_5)	5, 29, 36, 42, 54, 60	6
Identification (D_6)	6, 18, 30, 43	4
Prevention (D_7)	11, 17, 19, 31, 56	5
Socio-Economic Status (D_8)	8, 20, 45, 46, 55	5
Tendency (D_9)	9, 21, 33, 41, 47, 58	6
Education (D_{10})	22, 32, 34, 44, 48, 57, 61	7
Prognosis (D_{11})	7, 23, 35, 49, 59	5
Total		**61**

The Attitude dimensions were formulated by combining 60 Attitude questionnaire items divided into 11 dimensions given as follows :

Dimensions	Items of Questionnaire	Total Items
Awareness (D_{12})	1, 5, 9, 14, 25, 37	6
Family (D_{13})	2, 15, 26, 40, 56	5
Formal Institution (D_{14})	3, 16, 27, 41, 55, 57, 58	7
Media (D_{15})	4, 17, 28, 42, 54	5
Social Communication (D_{16})	12, 18, 24, 29, 51, 53, 60	7
Tendency (D_{17})	6, 7, 19, 30, 31, 33, 39, 59	8
Transmission (D_{18})	21, 45, 46	3
Prevention (D_{19})	8, 20, 32, 36, 43, 44	6
Identification (D_{20})	10, 22, 34, 47	4
Socio-Economic Status (D_{21})	11, 23, 35, 48, 52	5
Safe-Motherhood (D_{22})	13, 38, 49, 50	4
Total		**60**

3.11 Choice of Statistical Test

Product Moment Coefficient of Correlation :

$$r = \frac{\frac{\Sigma xy}{N} - \frac{\Sigma x}{N} \times \frac{\Sigma y}{N}}{\sigma_n \times \sigma_y}$$

The scores were then subjected to a ANOVA and t-test in order to test the hypothesis of the study and to find relationships and / or differences between the variables at 0.01 and 0.05 levels of significance.

t-Test :

The t-test helps us to determine whether two groups differ significantly in mean performance and enables us to say that there is a difference between the means of the population from which the samples were drawn. The t test is found out as follows :

$$t = \frac{M_1 - M_2}{\sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}}$$

where M_1 and M_2 represent two sample means of group A and group B and σ_1 and σ_2 are the Standard deviations of the two samples respectively. Whether a difference is to be taken significant or not depends upon the probability that given differences could have arisen by chance. Experimenters, for convenience, have chosen mostly used arbitrary standards called levels of significance of 0.05 and 0.01 levels.

3.12 Sample

The sample was the students of higher secondary (10 + 2) level schools of West Bengal. The researcher selected the sample of class XI students from the following schools :

Sl. No.	Name of the School	District
1.	Halisahar Ramprasad Vidyapith (H. S.)	North 24 Parganas
2.	Halisahar High School (H. S.)	North 24 Parganas
3.	Kankinara Boys High School (H. S.)	North 24 Parganas
4.	Kanchrapara Harnet High School (H. S.)	North 24 Parganas
5.	Jetia High School (H. S.)	North 24 Parganas
6.	Nimtala Rangaswar High School (H. S.)	Nadia
7.	Fatepur High School. (H. S.)	Nadia
8.	Shibpur Prasanna Kumari Balika Sikshalaya (H. S.)	Howrah
9.	Tiljala Brojanath Vidyapith Boys (H. S.)	South 24 Parganas
10.	Chalsa Gayanath Vidyapith (H. S.)	Jalpaiguri
11.	Bagmari High School (H. S.)	Murshidabad
12.	Tamluk High School (H. S.)	Purba Medinipur

Table I : Test-Retest Scores of Knowledge Test towards Sex Education

Sl. No.	Test Scores		Retest Scores		XY
	X	X^2	Y	Y^2	
1.	209	43681	220	48400	45980
2.	238	56644	245	60025	58310
3.	239	57121	238	56644	56882
4.	184	33856	172	29584	31648
5.	234	54756	232	53824	54288
6.	236	55696	225	50625	53100
7.	227	51529	226	51076	51302
8.	252	63504	250	62500	63000
9.	227	51529	226	51076	51302
10.	230	55824	229	52441	52670
11.	240	57600	230	52900	55200
12.	246	60516	244	59536	60024
13.	232	53824	232	53824	53824
14.	186	34596	170	28900	31620

Sl. No.	Test Scores		Retest Scores		XY
	X	X^2	Y	Y^2	
15.	212	44944	214	45796	45368
16.	220	48400	219	47961	48180
17.	224	50176	224	50176	50176
18.	233	54289	231	53361	53823
19.	225	50625	223	49729	50175
20.	185	34225	170	28900	31450
21.	248	61504	248	61504	61504
22.	249	62001	235	55225	58515
23.	231	53361	230	52900	53130
24.	212	44944	212	44944	44944
25.	234	54756	232	53824	54288
26.	207	42849	185	34225	38295
27.	228	51984	228	51984	51984
28.	242	58564	242	58564	58564
29.	216	46656	200	40000	43200
30.	214	45796	214	45796	45796
31.	220	48400	222	49284	48840
32.	240	57600	239	57121	57360
33.	225	50625	227	51529	51075
34.	238	56644	238	56644	56644
35.	245	60025	245	60025	60025
36.	230	52900	231	53361	53130
37.	238	56644	237	56169	56406
38.	218	47524	210	44100	45780
39.	226	51076	226	51076	51076
40.	238	56644	236	55696	56168
41.	251	63001	250	62500	62750
42.	215	46225	216	46656	46440
43.	213	45369	213	45369	45369

Sl. No.	Test Scores		Retest Scores		XY
	X	X^2	Y	Y^2	
44.	273	74529	274	75076	74802
45.	249	62001	252	63504	62748
46.	245	60025	243	59049	59535
47.	235	55225	245	60025	57575
48.	245	60025	243	59049	59535
49.	266	70756	266	70756	70756
50.	270	72900	262	68644	70740
51.	255	65025	245	60025	62475
52.	222	49284	220	48400	48840
53.	227	51529	229	52441	51983
54.	224	50176	226	51076	50624
55.	220	48400	223	49729	49060
56.	202	40804	190	36100	38380
57.	240	57600	238	56644	57120
58.	236	55696	240	57600	56640
59.	226	51076	226	51076	51076
60.	256	65536	250	62500	64000
61.	211	44521	198	39204	41778
62.	199	39601	180	32400	35820
63.	261	68121	260	67600	67860
64.	276	76176	262	68644	72312
65.	224	50176	225	50625	50400
66.	230	52900	232	53824	53360
67.	236	55696	235	55225	55460
68.	231	53361	231	53361	53361
69.	222	49284	195	38025	43290
70.	200	40000	199	39601	39800
71.	245	70225	245	70225	70225
72.	268	71824	268	71824	71824

Sl. No.	Test Scores		Retest Scores		XY
	X	X^2	Y	Y^2	
73.	256	65536	240	57600	61440
74.	265	70225	265	70225	70225
75.	268	71824	267	71289	71556
76.	223	49729	119	14161	26537
77.	234	54756	234	54756	54756
78.	236	55696	236	55696	55696
79.	202	40804	190	36100	38380
80.	231	53361	225	50625	51975
81.	250	62500	250	62500	62500
82.	260	67600	240	57600	62400
83.	235	55225	225	52875	52875
84.	261	68121	260	67600	67860
85.	265	70225	267	71289	70755
86.	213	45369	200	40000	42600
87.	230	52900	230	52900	52900
88.	253	64009	248	61504	62744
89.	250	62500	252	63504	63000
90.	223	49729	226	51076	50398
91.	235	55225	220	48400	51700
92.	254	64516	256	65536	65024
93.	231	53361	226	51076	52206
94.	242	58564	245	60025	59290
95.	253	64009	250	62500	63250
96.	184	33856	174	30276	32016
97.	198	39204	190	36100	37620
98.	185	34225	175	30625	32375
99.	198	39204	190	36100	37620
100.	236	55696	206	42436	48616

Calculation of Knowledge Test :

$\Sigma X = 23222$ $\Sigma Y = 22744$ $N = 100$

$\Sigma X^2 = 5448868$ $\Sigma Y^2 = 5252400$ $\Sigma XY = 5339298$

$$\overline{X} = \frac{\Sigma X}{N} = \frac{23222}{100} = 232.22$$

$$\sigma_X = \sqrt{\frac{\Sigma X^2}{N} - \left(\frac{\Sigma X}{N}\right)^2}$$

$$= \sqrt{\frac{5448866}{100} - \left(\frac{23222}{100}\right)^2}$$

$$= \sqrt{5448868 - 5392612}$$

$$= 23.71$$

$$\overline{Y} = \frac{\Sigma Y}{N} = \frac{22744}{100} = 227.44$$

$$\sigma_Y = \sqrt{\frac{\Sigma Y^2}{N} - \left(\frac{\Sigma Y}{N}\right)^2}$$

$$= \sqrt{\frac{5252400}{100} - \left(\frac{22744}{100}\right)^2}$$

$$= \sqrt{5252400 - 5172895}$$

$$= 28.19$$

$$r = \frac{\frac{\Sigma XY}{N} - \frac{\Sigma X}{N} \times \frac{\Sigma Y}{N}}{\sigma_x \times \sigma_y}$$

$$= \frac{53392.98 - 232.22 \times 227.44}{23.71 \times 28.19}$$

$$= \frac{53392.98 - 52816.11}{669.38}$$

$$= \frac{576.87}{668.38}$$

$$= 0.86$$

Notations used :

X = Test Scores of Knowledge, Y = Retest Scores of Knowledge

$\overline{X}$ = Mean of Knowledge Test Scores, $\overline{Y}$ = Mean of Knowledge Re-test Scores,

σ_X = Standard Deviation of Knowledge Test Scores,

σ_Y = Standard Deviation of Knowledge Retest Scores,

r = Correlation of Test-Retest Scoress in Knowledge

Table II : Test-Retest Scores of Attitude Test towards Sex Education

Sl. No.	Test Scores		Retest Scores		XY
	X	X^2	Y	Y^2	
1.	214	45796	225	50625	48150
2.	230	52900	230	52900	52900
3.	262	68644	270	72900	70740
4.	225	50625	215	46225	48375
5.	225	50625	225	50625	50625
6.	198	39204	198	39204	39204
7.	270	72900	260	67600	70200
8.	218	47524	218	47524	47524
9.	254	64516	245	60025	62230
10.	210	44100	199	44100	41790
11.	249	62001	269	72361	66981
12.	190	36100	210	44100	39900
13.	204	41616	204	41616	41616
14.	228	51984	228	51984	51984
15.	241	58081	241	58081	58081
16.	266	70756	266	70756	70756
17.	243	59049	247	61009	60021
18.	246	60516	235	55225	57810
19.	244	59536	244	59536	59536
20.	245	60025	245	60025	60025

Sl. No.	Test Scores		Retest Scores		XY
	X	X^2	Y	Y^2	
21.	233	54289	233	54289	54289
22.	230	52900	250	62500	57500
23.	225	50625	225	50625	50625
24.	261	68121	250	62500	65250
25.	229	52441	215	46225	49235
26.	222	49284	190	36100	42180
27.	190	36100	225	50625	42750
28.	218	47524	225	50625	49050
29.	270	72900	256	65536	69120
30.	256	65536	256	65536	65536
31.	233	54289	190	36100	44270
32.	264	69696	264	69696	69696
33.	247	61009	247	61009	61009
34.	251	63001	251	63001	63001
35.	277	76729	265	70225	73405
36.	242	58564	235	55225	56870
37.	258	66564	250	62500	64500
38.	243	59049	234	54756	56862
39.	259	67081	259	67081	67081
40.	216	46656	216	46656	46656
41.	244	59536	244	59536	59536
42.	250	62500	250	62500	62500
43.	239	57121	225	50625	53775
44.	236	55696	230	52900	54280
45.	240	57600	240	57600	57600
46.	239	57121	245	57600	58555
47.	247	61009	240	57600	59280
48.	239	57121	240	57600	57360

Sl. No.	Test Scores		Retest Scores		XY
	X	X^2	Y	Y^2	
49.	230	52900	240	57600	55200
50.	263	69169	250	62500	65750
51.	265	70225	250	62500	66250
52.	272	73984	262	68644	71264
53.	238	56644	230	52900	54740
54.	253	64009	240	57600	60720
55.	240	57600	225	50625	54000
56.	252	63504	250	62500	63000
57.	247	61009	245	60025	60515
58.	245	60025	245	60025	60025
59.	227	51529	235	55225	53345
60.	239	57121	245	60025	58555
61.	255	65025	240	57600	61200
62.	271	73441	260	67600	70460
63.	245	57600	235	55225	57575
64.	214	45796	225	50625	48150
65.	261	68121	274	75076	71514
66.	240	57600	228	51984	54720
67.	230	52900	214	51984	49220
68.	239	51984	239	51984	51984
69.	262	68644	242	58564	63404
70.	250	62500	232	55824	58000
71.	242	55824	242	55824	55824
72.	273	74529	260	67600	70980
73.	219	47961	225	50625	49275
74.	170	28900	190	36100	32300
75.	244	59536	235	55225	61920
76.	258	66564	240	57600	69696

Sl. No.	Test Scores		Retest Scores		XY
	X	X^2	Y	Y^2	
77.	264	69696	264	69696	60516
78.	246	60516	246	60516	56644
79.	238	56644	238	56644	58564
80.	242	58564	242	58564	61504
81.	248	61504	248	61504	52441
82.	229	52441	229	52441	52800
83.	240	57600	220	48400	75076
84.	274	75076	274	75076	57750
85.	250	62500	231	53361	62500
86.	250	62500	250	62500	57600
87.	240	57600	240	57600	63404
88.	242	58564	262	68644	68121
89.	261	68121	261	68121	38000
90.	200	40000	190	40000	60025
91.	245	60025	245	60025	66049
92.	257	66049	257	66049	42436
93.	206	42436	206	42436	61226
94.	253	64009	242	58564	66564
95.	258	66564	258	66564	60025
96.	245	60025	245	60025	43681
97.	209	43681	209	43681	74256
98.	273	74529	272	73984	64416
99.	264	59536	244	59536	72336
100.	274	75076	264	69696	61920

Calculation of Attitude Test :

$\Sigma X = 24172$ $\Sigma Y = 23859$ $N = 100$

$\Sigma X^2 = 5864460$ $\Sigma Y^2 = 5736428$ $\Sigma XY = 5793079$

$$\overline{X} = \frac{\Sigma X}{N} = \frac{24172}{100} = 241.72$$

$$\sigma_X = \sqrt{\frac{\Sigma X^2}{N} - \left(\frac{\Sigma X}{N}\right)^2}$$

$$= \sqrt{\frac{5864460}{100} - \left(\frac{24172}{100}\right)^2}$$

$$= \sqrt{5864460 - 5842855}$$

$$= 14.69$$

$$\overline{Y} = \frac{\Sigma Y}{N} = \frac{23859}{100} = 238.59$$

$$\sigma_Y = \sqrt{\frac{\Sigma Y^2}{N} - \left(\frac{\Sigma Y}{N}\right)^2}$$

$$= \sqrt{\frac{5736428}{100} - \left(\frac{23859}{100}\right)^2}$$

$$= \sqrt{5736428 - 5692518}$$

$$= 20.95$$

$$r = \frac{\frac{\Sigma XY}{N} - \frac{\Sigma X}{N} \times \frac{\Sigma Y}{N}}{\sigma_x \times \sigma_y}$$

$$= \frac{57930.79 - 241.72 \times 238.59}{20.95 \times 14.69}$$

$$= \frac{57930.79 - 57671.97}{307.75}$$

$$= \frac{258.82}{307.75}$$

$$= 0.84$$

Notations used :

X = Test Scores of Attitude, Y = Retest Scores of Attitude

$\overline{X}$ = Mean of Attitude Test Scores, $\overline{Y}$ = Mean of Attitude Re-test Scores,

σ_X = Standard Deviation of Attitude Test Scores,

σ_Y = Standard Deviation of Attitude Retest Scores,

r = Correlation of Test-Retest Scoress in Attitude

3.13 Reliability and Validity of the Test

The researcher applied test-retest to find out the reliability of the test. In this method a single form of test is administered twice on the same sample with a reasonable time gap. This yields two independent sets of scores. The correlation between the two sets of scores gives the value of the reliability coefficient. which is also known as temporal stability coefficient. A positive and significant correlation coefficient between the two sets of scores indicates that the test is reliable. Here test-retest was calculated by product moment method.

In the present study the test was re-administered upon 100 adolescent age group of class XI students. To reduce the memory effect to a minimum, retest was held 15 days after the first administration of the original test. Then the investigator found out the reliability coefficient between test scores and re-test scores of those same group of adolescents. The test-retest coefficient of the knowledge scale was determined as 0.86. and that of the attitude scale was found to be 0.84, both were significant.

The present test certainly ensured high content validity, because it adequately covered both the content and objectives of the unit. In constructing the test, the investigator did not work under any subjective influence. A good number of experts including the supervisor of the researcher assisted the investigation to prepare the test and the dimensions and items were also checked by them.

The obtained value r was significantly beyond 0.01 level which indicated high positive correlation between two sets of scores which means the knowledge and attitude tests were highly reliable.

3.14 Item Analysis

The first draft consisting 61 items of knowledge test and 60 items attitude test was administered to 150 subjects for item analysis and scoring was done. For negative items reserved scoring was done. After scoring, two extreme groups were formed from the Top 27% and bottom 27% on the basis of obtained summated scores. Responses of each item was analysed according to the principles by Edwards (1969) However no t-value was estimated. For the selection of items, mean difference of scores between high and low groups for each item was considered. According to Murphy and Likert (1937) on the basis of magnitude of the difference between the means of a high and low group agreed very well with the ordering of statements in terms of the magnitude of the correlation between the items response and total score.

Table III : Item Analysis for Knowledge Test

Item	High Mean	SD	Low Mean	SD	N	t	Sig. Level
1	4.09	1.04	3.77	1.14	35	1.21	NS
2	4.29	1.23	3.57	1.44	35	2.23	*
3	4.43	0.81	4.03	1.29	35	1.55	NS
4	3.51	1.44	2.77	1.65	35	2.01	*
5	4.69	0.72	3.54	1.34	35	4.46	**
6	4.63	0.94	3.83	1.42	35	2.77	**
7	4.66	0.87	3.91	1.2	35	2.97	**
8	4.14	1.12	2.97	1.52	35	3.67	**
9	4.06	1.3	3.11	1.51	35	2.79	**
10	4.63	0.69	4.06	1.28	35	2.32	*
11	4.14	1.09	3.43	1.4	35	2.38	*
12	4.4	0.95	3.81	1.12	35	2.38	*
13	4.4	0.85	3.51	1.22	35	3.52	**
14	4.63	0.88	3.8	1.43	35	2.92	**
15	3.97	1.27	3.22	1.52	35	1.28	NS
16	4.29	1.18	4.06	1.28	35	0.78	NS
17	4.63	0.73	3.89	1.28	35	2.98	**

Item	High Mean	SD	Low Mean	SD	N	t	Sig. Level
18	4.34	0.73	3.89	1.28	35	2.67	**
19	4.43	0.92	3.31	1.45	35	3.84	**
20	4.17	1.12	3.11	1.45	35	3.41	**
21	3.94	1.26	3.17	1.29	35	2.53	*
22	4.43	0.74	3.17	1.5	35	4.44	**
23	4.11	1.02	3.37	1.33	35	2.62	*
24	4.31	1.05	3.43	1.38	35	3.02	**
25	4.03	1.29	3.34	1.16	35	2.35	*
26	4.17	1.2	3.26	1.46	35	2.86	**
27	4.06	1.62	3.17	1.44	35	2.42	*
28	4.2	0.93	3.69	1.16	35	2.05	*
29	4.63	0.81	3.69	1.49	35	3.29	**
30	4.31	1.02	3.46	1.5	35	2.79	**
31	4.47	1.14	3.77	1.44	35	2.25	*
32	4.63	0.73	3.8	1.28	35	3.33	**
33	3.86	1.14	3.23	1.29	35	2.16	*
34	4.57	0.92	3.71	1.45	35	2.96	**
35	4.66	0.68	3	1.35	35	6.48	**
36	3.89	1.52	3.09	1.31	35	2.35	*
37	4.4	1.06	3.54	1.31	35	3	**
38	4.46	1.04	3.34	1.26	35	4.04	**
39	4.2	0.96	3.29	1.36	35	3.24	**
40	4.54	0.89	3.69	1.39	35	3.08	**
41	5.86	1.37	2.97	1.3	35	1.21	NS
42	3.89	1.37	2.97	1.62	35	2.55	*
43	4.37	1.09	3.34	1.51	35	3.27	**
44	4.54	0.85	3.94	1.3	35	2.28	*
45	4.66	0.64	3.26	1.42	35	5.31	**
46	4.66	0.59	3.71	1.2	35	4.16	**

Item	High Mean	SD	Low Mean	SD	N	t	Sig. Level
47	4.37	1.17	3.26	1.46	35	3.53	**
48	3.51	1.44	2.6	1.33	35	2.75	**
49	4.63	0.69	3.17	1.48	35	5.27	**
50	4.26	1.15	3.29	1.38	35	3.2	**
51	4.63	0.65	4.03	1.27	35	2.49	*
52	4.43	1.01	3.23	1.37	35	4.17	**
53	3.94	1.24	3.29	1.3	35	2.17	*
54	3.94	1.47	2.57	1.42	35	3.96	**
55	4.00	1.35	2.83	1.34	35	3.64	**
56	3.89	1.21	2.94	1.3	35	3.14	**
57	4.54	0.98	3.43	1.38	35	3.9	**
58	4.71	0.57	3.63	1.24	35	4.71	**
59	4.66	0.59	3.49	1.42	35	4.5	**
60	4.46	0.89	3.29	1.43	35	4.13	**
61	4.46	0.89	2.97	1.52	35	4.99	**

Table IV : Item Analysis for Attitude Test

Item	High Mean	SD	Low Mean	SD	N	t	Sig. Level
1	4.91	0.28	4.2	1.16	35	3.54	**
2	4.34	0.8	2.86	1.65	35	4.8	**
3	3.34	1.41	2.57	1.46	35	2.25	*
4	3.77	0.8	3.01	1.28	35	2.98	**
5	4.46	1.17	4.4	1.29	35	0.19	NS
6	4.66	0.8	4.09	1.4	35	2.09	*
7	4.43	1.17	3.54	1.65	35	2.59	*
8	4.56	1.09	3.95	1.25	35	2.5	*
9	4.17	1.27	2.97	1.58	35	3.5	**
10	4.49	1.2	3.64	1.23	35	2.92	**
11	2.74	1.75	1.86	1.24	35	2.44	*

Item	High Mean	SD	Low Mean	SD	N	t	Sig. Level
12	3.46	0.95	2.49	1.24	35	3.67	**
13	4.31	1.3	3.09	1.5	35	3.66	**
14	4.86	0.49	4.71	0.83	35	0.88	NS
15	4.03	0.79	3.46	1.16	35	2.4	*
16	4.54	1.07	3.77	1.21	35	2.82	**
17	4.86	0.43	4.17	1.25	35	3.07	**
18	4	1.35	2.63	1.52	35	4	**
19	4.34	1.41	2.86	1.54	35	4.19	**
20	4.49	1.09	3.31	1.69	35	3.44	**
21	4.54	1.09	3.8	1.64	35	2.23	*
22	4.37	1.19	3.43	1.24	35	3.24	**
23	4.91	0.51	4.4	1.03	35	2.64	*
24	4.66	0.8	3.97	1.1	35	2.98	**
25	4.23	0.94	3.17	1.18	35	4.15	**
26	4.69	0.8	4.11	1.18	35	2.37	*
27	4.29	0.96	3.03	1.4	35	4.38	**
28	4.49	0.95	3.29	1.43	35	4.14	**
29	4.94	0.24	4	1.5	35	3.69	**
30	4.63	0.84	3.49	1.63	35	3.68	**
31	4.4	1.19	3.6	1.5	35	2.47	*
32	4.43	1.2	3.97	1.18	35	1.61	NS
33	2.63	1.85	1.71	1.3	35	2.4	*
34	4.69	0.83	3.89	1.25	35	3.14	**
35	4.83	0.38	3.46	1.67	35	4.74	**
36	4.54	0.82	2.63	1.63	35	6.22	**
37	4.86	0.55	4.14	1.19	35	3.22	**
38	4.37	1.09	3.46	1.22	35	3.31	**
39	4.49	0.85	3.49	1.29	35	3.82	**
40	4.49	1.07	3.6	1.29	35	3.13	**

Item	High Mean	SD	Low Mean	SD	N	t	Sig. Level
41	4.49	0.95	3.66	1.26	35	3.11	**
42	4.74	0.51	3.34	1.3	35	5.92	**
43	4.66	0.64	3.46	1.31	35	4.86	**
44	4.49	0.89	3	1.41	35	5.27	**
45	4.71	0.67	3.91	1.25	35	3.35	**
46	4.11	1.45	3.39	1.38	35	2.13	*
47	4.97	0.17	4.11	1.23	35	4.08	**
48	4.71	0.57	4.17	1.22	35	2.38	*
49	4.77	0.87	4.08	1.23	35	2.71	**
50	4.37	1.14	3.17	1.44	35	3.86	**
51	4.11	1.32	3.17	1.32	35	2.99	**
52	4.86	0.49	4.31	1.13	35	2.6	*
53	4.91	0.51	4.34	1.19	35	2.62	*
54	3.8	1.51	3.31	1.47	35	1.36	NS
55	4.49	0.78	3.77	1.03	35	3.27	**
56	4.74	0.51	3.43	1.54	35	4.8	**
57	4.83	0.38	3.63	1.4	35	4.91	**
58	4.26	1.04	3.63	1.35	35	2.18	*
59	4.6	0.74	4.11	0.96	35	2.37	*
60	4.46	1.12	3.03	1.38	35	4.75	**

Legend :

n = Total observations in each group.

t at 0.05 = 2.00, t at 0.01 = 2.65

** Sig. at 0.01 level, * Sig. at 0.05 level, NS = Not Significant.

3.15 Final Selection of Test Items

After try-out of the test items, the test was prepared for final administration on the basis of try-out stated the items were now ready for final administration.

CHAPTER – IV

RESULT AND DISCUSSION

CHAPTER – IV

RESULT AND DISCUSSION

4.1 Dimension of the Study

It was a cross-sectional study conducted in class XI of different higher secondary schools in West Bengal in 2012. A total of 1200 students participated in the study. The information was collected through pre-tested questionnaire. All students were explained about the questions and the responses to be given in the questionnaire. The anonymity was maintained.

The present study is survey type in nature in an appropriate design. In this study questionnaire was selected for collecting data in two areas, viz., knowledge and attitude towards sex education among adolescents. Knowledge and attitude towards sex education among adolescents were divided into eleven dimensions.

4.2 Method of Controlling Variables

- The independent variable 'age' was controlled by selecting subjects of a particular group from more or less same age group.
- The independent variable 'sex' was controlled by selecting all male and female adolescent subjects.
- The independent variable 'environment' was controlled by selecting all the urban and rural subjects from some areas.

4.3 Selection of Samples

Population :

All the schools of higher secondary level were considered as population in West Bengal. A sample may be described as part of large number and the process of sampling in a survey means gathering information from the sources which tend to form cross section (representative sampling) of the entire group from which at time expense permitted it would be desirable to obtain data. It is not possible to interview test or observe each one under controlled conditions or it is not possible for any investigator to collect data about whole of the population in any investigation. It is

quite impossible to make the total population for investigation. So, sampling is both necessary and advantageous. In the present study, the sample consisted of 300 male and 300 female adolescent students from rural area and the same from urban area. Purposive random sampling method was adopted by the investigator for collection of data.

4.4 Tool used

A Self-administered Questionnaire (SKAQ) in simple Bengali language was constructed and standardized for assessing the knowledge and attitude of West Bengal Higher Secondary (10 + 2) schools. The preliminary constructed knowledge and attitude test of the questionnaire was administered on 131 adolescents age group students of class XI of North 24 Parganas district, to find out the difficulties of the people in responding to the items and understanding the language.

There were 121 items questionnaire splitted into two parts. 61 items in knowledge part and 60 items in attitude part were both measured by 5-point Likert Scale. Each statement of the knowledge and attitude test of questionnaire is associated with five possible responses viz., agreed, partially agreed, neutral, partially disagreed, disagreed. All favorable statements were scored from maximum to minimum as 5, 4, 3, 2, 1. All unfavourable statements were scored from minimum to maximum as 1, 2, 3, 4, 5. After this preliminary administration in knowledge test towards sex education among adolescents, among 61 items all except item numbers 3, 16, 41 were significant. In attitude test towards sex education among adolescents, among 60 items, all were significant except item numbers 5, 14, 32, 54. Efforts were taken to improve the language in understanding the items and necessary changes were incorporated with the help of experts in the final questionnaire.

Before the items were collected, a blue print of the proposed tool was drawn from the study of relevant literatures and previous tools for the job satisfaction of the researcher. Suggestions were also sought from the experts in this phase of tool preparation. It was accepted that this tool would include the items for 11 dimensions. These items were given to doctor and educationist with request to point out whether there was any ambiguity, irrelevance, repetition and inaccuracy in the items.

According to the experts' suggestions, the items were altered and necessary changes were made. These selected items were listed and submitted to the supervisor for his critical comments and advice.

Item Writing :

The researcher considered that the tool must have a design of knowledge and attitude scale to serve the purpose of the study. She preferred 5-point Likert Scale as the suitable type of knowledge and attitude test for the following reasons :

- It was easy to construct and score.
- It gave valuable information .
- It did not require panel of judges, took less time to construct and to score.
- Moreover it produced the same reliable data as Thurstones Scale.

From the collected situation 61 knowledge and 60 attitude statement were framed expressing both positive and negative in orientation. Care was taken so that the statements were clear and specific. In the preparation of item writing, four experts were consulted and their suggestions were duly incorporated. In this way the first draft of the scale was prepared. Each item had to be endorsed by putting (✓) tick mark on any one of the five response alternatives like agree, partially agree, neutral, partially disagree and disagree. In the knowledge test 38 statements are positive and 23 statements are negative. In attitude scale 40 statements are positive and 20 statements are negative.

Item Analysis :

The first draft consisting 61 items of knowledge test and 60 items attitude test was administered to 150 subjects for item analysis and scoring was done. For negative items reserved scoring was done. After scoring, two extreme groups were formed from the Top 27% and bottom 27% on the basis of obtained summated scores. Responses of each item was analysed according to the principles by Edwards (1969) However no t-value was estimated. For the selection of items, mean difference of scores between high and low groups for each item was considered. According to Murphy and Likert (1937) on the basis of magnitude of the difference between the

means of a high and low group agreed very well with the ordering of statements in terms of the magnitude of the correlation between the items response and total score.

4.5 Administration of Questionnaire and Collection of Data

Next to selection of samples, administration of questionnaire and method of collecting data are other important aspects which can not be neglected by any means. The final questionnaire was administered to 1200 adolescent aged 16 in rural and urban areas by purposive random sampling method. The investigator introduced herself with the pupil and supplied the questionnaire. Being convinced with the fact that the instructions were properly understood by the student, the investigator requested them not to waste time unnecessarily. They were allowed 30 minutes to complete the answer sheet. The answer sheets were collected after the completion of the test by the students. Then the researcher collected 1200 filled-up questionnaires. The responses to these questionnaires have been analysed and interpreted in the next chapter.

4.6 Scoring Technique

The researcher had followed the Likert Scale Tecnique which provides a 5-point scale and assigns each of the 5 positions a scale value. All positive statesments are scored 5, 4, 3, 2, 1. All negative statements are scored 1, 2, 3, 4, 5.

Options	Scores for Positive Statement	Scores for Negative Statements
Agree	5	1
Partially Agree	4	2
Neutral	3	3
Partially Disagree	2	4
Disagree	1	5

4.7 Standardised Form of the Test

The final form of the knowledge and attitude test contained 61 and 60 items respectively. Each item had to be endorsed in 5-point Likert Scale from obviously agree to obviously disagree with the neutral point of undecided .

4.8 Reliability of the Test

The questionnaire was highly reliable. The Test-Retest method was used for calculating reliability. The reliability coefficient was found to be 0.86 in Knowledge Test and 0.84 in Attitude Test.

Table V : Correlation Coefficient of Test-Retest Scores of Knowledge towards Sex Education

Subject	N	Sum of Scores	Sum of Square	Product of Two Score	Mean	SD	r
Test	100	23222	5448868	5339298	232.22	23.71	0.86
Retest	100	22744	5252400		227.44	28.19	

Table VI : Correlation Coefficient of Test-Retest Scores of Attitude towards Sex Education

Subject	N	Sum of Scores	Sum of Square	Product of Two Score	Mean	SD	r
Test	100	24172	5864460	5793079	241.72	14.69	0.84
Retest	100	23859	5736428		238.59	20.95	

4.9 Validity of the Test

Validity was calculated from reliability index and content validity was highly maintained.

4.10 Inferential Statistics : Dimensionwise Hypotheses Testing

Urban and Rural (Knowledge Test) :

Table 1 : t-value of urban and rural adolescent students for knowledge towards sex education in respect to dimension "Formal Institution"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	24.54	0.59	3.06	2.245*
Rural	300	23.95		3.37	

*Sig. at 0.05 level.

The above table shows t-value significant at 0.05 level indicated the rejection of the null hypothesis $H0_1$ and established the difference between the two types of school students (urban and rural) in relation to dimension "Formal Institution" in sex education.

Table 2 : t-value of urban and rural adolescent students for knowledge towards sex education in respect to dimension "Family"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	19.70	0.30	4.05	1.004
Rural	300	19.40		3.22	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_2$ and establishes the uniformity among the two types of school students (urban and rural) in relation to dimension "Family" in sex education.

Table 3 : t-value of urban and rural adolescent students for knowledge towards sex education in respect to dimension "Media"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	19.21	1.08	2.96	4.13*
Rural	300	18.13		3.43	

*Sig. at 0.01 level.

The above table shows t-value significant at 0.01 level indicates the rejection of the null hypothesis $H0_3$ and establishes the difference between the two types of school students (urban and rural) in relation to dimension "Media" in sex education.

Table 4 : t-value of urban and rural adolescent students for knowledge towards sex education in respect to dimension "Social Communication"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	23.50	0.38	3.22	1.040
Rural	300	23.12		5.45	

The above table shows t-value not significant indicates the acceptance of null

hypothesis $H0_4$ and establishes the uniformity among the two types of school students (urban and rural) in relation to dimension "Social Communication" in sex education.

Table 5 : t-value of urban and rural adolescent students for knowledge towards sex education in respect to dimension "Transmission"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	22.29	0.29	3.85	0.839
Rural	300	22.58		4.04	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_5$ and establishes the uniformity among the two types of school students (urban and rural) in relation to dimension "Transmission" in sex education.

Table 6 : t-value of urban and rural adolescent students for knowledge towards sex education in respect to dimension "Identification"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	16.50	1.46	3.56	5.443*
Rural	300	15.05		2.96	

*Sig. at 0.01 level.

The above table shows t-value significant at 0.01 level indicates the rejection of the null hypothesis $H0_6$ and establishes the difference between the two types of school students (urban and rural) in relation to dimension "Identification" in sex education.

Table 7 : t-value of urban and rural adolescent students for knowledge towards sex education in respect to dimension "Prevention"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	19.72	0.19	3.00	0.60
Rural	300	19.91		4.71	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_7$ and establishes the uniformity among the two types of school students (urban and rural) in relation to dimension "Prevention" in sex education.

Table 8 : t-value of urban and rural adolescent students for knowledge towards sex education in respect to dimension "Socio-economic Status"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	19.04	0.03	3.48	0.037
Rural	300	19.07		4.89	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_8$ and establishes the uniformity among the two types of school students (urban and rural) in relation to dimension "Socio-economic Status" in sex education.

Table 9 : t-value of urban and rural adolescent students for knowledge towards sex education in respect to dimension "Tendency"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	22.31	0.47	4.96	1.286
Rural	300	21.84		3.94	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_9$ and establishes the uniformity among the two types of school stucents (urban and rural) in relation to dimension "Tendency" in sex education.

Table 10 : t-value of urban and rural adolescent students for knowledge towards sex education in respect to dimension "Education"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	27.64	0.83	4.04	2.447*
Rural	300	26.81		4.26	

*Sig. at 0.05 level.

The above table shows t-value significant at 0.05 level indicates the rejection of the null hypothesis $H0_{10}$ and establishes the difference between the two types of school students (urban and rural) in relation to dimension "Education" in sex education.

Table 11 : t-value of urban and rural adolescent students for knowledge towards sex education in respect to dimension "Prognosis"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	19.94	0.37	3.24	1.441
Rural	300	20.31		3.16	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{11}$ and establishes the uniformity among the two types of school students (urban and rural) in relation to dimension "Prognosis" in sex education.

Male and Female (Knowledge Test) :

Table 12 : t-value of male and female adolescent students for knowledge towards sex education in respect to dimension "Formal Institution"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	24.58	0.67	3.02	2.579*
Female	300	23.91		3.40	

*Sig. at 0.05 level.

The above table shows t-value significant at 0.05 level indicates the rejection of the null hypothesis $H0_{12}$ and establishes the difference between the two types of school students (male and female) in relation to dimension "Formal Institution" in sex education.

Table 13 : t-value of male and female adolescent students for knowledge towards sex education in respect to dimension "Family"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	19.51	0.09	3.18	0.290
Female	300	19.60		4.09	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{13}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Family" in sex education.

Table 14 : t-value of male and female adolescent students for knowledge towards sex education in respect to dimension "Media"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	18.70	0.07	3.22	0.251
Female	300	18.63		3.27	

The above table shows t-value not significant indicates the acceptance of nu l hypothesis $H0_{14}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Media" in sex education.

Table 15 : t-value of male and female adolescent students for knowledge towards sex education in respect to dimension "Social Communication"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	23.54	0.46	3.39	1.259
Female	300	23.08		5.34	

The above table shows t-value not significant indicates the acceptance of nu l hypothesis $H0_{15}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Social Communication" in sex education.

Table 16 : t-value of male and female adolescent students for knowledge towards sex education in respect to dimension "Transmission"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	22.29	0.29	3.85	0.909
Female	300	22.58		4.05	

The above table shows t-value not significant indicates the acceptance of nu l hypothesis $H0_{16}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Transmission" in sex education.

Table 17 : t-value of male and female adolescent students for knowledge towards sex education in respect to dimension "Identification"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	16.03	0.51	3.63	1.890
Female	300	15.52		3.04	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{17}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Identification" in sex education.

Table 18 : t-value of male and female adolescent students for knowledge towards sex education in respect to dimension "Prevention"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	19.64	0.34	4.69	1.056
Female	300	19.98		3.03	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{18}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Prevention" in sex education.

Table 19 : t-value of male and female adolescent students for knowledge towards sex education in respect to dimension "Socio-economic Status"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	19.01	0.08	4.62	0.221
Female	300	19.09		3.83	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{19}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Socio-economic Status" in sex education.

Table 20 : t-value of male and female adolescent students for knowledge towards sex education in respect to dimension "Tendency"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	22.23	0.32	4.96	0.866
Female	300	21.91		3.94	

The above table shows t-value not significant indicates the acceptance of nu l hypothesis $H0_{20}$ and establishes the uniformity among the two types of schoc l students (male and female) in relation to dimension "Tendency" in sex education.

Table 21 : t-value of male and female adolescent students for knowledge towards sex education in respect to dimension "Education"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	27.42	0.38	3.85	1.106
Female	300	27.04		4.47	

The above table shows t-value not significant indicates the acceptance of nu l hypothesis $H0_{21}$ and establishes the uniformity among the two types of schoc l students (male and female) in relation to dimension "Education" in sex education.

Table 22 : t-value of male and female adolescent students for knowledge towards sex education in respect to dimension "Prognosis"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	20.23	0.21	3.12	0.802
Female	300	20.02		3.29	

The above table shows t-value not significant indicates the acceptance of nu l hypothesis $H0_{22}$ and establishes the uniformity among the two types of schoc l students (male and female) in relation to dimension "Prognosis" in sex education.

Attitude Test (Urban and Rural) :

Table 23 : t-value of urban and rural adolescent students for attitude towards sex education in respect to dimension "Awareness"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	20.66	0.45	2.83	1.851
Rural	300	20.21		3.07	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{23}$ and establishes the uniformity among the two types of school students (urban and rural) in relation to dimension "Awareness" in sex education.

Table 24 : t-value of urban and rural adolescent students for attitude towards sex education in respect to dimension "Family"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	23.94	0.91	3.59	2.984*
Rural	300	23.03		3.87	

*Sig. at 0.01 level.

The above table shows t-value significant at 0.01 level indicates the rejection of the null hypothesis $H0_{24}$ and establishes the difference between the two types of school students (urban and rural) in relation to dimension "Family" in sex education.

Table 25 : t-value of urban and rural adolescent students for attitude towards sex education in respect to dimension "Formal Institution"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	27.38	1.00	3.91	3.187*
Rural	300	26.38		3.77	

*Sig. at 0.01 level.

The above table shows t-value significant at 0.01 level indicates the rejection of the null hypothesis $H0_{25}$ and establishes the difference between the two types of school students (urban and rural) in relation to dimension "Formal Institution" in sex education.

Table 26 : t-value of urban and rural adolescent students for attitude towards sex education in respect to dimension "Media"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	19.00	0.10	3.31	0.398
Rural	300	18.90		3.25	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{26}$ and establishes the uniformity among the two types of school students (urban and rural) in relation to dimension "Media" in sex education.

Table 27 : t-value of urban and rural adolescent students for attitude towards sex education in respect to dimension "Social Communication"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	23.79	2.38	5.54	6.007*
Rural	300	26.17		4.07	

*Sig. at 0.01 level.

The above table shows t-value significant at 0.01 level indicates the rejection of the null hypothesis $H0_{27}$ and establishes the difference between the two types of school students (urban and rural) in relation to dimension "Social Communication" in sex education.

Table 28 : t-value of urban and rural adolescent students for attitude towards sex education in respect to dimension "Tendency"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	20.13	0.58	3.14	2.122*
Rural	300	19.55		3.55	

*Sig. at 0.05 level.

The above table shows t-value significant at 0.05 level indicates the rejection of the null hypothesis $H0_{28}$ and establishes the difference between the two types of school students (urban and rural) in relation to dimension "Tendency" in sex education.

Table 29 : t-value of urban and rural adolescent students for attitude towards sex education in respect to dimension "Transmission"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	18.43	0.07	3.27	0.292
Rural	300	18.36		3.15	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{29}$ and establishes the uniformity among the two types of school students (urban and rural) in relation to dimension "Transmission" in sex education.

Table 30 : t-value of urban and rural adolescent students for attitude towards sex education in respect to dimension "Prevention"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	23.82	0.40	3.72	1.238
Rural	300	23.42		4.18	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{30}$ and establishes the uniformity among the two types of school students (urban and rural) in relation to dimension "Prevention" in sex education.

Table 31 : t-value of urban and rural adolescent students for attitude towards sex education in respect to dimension "Identification"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	16.50	0.93	2.54	4.377*
Rural	300	15.57		2.63	

*Sig. at 0.01 level.

The above table shows t-value significant at 0.01 level indicates the rejection of the null hypothesis $H0_{31}$ and establishes the difference between the two types of school students (urban and rural) in relation to dimension "Identification" in sex education.

Table 32 : t-value of urban and rural adolescent students for attitude towards sex education in respect to dimension "Socio-economic Status"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	19.66	0.80	2.86	3.314*
Rural	300	18.86		3.02	

*Sig. at 0.01 level.

The above table shows t-value significant at 0.01 level indicates the rejection of the null hypothesis $H0_{32}$ and establishes the difference between the two types of school students (urban and rural) in relation to dimension "Socio-economic Status" in sex education.

Table 33 : t-value of urban and rural adolescent students for attitude towards sex education in respect to dimension "Safe Motherhood"

Type of School	N	Mean	Mean Difference	SD	t
Urban	300	19.90	0.79	3.36	2.955*
Rural	300	19.11		3.16	

*Sig. at 0.01 level.

The above table shows t-value significant at 0.01 level indicates the rejection of the null hypothesis $H0_{33}$ and establishes the difference between the two types of school students (urban and rural) in relation to dimension "Safe Motherhood" in sex education.

Attitude Test (Male and Female) :

Table 34 : t-value of male and female adolescent students for attitude towards sex education in respect to dimension "Awareness"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	20.75	0.63	2.84	2.604*
Female	300	20.12		3.05	

*Sig. at 0.01 level.

The above table shows t-value significant at 0.01 level indicates the rejection of the null hypothesis $H0_{34}$ and establishes the difference between the two types of school students (male and female) in relation to dimension "Awareness" in sex education.

Table 35 : t-value of male and female adolescent students for attitude towards sex education in respect to dimension "Family"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	23.23	0.51	3.76	1.686
Female	300	23.74		3.74	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{35}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Family" in sex education.

Table 36 : t-value of male and female adolescent students for attitude towards sex education in respect to dimension "Formal Institution"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	27.11	0.46	3.12	1.477
Female	300	26.65		3.29	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{36}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Formal Institution" in sex education.

Table 37 : t-value of male and female adolescent students for attitude towards sex education in respect to dimension "Media"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	19·41	0.93	3.16	3.494*
Female	300	18·49		3.33	

*Sig. at 0.01 level.

The above table shows t-value significant at 0.01 level indicates the rejection of the null hypothesis $H0_{37}$ and establishes the difference between the two types of school students (male and female) in relation to dimension "Media" in sex education.

Table 38 : t-value of male and female adolescent students for attitude towards sex education in respect to dimension "Social Communication"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	22.75	4.43	4.75	12.029*
Female	300	27.18		4.21	

*Sig. at 0.01 level.

The above table shows t-value significant at 0.01 level indicates the rejection of the null hypothesis $H0_{38}$ and establishes the difference between the two types of school students (male and female) in relation to dimension "Social Communication" in sex education.

Table 39 : t-value of male and female adolescent students for attitude towards sex education in respect to dimension "Tendency"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	19.80	0.08	3.19	0.267
Female	300	19.88		3.52	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{39}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Tendency" in sex education.

Table 40 : t-value of male and female adolescent students for attitude towards sex education in respect to dimension "Transmission"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	18.36	0.07	3.10	0.242
Female	300	18.43		3.31	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{40}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Transmission" in sex education.

Table 41 : t-value of male and female adolescent students for attitude towards sex education in respect to dimension "Prevention"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	23.77	0.31	4.08	0.969
Female	300	23.46		3.84	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{41}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Prevention" in sex education.

Table 42 : t-value of male and female adolescent students for attitude towards sex education in respect to dimension "Identification"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	16.02	0.03	2.42	0.140
Female	300	16.05		2.82	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{42}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Identification" in sex education.

Table 43 : t-value of male and female adolescent students for attitude towards sex education in respect to dimension "Socio-economic Status"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	19.55	0.59	2.90	2.444*
Female	300	18.96		3.01	

*Sig. at 0.05 level.

The above table shows t-value significant at 0.05 level indicates the rejection of the null hypothesis $H0_{43}$ and establishes the difference between the two types of school students (male and female) in relation to dimension "Socio-economic Status" in sex education.

Table 44 : t-value of male and female adolescent students for attitude towards sex education in respect to dimension "Safe Motherhood"

Type of School	N	Mean	Mean Difference	SD	t
Male	300	19.49	0.03	3.35	0.124
Female	300	19.52		3.21	

The above table shows t-value not significant indicates the acceptance of null hypothesis $H0_{44}$ and establishes the uniformity among the two types of school students (male and female) in relation to dimension "Safe Motherhood" in sex education.

4.11 Multiple Regression Statistics

When predicting the value of one dependent variable from the values of two or more independent variables, it is called multiple regression. Multiple regression will not be good at explaining the relationship of the independent variables to the dependent variables if those relationships are not linear.

Steps in Multiple Regression :

The steps in multiple regression are as follows :

1. State the null hypothesis.
2. Gather the data.
3. Assess each variable separately by measuring central tendency, dispersion & frequency distributions, the relationship of each independent variable with the dependent variable and with each other by calculating the correlation coefficient.
4. Calculate the regression equation from the data.
5. Calculate and examine appropriate measures of association and tests of statistical significance for each coefficient and for the equation as a whole
6. Accept or reject the null hypothesis.
7. Explain the practical implications of the findings.

Elements of a Multiple Regression Equation :

Regression analysis generates an equation to describe the statistical relationship between one or more predictor variables and the response variable.

$Y = c + b_1X_1 + b_2X_2 + b_3X_3 + ...$

Y is the dependent variable, what is being predicted or explained and c is the constant or intercept, b_1, b_2, b_3 ..... are the slopes (Beta coefficient), X_1, X_2, X_3, ... are the independent variables that is explaining the variance in Y, S.E.b_1, S. E.b_2, S. E.b_3, ... are the standard errors of beta coefficients.

The coefficient of determination (R^2) is the proportion of the variance in dependent variable (Y) explained by all the independent variables (Xs) in the equation together. It is the square of the correlation coefficient. Its value may vary from zero to one. Adjusted R^2 is the correction been made to reflect the number of variables in the equation.

F value depicts whether the equation as a whole is statistically significant in explaining Y

The p-value for each term tests the null hypothesis that the coefficient is equal to zero (no effect). A low p-value (< 0.05) indicates that one can reject the null hypothesis. Conversely, a larger (insignificant) p-value suggests that changes in the predictor are not associated with changes in the response. The coefficient p-values to determine which terms to keep in the regression model.

Regression coefficients represent the mean change in the response variable for one unit of change in the predictor variable while holding other predictors in the model constant. It isolates the role of one variable from all of the others in the model.

Variables used in Muliple Regression :

In the present study, in the multiple regression equation, the dependent variable was Madhyamik Examination Score (M. E. SCORE) and 22 independent variables, D_1 to D_{11} for knowledge test and D_{12} to D_{22} for attitude test were taken under consideration.

Multiple Regression of Total Male in Knowledge (Objective – 5) :

To examine the effect of male sexual knowledge on academic achievement of adolescent.

Table R1 : Regression Analysis of Total Male in Knowledge

Multiple R	**R Square**	**Adjusted R Square**	**Standard Error**	**Observations**
0.22	0.05	0.01	106.09	300

ANOVA

Sources of Variance	**Df**	**Sum of Squares**	**Mean Square**	**F**	**Significance F**
Regression	11	168959.59	15359	1.36	0.19
Residual	288	3241446.56	11255.02		
Total	299	3410406.15			

	Coefficients	**Standard Error**	**t-value**	**P-value**	**Sig**
Intercept	352.00	75.77	4.65	0.00	
D_1	-1.06	2.33	0.46	0.65	
D_2	-1.10	2.20	0.50	0.62	
D_3	3.34	2.02	1.65	0.10	
D_4	3.10	2.05	1.51	0.13	
D_5	-3.01	1.78	1.69	0.09	
D_6	1.74	1.90	0.91	0.36	
D_7	-0.78	1.37	0.57	0.57	
D_8	-1.72	1.47	1.17	0.24	
D_9	-0.27	1.31	0.21	0.84	
D_{10}	2.89	1.84	1.57	0.12	
D_{11}	-0.58	2.28	0.25	0.80	

The multiple regression equation is

M. E. Score = $352.00 - 1.06D_1 - 1.10D_2 + 3.34D_3 + 3.10D_4 - 3.01D_5 + 1.74D_6 - 0.78D_7 - 1.72D_8 - 0.27D_9 + 2.89D_{10} - 0.58D_{11}$

From the above table the coefficient was –1.06, standard error was 2.33, t-value was 0.46 and P-Value was 0.65 and so the dimension D_1 was not significant. It was interpreted that in formal institution there was no influence of male knowledge on the

academic achievement of adolescent students. Hence hypothesis $H0_{45}$was accepted.

From the above table the coefficient was –1.10, standard error was 2.20, t-value was 0.50 and P-value was 0.62 and so the dimension D_2 was not significant. It was interpreted that in family, there was no influence of male knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{46}$was accepted.

From the above table the coefficient was 3.34, standard error was 2.02, t-value was 1.65 and P-Value was 0.10 and so the dimension D_3 was not significant. It was interpreted that in Media, there was no influence of male knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{47}$was accepted.

The above table shows that the coefficient was 3.10, standard error was 2.05, t-value was 1.51 and P-Value was 0.13 and so the dimension D_4 was not significant. It was interpreted that in Social Communication, there was no influence of male knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{48}$was accepted.

From the above table the coefficient was –3.01, standard error was 1.78, t-value was 1.69 and P-Value was 0.09 and so the dimension D_5 was not significant. It was interpreted that in Transmission, there was no influence of male knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{49}$was accepted.

From the above table the coefficient was 1.74, standard error was 1.90, t-value was 0.91 and P-Value was 0.36 and so the dimension D_6 was not significant. It was interpreted that in Identification, there was no influence of male knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{50}$was accepted.

The above table shows that the coefficient was –0.78, standard error was 1.37, t-value was 0.57 and P-Value was 0.57 and so the dimension D_7 was not significant. It was interpreted that in Prevention, there was no influence of male knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{51}$was accepted.

From the above table the coefficient was –1.72, standard error was 1.47, t-value was 1.17 and P-Value was 0.24 and so the dimension D_8 was not significant. It was interpreted that in Socio-economic Status, there was no influence of male knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{52}$was accepted.

The above table shows that the coefficient was –0.27, standard error was 1.31, t-value was 0.21 and P-Value was 0.84 and so the dimension D_9 was not significant. It was interpreted that in Tendency, there was no influence of male knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{53}$ was accepted.

From the above table the coefficient was 2.89, standard error was 1.84, t-value was 1.57 and P-Value was 0.12 and so the dimension D_{10} was not significant. It was interpreted that in Education, there was no influence of male knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{54}$ was accepted.

From the above table the coefficient was –0.58, standard error was 2.28, t-value was 0.25 and P-Value was 0.80 and so the dimension D_{11} was not significant. It was interpreted that in Prognosis, there was no influence of male knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{55}$ was accepted.

Multiple Regression of Total Female in Knowledge (Objective – 6) :

To examine the effect of female sexual knowledge on academic achievement of adolescent.

Table R2 : Regression Analysis of Total Female in Knowledge

Multiple R	**R Square**	**Adjusted R Square**	**Standard Error**	**Observations**
0.32	0.10	0.07	103.17	300

ANOVA

Sources of Variance	**Df**	**Sum of Squares**	**Mean Square**	**F**	**F Significance**
Regression	11	342544.72	31140.43	2.93	0.00*
Residual	288	3065507.83	10644.12		
Total	299	3408052.55			

	Coefficients	**Standard Error**	**t Stat**	**P-value**	**Sig.**
Intercept	262.05	61.02	4.29	0.00	
D_1	0.19	2.04	0.09	0.93	
D_2	1.04	1.63	0.63	0.53	
D_3	3.67	2.04	1.80	0.07	
D_4	-1.48	1.21	1.22	0.22	
D_5	-1.27	1.70	0.75	0.46	

D_6	9.13	2.26	4.04	0.00	**
D_7	-4.96	2.33	2.12	0.03	*
D_8	-0.67	1.81	0.37	0.71	
D_9	1.13	1.81	0.62	0.53	
D_{10}	0.22	1.58	0.14	0.89	
D_{11}	0.82	2.14	0.38	0.70	

**Sig. at 0.01 level, *Sig. at 0.05 level

M. E. Score = $262.05 + 0.19D_1 + 1.04D_2 + 3.67D_3 - 1.48D_4 - 1.27D_5 + 9.13D_6 - 4.96D_7 - 0.67D_8 + 1.13D_9 + 0.22D_{10} + 0.82D_{11}$

From the above table the coefficient was 0.19, standard error was 2.04, t-value was 0.09 and P-Value was 0.93 and so the dimension D_1 was not significant. It was interpreted that in Formal Institution, there was no influence of female knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{56}$ was accepted.

From the above table the coefficient was 1.04, standard error was 1.63, t-value was 0.63 and P-Value was 0.53 and so the dimension D_2 was not significant. It was interpreted that in Family, there was no influence of female knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{57}$ was accepted.

From the above table the coefficient was 3.67, standard error was 2.04, t-value was 1.80 and P-Value was 0.07 and so the dimension D_3 was not significant. It was interpreted that in Media, there was no influence of female knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{58}$ was accepted.

The above table shows that the coefficient was –1.48, standard error was 1.21, t-value was 1.22 and P-Value was 0.22 and so the dimension D_4 was not significant. It was interpreted that in Social Communication, there was no influence of female knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{59}$ was accepted.

From the above table the coefficient was –1.27, standard error was 1.70, t-value was 0.75 and P-Value was 0.46 and so the dimension D_5 was not significant. It was interpreted that in Transmission, there was no influence of female knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{60}$ was accepted.

From the above table the coefficient was 9.13, standard error was 2.26, t-value was 4.04 and P-Value was 0.00 and so the dimension D_6 was significant at 0.01 level. It was interpreted that in Identification, there was influence of female knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{61}$ was rejected.

From the above table the coefficient was –4.96, standard error was 2.33, t-value was 2.12 and P-Value was 0.03 and so the dimension D_7 was significant at 0.05 level. It was interpreted that in Prevention, there was influence of female knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{62}$ was rejected.

From the above table the coefficient was –0.67, standard error was 1.81, t-value was 0.37 and P-Value was 0.71 and so the dimension D_8 was not significant. It was interpreted that in Socio-economic Status, there was no influence of female knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{63}$ was accepted.

From the above table the coefficient was 1.13, standard error was 1.81, t-value was 0.62 and P-Value was 0.53 and so the dimension D_9 was not significant. It was interpreted that in Tendency, there was no influence of female knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{64}$ was accepted.

From the above table the coefficient was 0.22, standard error was 1.58, t-value was 0.14 and P-Value was 0.89 and so the dimension D_{10} was not significant. It was interpreted that in Education, there was no influence of female knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{65}$ was accepted.

From the above table the coefficient was 0.82, standard error was 2.14, t-value was 0.38 and P-Value was 0.70 and so the dimension D_{11} was not significant. It was interpreted that in Prognosis, there was no influence of female knowledge on the academic achievement of adolescent students. Hence hypothesis $H0_{66}$ was accepted.

Multiple Regression of Total Male in Attitude (Objective – 7) :

To examine the effect of male sexual attitude on academic achievement of adolescent.

Table R3 : Regression Analysis of Total Male in Attitude

Multiple R	R Square	Adjusted R Square	Standard Error	Observations
0.45	0.21	0.18	96.97	300

ANOVA

Sources of Variance	Df	Sum of Squares	Mean Square	F	Significance F
Regression	11	702137.89	63830.72	6.79	0.00*
Residual	288	2708268.26	9403.71		
Total	299	3408052.55			

	Coefficients	Standard Error	t Stat	P-value	Sig.
Intercept	457.10	66.52	6.87	0.00	
D_{12}	3.57	2.39	1.49	0.14	
D_{13}	-0.74	1.68	0.44	0.66	
D_{14}	4.87	1.69	2.89	0.00	*
D_{15}	-2.50	1.99	1.26	0.21	
D_{16}	-9.49	1.24	7.63	0.00	*
D_{17}	0.31	1.99	0.15	0.88	
D_{18}	-0.81	1.91	0.42	0.67	
D_{19}	2.29	1.62	1.41	0.16	
D_{20}	-3.06	2.66	1.15	0.25	
D_{21}	2.28	2.28	1.00	0.32	
D_{22}	-0.47	2.05	0.23	0.82	

*Sig. at 0.01 level

M. E. Score = $457.10 + 3.57D_{12} - 0.74D_{13} + 4.87D_{14} - 2.50D_{15} - 9.49D_{16} + 0.31D_{17} - 0.81D_{18} + 2.29D_{19} - 3.06D_{20} + 2.28D_{21} - 0.47D_{22}$

From the above table the coefficient was 3.57, standard error was 2.39, t-value was 1.49 and P-Value was 0.14 and so the dimension D_{12} was not significant. It was interpreted that in Awareness, there was no influence of male attitude on the academic

achievement of adolescent students. Hence hypothesis $H0_{67}$ was accepted.

From the above table the coefficient was –0.74, standard error was 1.68, t-value was 0.44 and P-Value was 0.66 and so the dimension D_{13} was not significant. It was interpreted that in Family, there was no influence of male attitude on the acacemic achievement of adolescent students. Hence hypothesis $H0_{68}$ was accepted.

From the above table the coefficient was 4.87, standard error was 1.69, t-value was 2.89 and P-Value was 0.00 and so the dimension D_{14} was significant at 0.01 evel. It was interpreted that in Formal Institution, there was influence of male attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{69}$ was rejected.

From the above table the coefficient was –2.50, standard error was 1.99, t-value was 1.26 and P-Value was 0.21 and so the dimension D_{15} was not significant. It was interpreted that in Media, there was no influence of male attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{70}$ was accepted.

From the above table the coefficient was –9.49, standard error was 1.24, t-value was 7.63 and P-Value was 0.00 and so the dimension D_{16} was significant at 0.01 level. It was interpreted that in Social Communication, there was influence of male attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{71}$ was rejected.

From the above table the coefficient was 0.31, standard error was 1.99, t-value was 0.15 and P-Value was 0.88 and so the dimension D_{17} was not significant. It was interpreted that in Tendency, there was no influence of male attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{72}$ was accepted.

From the above table the coefficient was –0.81, standard error was 1.91, t-value was 0.42 and P-Value was 0.67 and so the dimension D_{18} was not significant. It was interpreted that in Transmission, there was no influence of male attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{73}$ was accepted.

From the above table the coefficient was 2.29, standard error was 1.62, t-value was 1.41 and P-Value was 0.16 and so the dimension D_{19} was not significant. It was interpreted that in Prevention, there was no influence of male attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{74}$ was accepted.

From the above table the coefficient was –3.06, standard error was 2.66, t-value

was 1.15 and P-Value was 0.25 and so the dimension D_{20} was not significant. It was interpreted that in Identification, there was no influence of male attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{75}$ was accepted.

From the above table the coefficient was 2.28, standard error was 2.28, t-value was 1.00 and P-Value was 0.32 and so the dimension D_{21} was not significant. It was interpreted that in Socio-economic Status, there was no influence of male attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{76}$ was accepted.

From the above table the coefficient was –0.47, standard error was 2.05, t-value was 0.23 and P-Value was 0.82 and so the dimension D_{22} was not significant. It was interpreted that in Safe Motherhood, there was no influence of male attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{77}$ was accepted.

Regression Statistics of Total Female in Attitude (Objective – 8) :

To examine the effect of female sexual attitude on academic achievement of adolescent.

Table R4 : Regression Analysis of Total Female in Attitude

Multiple R	**R Square**	**Adjusted R Square**	**Standard Error**	**Observations**
0.29	0.09	0.05	103.95	300

ANOVA

Sources of Variance	**Df**	**Sum of Squares**	**Mean Square**	**F**	**Significance F**
Due to regression	11	296213.05	26928.46	2.49	0.01*
Due to residual	288	3111839.50	10805.00		
Total	299	3408052.55			

	Coefficients	**Standard Error**	**t Stat**	**P-value**	**Sig.**
Intercept	413.71	61.30	6.75	0.00	
D_{12}	-1.05	2.35	0.45	0.65	
D_{13}	-2.32	2.03	1.14	0.25	
D_{14}	-0.22	1.77	0.12	0.90	
D_{15}	-5.05	2.08	2.43	0.02	*
D_{16}	2.62	1.69	1.55	0.12	

D_{17}	1.55	1.98	0.78	0.43	
D_{18}	-2.31	2.05	1.13	0.26	
D_{19}	-2.28	2.07	1.10	0.27	
D_{20}	7.49	2.57	2.92	0.00	**
D_{21}	2.60	2.32	1.12	0.26	
D_{22}	-2.26	2.30	0.98	0.33	

*Sig. at 0.05 level, **Sig. at 0.01 level.

M. E. Score $= 413.71 - 1.05D_{12} - 2.32D_{13} - 0.22D_{14} - 5.05D_{15} + 2.62D_{16} + 1.55D_{17} - 2.31D_{18} - 2.28D_{19} + 7.49D_{20} + 2.60D_{21} - 2.26D_{22}$

From the above table the coefficient was –1.05, standard error was 2.35, t-value was 0.45 and P-Value was 0.65 and so the dimension D_{12} was not significant. It was interpreted that in Awareness, there was no influence of female attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{78}$ was accepted.

From the above table the coefficient was –2.32, standard error was 2.03, t-value was 1.14 and P-Value was 0.25 and so the dimension D_{13} was not significant. It was interpreted that in Family, there was no influence of female attitude on the acacemic achievement of adolescent students. Hence hypothesis $H0_{79}$ was accepted.

From the above table the coefficient was –0.22, standard error was 1.77, t-value was 0.12 and P-Value was 0.90 and so the dimension D_{14} was not significant. It was interpreted that in Formal Institution, there was no influence of female attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{80}$ was accepted.

From the above table the coefficient was –5.05, standard error was 2.08, t-value was 2.43 and P-Value was 0.02 and so the dimension D_{15} was significant at 0.05 level. It was interpreted that in Media, there was influence of female attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{81}$ was rejected.

From the above table the coefficient was 2.62, standard error was 1.69, t-value was 1.55 and P-Value was 0.12 and so the dimension D_{16} was not significant. It was interpreted that in Social Communication, there was no influence of female attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{82}$ was accepted.

From the above table the coefficient was 1.55, standard error was 1.98, t-value

was 0.78 and P-Value was 0.43 and so the dimension D_{17} was not significant. It was interpreted that in Tendency, there was no influence of female attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{83}$ was accepted.

From the above table the coefficient was –2.31, standard error was 2.05, t-value was 1.13 and P-Value was 0.26 and so the dimension D_{18} was not significant. It was interpreted that in Transmission, there was no influence of female attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{84}$ was accepted.

From the above table the coefficient was –2.28, standard error was 2.07, t-value was 1.10 and P-Value was 0.27 and so the dimension D_{19} was not significant. It was interpreted that in Prevention, there was no influence of female attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{85}$ was accepted.

From the above table the coefficient was 7.49, standard error was 2.57, t-value was 2.92 and P-Value was 0.00 and so the dimension D_{20} was significant at 0.01 level. It was interpreted that in Identification, there was influence of female attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{86}$ was rejected.

From the above table the coefficient was 2.60, standard error was 2.32, t-value was 1.12 and P-Value was 0.26 and so the dimension D_{21} was not significant. It was interpreted that in Socio-economic Status, there was no influence of female attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{87}$ was accepted.

From the above table the coefficient was –2.26, standard error was 2.30, t-value was 0.98 and P-Value was 0.33 and so the dimension D_{22} was not significant. It was interpreted that in Safe Motherhood, there was no influence of female attitude on the academic achievement of adolescent students. Hence hypothesis $H0_{88}$ was accepted.

CHAPTER – V

SUMMARY AND CONCLUSION

CHAPTER – V

SUMMARY AND CONCLUSION

This study assessed the existing sexual knowledge and attitude among adolescents. This study adopted the design of descriptive survey research. The population of study comprised male and female adolescents in some selected schools (H. S.) in West Bengal within the age range of 16–17 years. Purposive sampling was adopted to select twelve secondary schools (H. S.) in West Bengal. The instrument for this study was two self-structured questionnaire for students using five point Likert Scale for adolescents. The knowledge based questionnaire was divided into eleven dimensions as follows :

1. Formal Institution (D_1)
2. Family (D_2)
3. Media (D_3)
4. Social Communication (D_4)
5. Transmission (D_5)
6. Identification (D_6)
7. Prevension (D_7)
8. Socio-economic Status (D_8)
9. Tendency (D_9)
10. Education (D_{10})
11. Prognosis (D_{11})

The attitude based questionnaire was divided into eleven dimensions as follows :

1. Awareness (D_{12})
2. Family (D_{13})
3. Formal Institution (D_{14})
4. Media (D_{15})
5. Social Communication (D_{16})
6. Tendency (D_{17})
7. Transmission (D_{18})
8. Prevension (D_{19})
9. Identification (D_{20})
10. Socio-economic Status (D_{21})
11. Safe Motherhood (D_{22})

To determine the content validity of the instrument, a draft of the self structured questionnaire was subjected to validation by experts and supervisor, who were consulted for validation and standardization. Test-retest method was conducted on the sample elements to determine their response to the questionnaire. Their responses were collected and analyzed using Pearson Product Moment formula. This

established the internal consistency and the degree of relationship among the test items. All these efforts were to ascertain whether there was need to moderate or modify the questionnaire items. Both descriptive and inferential statistics had been used for conducting the study .

In India there is no unlimited access to information on sexual topics. Since the government decided to ban sex education from public schools (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, 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. 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" (R. C. Sharma, 2000). The present study revealed that the urban adolescents are more conscious about sexual issues than the rural pupil. To determine the level of consciousness, the researcher used an attitude test constructed and standardized by her, which is shown in appendix. The study was carried out in urban and rural areas. So a comparative picture about impact of sex education of rural and urban pupils of West Bengal was revealed in the study. The hypothesis framed, were tested by t-test at 0.01 and 0.05 level of significance.

5.1 Objectives of the Study

1. To compare the knowledge (dimensionwise) of urban and rural adolescent towards sex education.
2. To compare the attitude (dimensionwise) of urban and rural adolescent towards sex education.
3. To compare the knowledge (dimensionwise) of male and female adolescent towards sex education.
4. To compare the attitude (dimensionwise) of male and female adolescent towards sex education.

5. To examine the effect of sexual knowledge on academic achievement of male adolescent.
6. To examine the effect of sexual knowledge on academic achievement of female adolescent.
7. To examine the effect of sexual attitude on academic achievement of male adolescent.
8. To examine the effect of sexual attitude on academic achievement of female adolescent.

5.2 Methodology

Type of Resarch :

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

Tool Used :

1. A Self–administered Questionnaire (SKAQ) in simple Bengali language was constructed and standardized for assessing the knowledge and attitude of West Bengal higher secondary (10 + 2) school students.
2. Assembled total score of individuals Madhyamik Examination conducted by West Bengal Board of Secondary Education .

Population :

Students of some schools of higher secondary (10 + 2) level were considered as population in West Bengal.

Sample :

The population of the sample is the students of higher secondary (10 + 2) level schools in West Bengal. The researcher had selected the sample of class XI students from the following schools :

Sl. No.	Name of the School	District
1.	Halisahar Ramprasad Vidyapith (H. S.)	North 24 Parganas
2.	Halisahar High School (H. S.)	North 24 Parganas
3.	Kankinara Boys High School (H. S.)	North 24 Parganas
4.	Kanchrapara Harnet High School (H. S.)	North 24 Parganas
5.	Jetia High School (H. S.)	North 24 Parganas
6.	Nimtala Rangaswar High School (H. S.)	Nadia
7.	Fatepur High School. (H. S.)	Nadia
8.	Shibpur Prasanna Kumari Balika Sikshalaya (H. S.)	Howrah
9.	Tiljala Brojanath Vidyapith Boys (H. S.)	South 24 Parganas
10.	Chalsa Gayanath Vidyapith (H. S.)	Jalpaiguri
11.	Bagmari High School (H. S.)	Murshidabad
12.	Tamluk High School (H. S.)	Purba Medinipur

Reliability : Knowledge test : 0.86, Attitude test : 0.84

Validity : High content validity.

5.3 Analysis and Findings of the Study

Knowledge Test (Urban and Rural) :

After collecting the data the interpretations were done by following ways :

Objective – 1 : To compare the knowledge of urban and rural adolescent towards sex education.

For the above objective the following hypotheses were formulated :

$H0_1$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to formal institution.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	24.54	2.245	0.05	Rejected
Rural	300	23.95			

From the above table it was concluded that the mean knowledge of urban and rural adolescents was different towards sex eductation in formal institution. Hence hypothesis $H0_1$ was rejected.

$H0_2$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to family.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	19.70	1.004	Not Sig.	Accepted
Rural	300	19.40			

From the above table it was concluded that mean knowledge of urban and rural adolescents was same towards sex education in family. Hence hypothesis $H0_2$ was accepted.

$H0_3$: There is no significant Mean difference of urban and rural adolescent students for knowledge towards sex education in respect to media.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	19.21	4.130	0.01	Rejected
Rural	300	18.13			

From the above table it was concluded that the mean knowledge of urban and rural adolescents was different towards sex eductation in media. Hence hypothesis $H0_3$ was rejected.

$H0_4$: There is no significant mean difference of urban and rural adolescent students for knowledge in respect to social communication towards sex education.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	23.50	1.040	Not Sig.	Accepted
Rural	300	23.12			

From the above table it was concluded that mean knowledge of urban and rural adolescents was same towards sex education in social communication. Hence hypothesis $H0_4$ was accepted.

$H0_5$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to transmission.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	22.29	0.889	Not Sig.	Accepted
Rural	300	22.58			

From the above table it was concluded that mean knowledge of urban and rural adolescents was same towards sex education in transmission. Hence hypothesis $H0_5$ was accepted.

$H0_6$: There is no significant Mean difference of urban and rural adolescent students for knowledge towards sex education in respect to identification.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	16.50	5.443	0.01	Rejected
Rural	300	15.05			

From the above table it was concluded that the mean knowledge of urban and rural adolescents was different towards sex eductation in identification. Hence hypothesis $H0_6$ was rejected.

$H0_7$: There is no significant mean difference of urban and rural adolescent students for knowledge (prevention)towards sex education in respect to prevention.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	19.72	0.600	Not Sig.	Accepted
Rural	300	19.91			

From the above table it was concluded that mean knowledge of urban and rural adolescents was same towards sex education in prevention. Hence hypothesis $H0_7$ was accepted.

$H0_8$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to socio-economic status.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	19.04	0.087	Not Sig.	Accepted
Rural	300	19.07			

From the above table it was concluded that mean knowledge of urban and rural adolescents was same towards sex education in socio-economic status. Hence hypothesis $H0_8$ was accepted.

$H0_9$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to tendency.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	22.31	1.286	Not Sig.	Accepted
Rural	300	21.84			

From the above table it was concluded that mean knowledge of urban and rural adolescents was same towards sex education in tendency. Hence hypothesis $H0_9$ was accepted.

$H0_{10}$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to Education.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	27.64	2.477	0.05	Rejected
Rural	300	26.81			

From the above table it was concluded that the mean knowledge of urban and rural adolescents was different towards sex eductation in Education. Hence hypothesis $H0_{10}$ was rejected.

$H0_{11}$: There is no significant Mean difference of urban and rural adolescent students for knowledge towards sex education in respect to prognosis.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	19.94	1.441	Not Sig.	Accepted
Rural	300	20.31			

From the above table it was concluded that mean knowledge of urban and rural adolescents was same towards sex education in prognosis. Hence hypothesis $H0_{11}$ was accepted.

Knowledge Test (Male and Female) :

Objective – 3 : To compare the knowledge of male and female adolescent towards sex education.

For the above objective the following hypotheses were formulated :

$H0_{12}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to Formal Institution.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	24.58	2.579	0.01	Rejected
Female	300	23.91			

From the above table it was concluded that the mean knowledge of male and female adolescents was different towards sex eductation in Formal Institution. Hence hypothesis $H0_{12}$ was rejected.

HO_{13} : There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to their family.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	19.51	0.290	Not Sig.	Accepted
Female	300	19.60			

From the above table it was concluded that mean knowledge of male and female adolescents was same towards sex education in family. Hence hypothesis $H0_{13}$ was accepted.

HO_{14} : There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to media.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	18.70	0.251	Not Sig.	Accepted
Female	300	18.63			

From the above table it was concluded that mean knowledge of male and female adolescents was same towards sex education in media. Hence hypothesis $H0_{14}$ was accepted.

$H0_{15}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to social communication.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	23.54	1.259	Not Sig.	Accepted
Female	300	23.08			

From the above table it was concluded that mean knowledge of male and female adolescents was same towards sex education in social communication. Hence hypothesis $H0_{15}$ was accepted.

HO_{16} : There is no significant Mean difference of male and female adolescent students for knowledge towards sex education in respect to transmission.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	22.29	0.909	Not Sig.	Accepted
Female	300	22.58			

From the above table it was concluded that mean knowledge of male and female adolescents was same towards sex education in transmission. Hence hypothesis $H0_{16}$ was accepted.

$H0_{17}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to identification.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	16·03	1·890	Not Sig.	Accepted
Female	300	15·52			

From the above table it was concluded that the mean knowledge of male and female adolescents was same towards sex eductation in identification. Hence hypothesis $H0_{17}$ was Accepted

HO_{18} : There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to prevention.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	19.64	1.056	Not Sig.	Accepted
Female	300	19.98			

From the above table it was concluded that mean knowledge of male and female adolescents was same towards sex education in prevention. Hence hypothesis $H0_{18}$ was accepted.

$H0_{19}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to their socio-economic status.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	19.01	0.221	Not Sig.	Accepted
Female	300	19.09			

From the above table it was concluded that mean knowledge of male and female adolescents was same towards sex education in socio-economic status. Hence hypothesis $H0_{19}$ was accepted.

$H0_{20}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to their tendency

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	22.23	0.866	Not Sig.	Accepted
Female	300	21.91			

From the above table it was concluded that mean knowledge of male and female adolescents was same towards sex education in tendency. Hence hypothesis $H0_{20}$ was accepted.

$H0_{21}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to Education.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	27.42	1.106	Not Sig.	Accepted
Female	300	27.04			

From the above table it was concluded that the mean knowledge of male and female adolescents was same towards sex eductation in Education. Hence hypothesis $H0_{21}$ was Accepted

$H0_{22}$: There is no significant mean difference of male and female adolescent students for knowledge towards sex education in respect to prognosis.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	20.23	0.802	Not Sig.	Accepted
Female	300	20.02			

From the above table it was concluded that mean knowledge of male and female adolescents was same towards sex education in prognosis. Hence hypothesis $H0_{22}$ was accepted.

Attitude Test (Urban and Rural) :

Objective – 2 : To compare the attitude of urban and rural adolescent towards sex education .

For the above objective the following hypotheses were formulated :

$H0_{23}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to awareness.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	20.66	1.851	Not Sig.	Accepted
Rural	300	20.21			

From the above table it was concluded that mean knowledge of urban and rural adolescents was same towards sex education in awareness. Hence hypothesis $H0_{23}$ was accepted.

$H0_{24}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to family.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	23.94	2.984	0.01	Rejected
Rural	300	23.03			

From the above table it was concluded that the mean knowledge of urban and rural adolescents was different towards sex eductation in family. Hence hypothesis $H0_{24}$ was rejected.

$H0_{25}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to institution.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	27.38	3.187	0.01	Rejected
Rural	300	26.38			

From the above table it was concluded that the mean knowledge of urban and rural adolescents was different towards sex eductation in institution. Hence hypothesis $H0_{25}$ was rejected.

$H0_{26}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in media.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	19.00	0.398	Not Sig.	Accepted
Rural	300	18.90			

From the above table it was concluded that mean knowledge of urban and rural adolescents was same towards sex education in media. Hence hypothesis $H0_{26}$ was accepted.

$H0_{27}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to social communication.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	23.79	6.007	0.01	Rejected
Rural	300	26.17			

From the above table it was concluded that the mean knowledge of urban and rural adolescents was different towards sex eductation in social communication. Hence hypothesis $H0_{27}$ was rejected.

$H0_{28}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to tendency.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	20.13	2.122	0.05	Rejected
Rural	300	19.55			

From the above table it was concluded that the mean knowledge of urban and rural adolescents was different towards sex eductation in tendency. Hence hypothesis $H0_{28}$ was rejected.

$H0_{29}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to transmission.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	18.43	0.292	Not Sig.	Accepted
Rural	300	18.36			

From the above table it was concluded that mean knowledge of urban and rural adolescents was same towards sex education in transmission. Hence hypothesis $H0_{29}$ was accepted.

$H0_{30}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to prevention.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	23.82	1.238	Not Sig.	Accepted
Rural	300	23.42			

From the above table it was concluded that mean knowledge of urban and rural adolescents was same towards sex education in prevention. Hence hypothesis $H0_{30}$ was accepted.

$H0_{31}$: There is no significant mean difference of urban and rural adolescent students for knowledge towards sex education in respect to identification

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	16.50	4.377	0.01	Rejected
Rural	300	15.57			

From the above table it was concluded that the mean knowledge of urban and rural adolescents was different towards sex eductation in identification. Hence hypothesis $H0_{31}$ was rejected.

$H0_{32}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to socio-economic status.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	19.66	3.314	0.05	Rejected
Rural	300	18.86			

From the above table it was concluded that the mean knowledge of urban and rural adolescents was different towards sex eductation in socio-economic status. Hence hypothesis $H0_{32}$ was rejected.

$H0_{33}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to safe motherhood.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Urban	300	19.90	2.955	0.05	Rejected
Rural	300	19.11			

From the above table it was concluded that the mean knowledge of urban and rural adolescents was different towards sex eductation in safe motherhood. Hence hypothesis $H0_{33}$ was rejected.

Attitude Test (Male and Female) :

Objective – 4 : To compare the attitude of male and female adolescent towards sex education.

For the above objective the following hypotheses were formulated :

$H0_{34}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to awareness.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	20.75	2.604	0.01	Rejected
Female	300	20.12			

From the above table it was concluded that the mean attitude of male and female adolescents was different towards sex eductation in awareness. Hence hypothesis $H0_{34}$ was rejected.

$H0_{35}$: There is no significant mean difference of urban and rural adolescent students for attitude towards sex education in respect to family

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	23.23	1.686	Not Sig.	Accepted
Female	300	23.74			

From the above table it was concluded that mean attitude of male and female adolescents was same towards sex education in family. Hence hypothesis $H0_{35}$ was accepted.

$H0_{36}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to formal institution.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	27.11	1.477	Not Sig.	Accepted
Female	300	26.65			

From the above table it was concluded that mean attitude of male and female adolescents was same towards sex education in formal institution. Hence hypothesis $H0_{36}$ was accepted.

$H0_{37}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to media.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	19.41	3.494	0.01	Rejected
Female	300	18.49			

From the above table it was concluded that the mean attitude of male and female adolescents was different towards sex eductation in media. Hence hypothesis $H0_{37}$ was rejected.

$H0_{38}$: There is no significant mean difference of male and female adolescent stucents for attitude towards sex education in respect to social communication.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	22.75	12.029	0.01	Rejected
Female	300	27.18			

From the above table it was concluded that the mean attitude of male and female adolescents was different towards sex eductation in social communication. Hence hypothesis $H0_{38}$ was rejected.

$H0_{39}$: There is no significant mean difference of male and female adolescent stucents for attitude towards sex education in respect to tendency.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	19.80	0.267	Not Sig.	Accepted
Female	300	19.88			

From the above table it was concluded that mean attitude of male and female adolescents was same towards sex education in tendency. Hence hypothesis $H0_{39}$ was accepted.

$H0_{40}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to transmission.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	18.36	0.242	Not Sig.	Accepted
Female	300	18.43			

From the above table it was concluded that mean attitude of male and female adolescents was same towards sex education in transmission. Hence hypothesis $H0_{40}$ was accepted.

$H0_{41}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to prevention.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	23.77	0.969	Not Sig.	Accepted
Female	300	23.46			

From the above table it was concluded that mean attitude of male and female adolescents was same towards sex education in prevention. Hence hypothesis $H0_{41}$ was accepted.

$H0_{42}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to identification.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	16.02	0.140	Not Sig.	Accepted
Female	300	16.05			

From the above table it was concluded that mean attitude of male and female adolescents was same towards sex education in identification. Hence hypothesis $H0_{42}$ was accepted.

$H0_{43}$: There is no significant mean difference of male and female adolescent students for attitude towards sex education in respect to socio-economic status.

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	19.55	2.444	0.05	Rejected
Female	300	18.96			

From the above table it was concluded that the mean attitude of male and female adolescents was different towards sex eductation in socio-economic status. Hence hypothesis $H0_{43}$ was rejected.

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

t-test for the acceptance or rejection of the above hypothesis is given below :

Group	N	Mean	t-value	Sig. Level	Hypothesis
Male	300	19.49	0.124	Not Sig.	Accepted
Female	300	19.52			

From the above table it was concluded that mean attitude of male and female adolescents was same towards sex education in safe motherhood. Hence hypothesis $H0_{44}$ was accepted.

5.4 Interpretation of Results

Knowledge Test (Urban and Rural) :

Finding – 1 : There was significant difference of knowledge towards sex education between adolescents of urban and rural schools in the dimension Formal Institution and so the hypothesis $H0_1$ was rejected.

Finding – 2 : There was no significant difference of knowledge towards sex education between adolescents of urban and rural schools showing uniformity towards the dimension Family and so the hypothesis $H0_2$ was accepted.

Finding – 3 : There was significant difference of knowledge towards sex education between adolescents of urban and rural schools in the dimension Media and so the hypothesis $H0_3$ was rejected.

Finding – 4 : There no significant difference of knowledge towards sex education between adolescents of urban and rural schools in the dimension Social Communication and so the hypothesis $H0_4$ was Accepted

Finding – 5 : There was no significant difference of knowledge towards sex education between adolescents of urban and rural schools showing uniformity towards the dimension Transmission and so the hypothesis $H0_5$ was accepted.

Finding – 6 : There was significant difference of knowledge towards sex education between adolescents of urban and rural schools in the dimension Identification and so the hypothesis $H0_6$ was rejected.

Finding – 7 : There was no significant difference of knowledge towards sex education between adolescents of urban and rural schools showing uniformity towards the dimension Prevention and so the hypothesis $H0_7$ was accepted.

Finding – 8 : There was no significant difference of knowledge towards sex education between adolescents of urban and rural schools showing uniformity towards the dimension Socio-economic status and so the hypothesis $H0_8$ was accepted.

Finding – 9 : There was no significant difference of knowledge towards sex education between adolescents of urban and rural schools showing uniformity towards the dimension Tendency and so the hypothesis $H0_9$ was accepted.

Finding – 10 : There was significant difference of knowledge towards sex education between adolescents of urban and rural schools in the dimension Education and so the

hypothesis $H0_{10}$ was rejected.

Finding – 11 : There was no significant difference of knowledge towards sex education between adolescents of urban and rural schools showing uniformity towards the dimension Prognosis and so the hypothesis $H0_{11}$ was accepted.

Knowledge Test (Male and Female)

Finding – 12 : There was significant difference of knowledge towards sex education between male and female adolescents in the dimension Formal Institution and so the hypothesis $H0_{12}$ was rejected.

Finding – 13 : There was no significant difference of knowledge towards sex education between male and female adolescents showing uniformity towards the dimension Family and so the hypothesis $H0_{13}$ was accepted.

Finding – 14 : There was no significant difference of knowledge towards sex education between male and female adolescents showing uniformity towards the dimension Media and so the hypothesis $H0_{14}$ was accepted.

Finding – 15 : There was no significant difference of knowledge towards sex education between male and female adolescents showing uniformity towards the dimension social communication and so the hypothesis $H0_{15}$ was accepted.

Finding – 16 : There was no significant difference of knowledge towards sex education between male and female adolescents showing uniformity towards the dimension Transmission and so the hypothesis $H0_{16}$ was accepted.

Finding – 17 : There was no significant difference of knowledge towards sex education between male and female adolescents showing uniformity towards the dimension Identification and so the hypothesis $H0_{17}$ was accepted.

Finding – 18 : There was no significant difference of knowledge towards sex education between male and female adolescents showing uniformity towards the dimension Prevention and so the hypothesis $H0_{18}$ was accepted.

Finding – 19 : There was no significant difference of knowledge towards sex education between male and female adolescents showing uniformity towards the dimension Socio-economic Status and so the hypothesis $H0_{19}$ was accepted.

Finding – 20 : There was no significant difference of knowledge towards sex education between male and female adolescents showing uniformity towards the dimension Tendency and so the hypothesis $H0_{20}$ was accepted.

Finding – 21 : There was no significant difference of knowledge towards sex education between male and female adolescents showing uniformity towards the dimension Education and so the hypothesis $H0_{21}$ was accepted.

Finding – 22 : There was no significant difference of knowledge towards sex education between male and female adolescents showing uniformity towards the dimension Prognosis and so the hypothesis $H0_{22}$ was accepted.

Attitude Test (Urban and Rural) :

Finding – 23 : There was no significant difference of attitude towards sex education between adolescents of urban and rural schools showing uniformity towards the dimension Awareness and so the hypothesis $H0_{23}$ was accepted.

Finding – 24 : There was significant difference of attitude towards sex education between adolescents of urban and rural schools in the dimension Family and so the hypothesis $H0_{24}$ was rejected.

Finding – 25 : There was significant difference of attitude towards sex education between adolescents of urban and rural schools in the dimension Formal Institution and so the hypothesis $H0_{25}$ was rejected.

Finding – 26 : There was no significant difference of attitude towards sex education between adolescents of urban and rural schools showing uniformity towards the dimension Media and so the hypothesis $H0_{26}$ was accepted.

Finding – 27 : There was significant difference of attitude towards sex education between adolescents of urban and rural schools in the dimension Social Communication and so the hypothesis $H0_{27}$ was rejected.

Finding – 28 : There was significant difference of attitude towards sex education between adolescents of urban and rural schools in the dimension Tendency and so the hypothesis $H0_{28}$ was rejected.

Finding – 29 : There was no significant difference of attitude towards sex education between adolescents of urban and rural schools showing uniformity towards the dimension Transmission and so the hypothesis $H0_{29}$ was accepted.

Finding – 30 : There was no significant difference of attitude towards sex education between adolescents of urban and rural schools showing uniformity towards the dimension Prevention and so the hypothesis $H0_{30}$ was accepted.

Finding – 31 : There was significant difference of attitude towards sex education between adolescents of urban and rural schools in the dimension Identification and so the hypothesis $H0_{31}$ was rejected.

Finding – 32 : There was significant difference of attitude towards sex education between adolescents of urban and rural schools in the dimension Socio-economic Status and so the hypothesis $H0_{32}$ was rejected.

Finding – 33 : There was significant difference of attitude towards sex education between adolescents of urban and rural schools in the dimension Safe Motherhood and so the hypothesis $H0_{33}$ was rejected.

Attitude Test (Male and Female) :

Finding – 34 : There was significant difference of attitude towards sex education between male and female adolescents in the dimension Awareness and so the hypothesis $H0_{34}$ was rejected.

Finding – 35 : There was no significant difference of attitude towards sex education between male and female adolescents showing uniformity towards the dimension Family and so the hypothesis $H0_{35}$ was accepted.

Finding – 36 : There was no significant difference of attitude towards sex education between male and female adolescents showing uniformity towards the dimension Formal institution and so the hypothesis $H0_{36}$ was accepted.

Finding – 37 : There was significant difference of attitude towards sex education between male and female adolescents in the dimension Media and so the hypothesis $H0_{37}$ was rejected.

Finding – 38 : There was significant difference of attitude towards sex education between male and female adolescents in the dimension Social communication and so the hypothesis $H0_{38}$ was rejected.

Finding – 39 : There was no significant difference of attitude towards sex education between male and female adolescents showing uniformity towards the dimension Tendency and so the hypothesis $H0_{39}$ was accepted.

Finding – 40 : There was no significant difference of attitude towards sex education between male and female adolescents showing uniformity towards the dimension Transmission and so the hypothesis $H0_{40}$ was accepted.

Finding – 41 : There was no significant difference of attitude towards sex education between male and female adolescents showing uniformity towards the dimension Prevention and so the hypothesis $H0_{41}$ was accepted.

Finding – 42 : There was no significant difference of attitude towards sex education between male and female adolescents showing uniformity towards the dimension Identification and so the hypothesis $H0_{42}$ was accepted.

Finding – 43 : There was significant difference of attitude towards sex education between male and female adolescents in the dimension Socio-economic Status and so

the hypothesis $H0_{43}$ was rejected.

Finding – 44 : There was no significant difference of attitude towards sex education between male and female adolescents showing uniformity towards the dimension Safe motherhood and so the hypothesis $H0_{44}$ was accepted.

Regression Statistics of Total Male in Knowledge :

Finding – 45 : The t-value is 0.46 which is not significant and so the hypothesis $H0_{45}$ was accepted. Hence there is no influence of male knowledge towards sex education on the academic achievement of adolescent students in respect to Formal Institution (D_1).

Finding – 46 : The t-value is 0.50 which is not significant and so the hypothesis $H0_{46}$ was accepted. Hence there is no influence of male knowledge towards sex education on the academic achievement of adolescent students in respect to Family (D_2).

Finding – 47 : The t-value is 1.65 which is not significant and so the hypothesis $H0_{47}$ was accepted. Hence there is no influence of male knowledge towards sex education on the academic achievement of adolescent students in respect to Media (D_3).

Finding – 48 : The t-value is 1.51 which is not significant and so the hypothesis $H0_{48}$ was accepted. Hence there is no influence of male knowledge towards sex education on the academic achievement of adolescent students in respect to Social Communication (D_4).

Finding – 49 : The t-value is 1.69 which is not significant and so the hypothesis $H0_{49}$ was accepted. Hence there is no influence of male knowledge towards sex education on the academic achievement of adolescent students in respect to Transmission (D_5).

Finding – 50 : The t-value is 0.91 which is not significant and so the hypothesis $H0_{50}$ was accepted. Hence there is no influence of male knowledge towards sex education on the academic achievement of adolescent students in respect to Identification (D_6).

Finding – 51 : The t-value is 0.57 which is not significant and so the hypothesis $H0_{51}$ was accepted. Hence there is no influence of male knowledge towards sex education on the academic achievement of adolescent students in respect to Prevention (D_7).

Finding – 52 : The t-value is 1.17 which is not significant and so the hypothesis $H0_{52}$ was accepted. Hence there is no influence of male knowledge towards sex education on the academic achievement of adolescent students in respect to Socio-economic Status (D_8).

Finding – 53 : The t-value is 0.21 which is not significant and so the hypothesis $H0_{53}$ was accepted. Hence there is no influence of male knowledge towards sex education on the academic achievement of adolescent students in respect to Tendency (D_9).

Finding – 54 : The t-value is 1.57 which is not significant and so the hypothesis $H0_{54}$ was accepted. Hence there is no influence of male knowledge towards sex education on the academic achievement of adolescent students in respect to Education (D_{10}).

Finding – 55 : The t-value is 0.25 which is not significant and so the hypothesis $H0_{55}$ was accepted. Hence there is no influence of male knowledge towards sex education on the academic achievement of adolescent students in respect to Prognosis (D_{11}).

Regression Statistics of Total Female in Knowledge :

Finding – 56 : The t-value is 0.09 which is not significant and so the hypothesis $H0_{56}$ was accepted. Hence there is no influence of female knowledge towards sex education on the academic achievement of adolescent students in respect to Formal Institution (D_1).

Finding – 57 : The t-value is 0.63 which is not significant and so the hypothesis $H0_{57}$ was accepted. Hence there is no influence of female knowledge towards sex education on the academic achievement of adolescent students in respect to Family (D_2).

Finding – 58 : The t-value is 1.80 which is not significant and so the hypothesis $H0_{58}$ was accepted. Hence there is no influence of female knowledge towards sex education

on the academic achievement of adolescent students in respect to Media (D_3).

Finding – 59 : The t-value is 1.22 which is not significant and so the hypothesis $H0_{59}$ was accepted. Hence there is no influence of female knowledge towards sex education on the academic achievement of adolescent students in respect to Social Communication (D_4).

Finding – 60 : The t-value is 0.75 which is not significant and so the hypothesis $H0_{60}$ was accepted. Hence there is no influence of female knowledge towards sex education on the academic achievement of adolescent students in respect to Transmission (D_5).

Finding – 61 : The t-value is 4.04 which is significant and so the hypothesis $H0_{61}$ was rejected. Hence there is influence of female knowledge towards sex education on the academic achievement of adolescent students in respect to Identification (D_6).

Finding – 62 : The t-value is 2.12 which is significant and so the hypothesis $H0_{62}$ was rejected. Hence there is influence of female knowledge towards sex education on the academic achievement of adolescent students in respect to Prevention (D_7).

Finding – 63 : The t-value is 0.37 which is not significant and so the hypothesis $H0_{63}$ was accepted. Hence there is no influence of female knowledge towards sex education on the academic achievement of adolescent students in respect to Socio-economic Status (D_8).

Finding – 64 : The t-value is 0.62 which is not significant and so the hypothesis $H0_{64}$ was accepted. Hence there is no influence of female knowledge towards sex education on the academic achievement of adolescent students in respect to Tendency (D_9).

Finding – 65 : The t-value is 0.14 which is not significant and so the hypothesis $H0_{65}$ was accepted. Hence there is no influence of female knowledge towards sex education on the academic achievement of adolescent students in respect to Education (D_{10}).

Finding – 66 : The t-value is 0.38 which is not significant and so the hypothesis $H0_{66}$ was accepted. Hence there is no influence of female knowledge towards sex education on the academic achievement of adolescent students in respect to Prognosis (D_{11}).

Regression Statistics of Total Male in Attitude :

Finding – 67 : The t-value is 1.49 which is not significant and so the hypothesis $H0_{67}$ was accepted. Hence there is no influence of male attitude towards sex education on the academic achievement of adolescent students in respect to Awareness (D_{12}).

Finding – 68 : The t-value is 0.44 which is not significant and so the hypothesis $H0_{68}$ was accepted. Hence there is no influence of male attitude towards sex education on the academic achievement of adolescent students in respect to Family (D_{13}).

Finding – 69 : The t-value is 2.89 which is significant and so the hypothesis $H0_{69}$ was rejected. Hence there is influence of male attitude towards sex education on the academic achievement of adolescent students in respect to Formal Institution (D_{14}).

Finding – 70 : The t-value is 1.26 which is not significant and so the hypothesis $H0_{70}$ was accepted. Hence there is no influence of male attitude towards sex education on the academic achievement of adolescent students in respect to Media (D_{15}).

Finding – 71 : The t-value is 7.63 which is significant and so the hypothesis $H0_{71}$ was rejected. Hence there is influence of male attitude towards sex education on the academic achievement of adolescent students in respect to Social Communication (D_{16}).

Finding – 72 : The t-value is 0.15 which is not significant and so the hypothesis $H0_{72}$ was accepted. Hence there is no influence of male attitude towards sex education on the academic achievement of adolescent students in respect to Tendency (D_{17}).

Finding – 73 : The t-value is 0.42 which is not significant and so the hypothesis $H0_{73}$ was accepted. Hence there is no influence of male attitude towards sex education on the academic achievement of adolescent students in respect to Transmission (D_{18}).

Finding – 74 : The t-value is 1.41 which is not significant and so the hypothesis $H0_{74}$ was accepted. Hence there is no influence of male attitude towards sex education on the academic achievement of adolescent students in respect to Prevention (D_{19}).

Finding – 75 : The t-value is 1.15 which is not significant and so the hypothesis $H0_{75}$ was accepted. Hence there is no influence of male attitude towards sex education on the academic achievement of adolescent students in respect to Identification (D_{20}).

Finding – 76 : The t-value is 1.00 which is not significant and so the hypothesis $H0_{76}$ was accepted. Hence there is no influence of male attitude towards sex education on the academic achievement of adolescent students in respect to Socio-economic Status (D_{21}).

Finding – 77 : The t-value is 0.23 which is not significant and so the hypothesis $H0_{77}$ was accepted. Hence there is no influence of male attitude towards sex education on the academic achievement of adolescent students in respect to Safe Motherhood (D_{22}).

Regression Statistics of Total Female in Attitude :

Finding – 78 : The t-value is 0.45 which is not significant and so the hypothesis $H0_{78}$ was accepted. Hence there is no influence of female attitude towards sex education on the academic achievement of adolescent students in respect to Awareness (D_{12}).

Finding – 79 : The t-value is 1.14 which is not significant and so the hypothesis $H0_{79}$ was accepted. Hence there is no influence of female attitude towards sex education on the academic achievement of adolescent students in respect to Family (D_{13}).

Finding – 80 : The t-value is 0.12 which is not significant and so the hypothesis $H0_{80}$ was accepted. Hence there is no influence of female attitude towards sex education on the academic achievement of adolescent students in respect to Formal Institution (D_{14}).

Finding – 81 : The t-value is 2.43 which is significant and so the hypothesis $H0_{81}$ was rejected. Hence there is influence of female attitude towards sex education

on the academic achievement of adolescent students in respect to Media (D_{15}).

Finding – 82 : The t-value is 1.55 which is not significant and so the hypothesis $H0_{82}$ was accepted. Hence there is no influence of female attitude towards sex education on the academic achievement of adolescent students in respect to Social Communication (D_{16}).

Finding – 83 :. The t-value is 0.78 which is not significant and so the hypothesis $H0_{83}$ was accepted. Hence there is no influence of female attitude towards sex education on the academic achievement of adolescent students in respect to Tendency (D_{17}).

Finding – 84 : The t-value is 1.13 which is not significant and so the hypothesis $H0_{84}$ was accepted. Hence there is no influence of female attitude towards sex education on the academic achievement of adolescent students in respect to Transmission (D_{18}).

Finding – 85 : The t-value is 1.10 which is not significant and so the hypothesis $H0_{85}$ was accepted. Hence there is no influence of female attitude towards sex education on the academic achievement of adolescent students in respect to Prevention (D_{19}).

Finding – 86 : The t-value is 2.92 which is significant and so the hypothesis $H0_{86}$ was rejected. Hence there is influence of female attitude towards sex education on the academic achievement of adolescent students in respect to Identification (D_{20}).

Finding – 87 : The t-value is 1.12 which is not significant and so the hypothesis $H0_{87}$ was accepted. Hence there is no influence of female attitude towards sex education on the academic achievement of adolescent students in respect to Socio-economic Status (D_{21}).

Finding – 88 : The t-value is 0.98 which is not significant and so the hypothesis $H0_{88}$ was accepted. Hence there is no influence of female attitude towards sex education on the academic achievement of adolescent students in respect to Safe Motherhood (D_{22}).

5.5 Limitations of the Study

1. The samples selected by the researcher were not randomly selected. The researcher had taken the help of principles of purposive sampliing.
2. The investigation was vast and expensive too, so the researcher limited her attention only to the adolescent students of class XI of West Bengal Board of Secondary Education.
3. Out of four methods of findings reliability coefficients of the test, only Test-Retest method was used.
4. Another limitation was that a representative sample was not feasible due to time and resources. So one can not conclude that the results obtained are representative of all the adolescent students of class XI of West Bengal and thus generalization of the present findings were limited.

5.6 Conclusion

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. In most parts of India sex is generally regarded as taboo. 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.

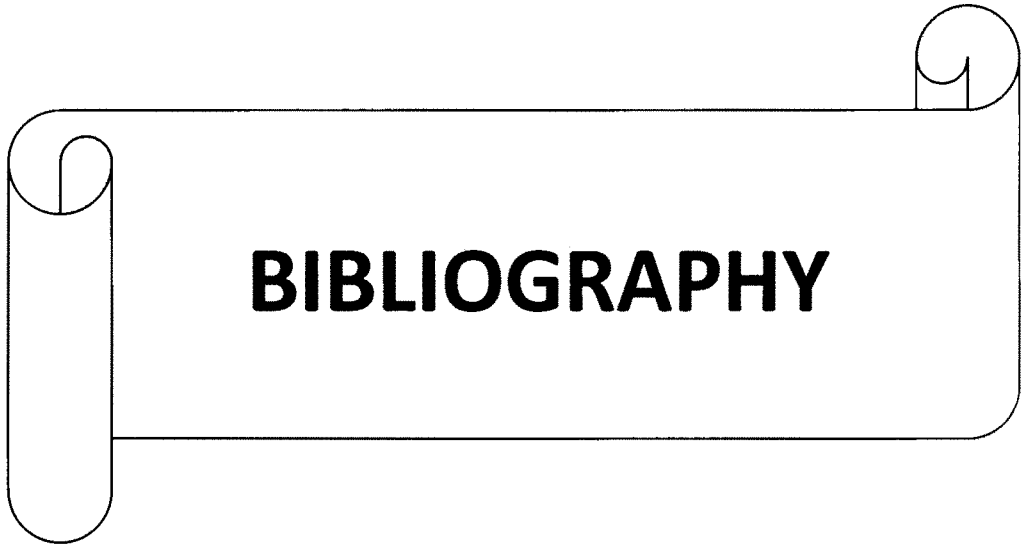
Sexual problems of children and teenagers have become a worry for society. These problems include indulgence in pornography, premarital sex, unwed pregnancy, casual sex, prostitution, sexual harassment / abuse and other sexual crimes. If schools carry out formal sex education, students can be provided with proper knowledge and values about sex. In the present study the sample was adolescent rather than parents and teachers. Adolescence is one of the most crucial periods in the life of an individual. The actual implementation of sex education on the adolescent is necessary. So the researcher wanted to introduce the sex education in school. For this purpose, the researcher thought about adolescent, rather than others. The aim of this study was to investigate the knowledge and attitudes of high school adolescent towards sex

education and its influence on academic achievement at secondary level.

Based on the findings of these study, learners' overall positive knowledge and attitude towards sex education were found. This information has led to the acknowledgement that sexual behaviour is influenced by combination of many factors – socioeconomic and personal. As sex education is one of the many initiatives working towards reducing rape, HIV/AIDS infections and teenage pregnancies and other sexual problems. A closer look on these factors and their solution will be beneficial in making the programme more effective.

School curriculum for all levels of education in India should include sex education. Community outreach seminars and projects on sex and health education need to be designed and implemented to achieve this. This can help teachers, students and the community at large to acquire the necessary knowledge and skills to do away with the challenges of sex and sexuality matters.

In India more research in this area are necessary. While this study has created a platform for dialogue and interest towards attitudes held by learners regarding sex education, a larger scale of research would have a much better impact in effecting change. Another aspect of this research study that needs to be considered on a larger scale is the quality of sex education. Such research might also include the attitudes and feelings of educators (especially Indian educators) regarding the introduction of sexuality education as part of the curriculum. Some researches that have been done in this field have focused more on evaluating the programme. More community involvement and the creation of dialogue around sex education and its introduction in schools and its prominence in the media is needed. Such work can be done mostly with adolescents, in order to evaluate their knowledge and attitudes and feelings towards sex education and the whole programme.



BIBLIOGRAPHY

BIBLIOGRAPHY

1. Acquelyn T.; Stephen B.; Hillman, C. A. & Cheryl L. S. (2011). Demographic Differences in Adolescents Sexual Attitude and Behaviours,Parent Communication about sex,and school education. *Electronic Journal of Human Sexuality*, Vol. 14.
2. Agampodi, S. B.; Agampodi, T. C. & Ukd, P. (2008). Adolescents perception of reproductive health services in Sri Lanka. *BMC Health Serv Res.* 8 : 98.
3. Alford S. (2003). Science and Success : *Sex Education and Other Programs that Work to Prevent Teen Pregnancy, HIV & Sexually Transmitted Infections.* Washington, DC : Advocates for Youth.
4. Ali, T. S.; Ali, P. A.; Waheed, H. & Memon, A. A. (2006). Understanding of puberty and related health problems among female adolescents in Karachi, Pakistan. *J. Pak Med. Assoc*,. 56 : 68 – 72.
5. Allan Guttmacher Institute (2001). 'Sex education: Politicians, parents, teachers and teens'. *The Guttamacher Report on Public Policy*, 4(1), 1–25.
6. American Association for Health Education (AAHE) (2012). Groundbreaking national sexuality education standards set the new gold standard for sexuality education in public schools, press release, Reston, VA : AAHE, http://www. aahperd.org/aahe/advocacy/pressreleases/education.cfm,accessed Feb. 16, 2012.
7. American Foundation for AIDS Research (2005). *Assessing the Efficacy of Abstinence-Only Programs for HIV Prevention among Young People.* [Issue Brief, No. 2] Washington, DC: Author.
8. Archana (2007). A study on need of sex education in senior secondary level. Bhartya Shikha Shodha Patrika, Vol. 1.
9. Avachat, S. S.; Phalke, D. B. *et al.* (2011). "Impact of sex education on knowledge and attitude of adolescent school children of Loni village". *Journal of the Indian Medical* Association, 109(11) : 808 – 811.
10. Ayalew, T.; Meseret, Y. & Yeshigeta, G. (2008). Reproductive Health Knowledge and Attitude among Adolescents : A community based study in Jimma Town, Southwest Ethiopia *Ethiop. J. Health Dev.*; 22(3).

11. Baldo M. *et al.* (1993). *Does Sex Education Lead to Earlier or Increased Sexual Activity in Youth ?* Presented at the Ninth International Conference on AIDS, Berlin, 1993. Geneva, Switzerland: World Health Organization.
12. Best, G.W. (1977). Research in Education, New Delhi, Prentice Hall of India.
13. Boonstra, H. D. (2012). Progressive and Pragmatic : The National Sexuality Education Standards for U.S. Public Schools, *Guttmacher Policy Review*, Vol. 15, No. 2.
14. Boostra, H. (2002). Legislators craft alternative vision of sex education to counter abstinence-only drive. *The Guttmacher Report on Public Policy*, #2:1-3.
15. Braverman P. K. & Strasburger, V. C. (1994). Sexually transmitted diseases. Clin Paediat (Phila), 33 : 26 – 37.
16. Brückner H. & Bearman P. (2005). After the promise: the STD consequences of adolescent virginity pledges. *Journal of Adolescent Health*, 36 : 271 – 278.
17. Budeba, P. M. (2013). Attitudes and Views of Teachers towards Students' Sexual Relationships in Secondary Schools in Tanzania, ISSN-L : 2, Academic Research International.
18. Burgess, V.; Dziegielewski, S. F. & Green, C. E. (2005). 'Improving comfort about sex communication between parents and their adolescent : Practice-based research within a teen sexuality group', *Brief treatment and crisis intervention* 5(4) : 379 – 390.
19. Centers for Disease Control and Prevention, HIV, other STD, and pregnancy prevention education in public secondary schools (2012). 45 states, 2008–2010, *Morbidity and Mortality Weekly Report,* 61(13) : 222 – 228, <http://www. cdc.gov/mmwr/preview/mmwrhtml/mm6113a2.htm>, accessed May 1, 2012.
20. Chapin, J. R. Adolescent Sex and Mass Media a Developmental Approach Academic Journal Article from *Adolescence*, Vol. 35, No. 140.
21. Committee on HIV Prevention Strategies in the United States, Institute of Medicine (2000). *No Time to Lose : Getting More from HIV Prevention.* Washington, DC : National Academy Press.

22. Darroch J. E. & Singh S. (1999). *Why Is Teenage Pregnancy Declining ? The Roles of Abstinence, Sexual Activity, and Contraceptive Use* [Occasional Report 1] New York : Alan Guttmacher Institute.

23. Division of Adolescent School Health, National Center for Chronic Disease and Prevention, Centers for Disease Control and Prevention, SHPPS topic and component specific fact sheets (2009). <http://www.cdc.gov/HealthyYouth /shpps /2006/factsheets/topic_component.htm>, accessed Mar. 28, 2012.

24. Edmondson B. (2012). Connecticut State Department of Education, Personal Communication.

25. Eisen, M. & Zellman, G. L. (1986). *The role of health belief model-based attitudes, sex education, and demographic factors in predicting adolescents' sexuality-related knowledge.* Source : Austin, Texas, University of Texas at Austin, Texas Population Research Center, 15, [10] p. (Texas Population Research Center Paper No. 7.010).

26. El-Sadek, A. A.; Abdel-Hakiim, M.; Kasim, Kh & Abd-Elhady, A. S. (2008). Knowledge and Attitude of Adolescent Girls towards Reproductive Health in Cairo, Egypt. *The Egyptian Journal of Community Medicine*, Vol. 26, No. 1.

27. Feijoo A. N. & Grayton C. (2004). *Trends in Sexual Risk Behaviors among High School Students – United States, 1991 to 1997 and 1999 to 2003.* [The Facts] Washington, DC: Advocates for Youth,.

28. Fernández L.; Bustos L.; González L.; Palma D.; Villagrán J. & Muñoz S. (2000). Beliefs, attitudes and knowledge about sex education. *Rev. Med. Chil.*, 128(6) : 574 – 83.

29. Garrett, H. E. & Woodworth, R. S. (1981). Statistics in Psychology and Education, Bombay : Vakil Feffer and Simons Ltd.

30. Haffner D. (2012). New minimum standards for sex education: progress or retreat ? *RH Reality Check,* 2012, <http://www.rhrealitycheck.org /article/2012 /01/13/new-minimum-standards-sex-education-progress-or-retreat>, accessed Mar. 29, 2012.

31. Hamilton B. E. *et al.*(2005). Births : Preliminary data for 2004. *National Vital Statistics Reports*, 54(8) : 1 – 16.

32. Hart, P. D. (2007). Research Associates, Inc., "Memorandum: Application of Research Findings". Washington, DC : Planned Parenthood Federation of America and National Women's Law Center, http://www.nwlc.org/pdf/7-12-07 interestedpartiesmemo.pdf.

33. Hauser D. (2004). *Five Years of Abstinence-Only-Until-Marriage Education: Assessing the Impact* [Title V State Evaluations], Washington, DC : Advocates for Youth.

34. Hickman-Brown (1999). Public Opinion Research. *Public Support for Sexuality Education Reaches Highest Levels*. Washington, DC : Advocates for Youth.

35. Idonije, B. O.; Oluba, O. M. & Otamere, H. O. (2011). A Study on Knowledge, Attitude and Practice of Contraception among Secondary School Students in Ekpoma, Nigeria, *JPCS*, Vol. 2, www.arpapress.com/Volumes/JPCS/Vol2 /JPCS_2_06.pdf 22 .

36. International Journal of Science and Technology Education Research (2011), Vol. 2(4) : 62 – 66, http://www.academicjournals.org/IJSTER ISSN 2141-6559

37. Iwu, R. U.; Onoja, A. I.; Ijioma, B. C.; Ngumah, M. O. & Egeruoh, A. S. The integration of sexuality education in secondary school. Biology curriculum for sustainable development : Teachers' perception.

38. Jennifer Richey (2012). Motivators and Barriers to Sexual-Health Information Provision in High School Libraries : Perspectives from District-Level Library Coordinators and High School Principals, Vol. 15

39. Kaiser Family Foundation, Kennedy School of Government (2004). *Sex Education in America : General Public / Parents Survey*, Washington, DC : National Public Radio, 2004.

40. Kelly, J. A. *et al.* (1999). HIV risk behaviour reduction following intervention with key opinion leaders of a population : An experimental analysis. *American Journal of Public Health*. 81 : 168 – 171.

41. Khan A. & Pine P. (2000). Adolescents and reproductive health in Pakistan : a literature review. Population Council Final Report 2000.

42. Khoza, L. B. (2004). 'Adolescent's knowledge, beliefs and experiences regarding sexual practices', *Health SA Gesondheid*, 9(3) : 34 – 41.

43. Kirby D, (2007). *Emerging Answers : Research Findings on Programs to Reduce Teen Pregnancy and Sexually Transmitted Diseases,* Washington, DC: National Campaign to Prevent Teen and Unplanned Pregnancy, http:// www.thenationalcampaign.org/EA2007/EA2007_full.pdf, accessed Apr. 30, 2012.

44. Kirby D. (2001). *Emerging Answers : Research Findings on Programs to Reduce Teen Pregnancy.* Washington, DC : National Campaign to Prevent Teen Pregnancy.

45. Kirby D. *et al.* (2005). *Impact of Sex and HIV Education Programs on Sexual Behaviors of Youth in Developing and Developed Countries.* Youth Research Working Paper, No. 2, Research Triangle Park, NC : Family Health International.

46. Kistnasamy, E. J.; Reddy, P. & Jordan, J. (2009). 'An evaluation of knowledge, attitude and practices of South African university students regarding the use of emergency contraception and of art as an advocacy tool', *South African Family Practice*, 51(5) : 423 – 426.

47. Klein, J. D. & Committee on Adolescence (2005). Adolescent pregnancy : current trends and issues. *Pediatrics*, 116(1) : 281 – 286.

48. Lauszus, F. F.; Nielsen, J. L.; Boelskifte1, J. & Falk, J. Sexual practice associated with knowledge in adolescents in ninth grade.

49. Leili, S.; Elham, S. & Farkhondeh, S. (2008). A population based survey of HIV/AIDS knowledge and attitude in general public, Bandar-Abbas, Iran. *Pak J. Med Sci.* 6 : 838 – 44.

50. Lindberg, L. D. & Maddow-Zimet I. (2012). Consequences of sex education on teen and young adult sexual behaviors and outcomes, *Journal of Adolescent Health,* http://www.guttmacher.org/pubs/journals/j.jadohealth.2011.12.028.pdf, Accessed May 1, 2012.

51. Majid, S. (1995). Reproductive health awareness in adolescent girls: report of a survey. J. *Coll. Physicians Surg Pak*, 5 : 214.

52. Manlove, E. *et al.* (2004). Contraceptive use and consistency in U.S. teenagers' most recent sexual relationships, *Perspectives on Sexual and Reproductive Health*, 36(6) : 265 – 275.

53. Martin, J. A. *et al.* (2005). Births: final data for 2003. *National Vital Statistics Reports*; 54(2) : 1 – 116.

54. Mauldon, J. & Luker K. (1996). The effects of contraceptive education on method use at first intercourse, *Family Planning Perspectives*, 28 : 19–24 & 41.

55. Mohamed S. (2004). Addressing gender inequality in adolescent life skills education: Aahung's experience in Pakistan. International women health.

56. Moore, S. & Parker, A. (1999). 'Barriers to safe sex: beliefs and attitudes among male and female adult heterosexuals across four relationship groups'. *Journal of Health Psychology*, 4(2), 149–163.

57. More, C. B. (2012). Study the Attitude of Youths Towards Sex Education Indian Streams Research Journal (2012).

58. Mosher, W. D. *et al.*(2002). Sexual behavior and selected health measures: men and women, 15-44 years of age, United States, 2002. *Advance Data* 2005; #362:1-56.

59. Nakpodia, E. D. (2012). The Relevance of Sex Education in Secondary School Curricula in Abraka Metropolis, Delta State, *Nigeria Scholarly Journal of Business Administration*, 2(2) : 36-41.

60. National Public Radio *et al.* (2004). *Sex Education in America: NPR/Kaiser/Kennedy School Poll.* Menlo Park, CA : Kaiser. http://www.npr.org/programs /morning/features/2004/jan/ kaiserpoll/publicfinal.pdf>, accessed Apr. 13, 2012.

61. Policy Statement (2007). Sexuality education, abstinence and distribution of condoms in schools, *American Medical Association*, http://www.ama-assn.org /apps/pf_new/pf_online?f_n=browse&doc=policyfiles/HnE/H-170.968. htm

62. Pute Rahimah Makol-Abdul Abu Sadat Nurullah Syed Sohail Imam Saodah Abd. Rahman (2009). Parents' Attitudes towards Inclusion of Sexuality Education in Malaysian Schools, *International Journal about Parents in Education*, Vol. 3, No. 1, 42 – 56.

63. Qazi Y. (2003). Adolescent reproductive health in Pakistan. In : Bott S. Jejeebhoy S, Shah I, Puri C. (eds). *Towards adulthood : exploring the sexual and reproductive health of adolescents in South Asia.*World Health Organization, Geneva, 78 – 80.

64. Rehan N. Attitude of health care providers to induced abortion in Pakistan. *J. Pak Med. Assoc.*, 2003; 53: 7.

65. Richards, K.W. (2003).Zimbabwean councelors knowledge and attitude towards HIV/AIDS.Corvallis,or, Oregon state University, Dept.Of counselor education.

66. Rodriguez, R. (2012). Sexuality Information and Education Council of the United States (SIECUS), New York, Personal Vommunication.

67. Santelli, J. *et al.*(2006). Abstinence and abstinence-only education : a review of U.S. policies and programs. *Journal of Adolescent Healthi,* 38(1) :72 – 81.

68. Santelli, J.; Lindberg, L.; Finer, L. & Singh, S. (2007). Explaining recent declines in adolescent pregnancy in the United States : The contribution of abstinence and improved contraceptive use ? *American Journal of Public Health*, 97(1) : 150 – 156.

69. Schuster, M. *et al.* (1996). Impact of a high school condom availability program on sexual attitudes and behaviors, *Family Planning Perspectives*, 30(2) : 67–72.

70. Shaw, D. Access to sexual and reproductive health for young people (2009). Bridging the disconnect between rights and reality. *Int. J. Gynecol. Obstet.*, 106 : 132 – 6.

71. Shtarkshall, R. A.; Santelli, J. S. and Hirsch, J. S. (2007). Sex Education and Sexual Socialization : Roles for Educators and Parents, On Ssexual and Reproductive Health, Vol. 39, Number 2.

72. Shubhada, S.; Avachat, S. S.; Baburao, D.; Phalke, D. B. & Vaishali Deepak, Phalke, V. D. (2011). Impact of sex education on knowledge and attitude of adolescent school children of Loni village. *J. Indian Med. Assoc.*, 109(11) : 808, 810 – 1.

73. Siddiqui, M. H.; Siddiqui, J. A. & Ahmed I. (2009). Demographic profile and clinical features of admitting HIV patients in a tertiary care teaching hospital of Karachi Pakistan. *Pak. J. Med. Sci.*; 25 : 861 – 4.

74. SIECUS (2004). *SIECUS State Profiles : a Portrait of Sexuality Education and Abstinence-Only-Until-Marriage Programs in the States.* New York : Author.

75. Singh, J. (2008). Parents' Attitudes towards Inclusion of Sexuality Education in Malaysian Schools.

76. Siti Nor Y. Wong Fui-Ping Rozumah B. Mariani M. Rumaya J. Mansor, A. T. Factors related to sexual knowledge among Malaysian adolescents, *Jurnal Kemanusiaan Bil.*16, Dis 2010

77. Society for Adolescent Medicine (2006). Abstinence-only education policies and programs: a position paper of the Society for Adolescent Medicine. *Journal of Adolescent Health*; 38(1) : 83 – 87.

78. Sowmya, H. & Mohan, S. S. (2012). Knowledge and practices of reproductive health among school going ruraladolescent girls of sullia taluk. *Elixir Soc. Sci.*, 50 : 10493 – 10497.

79. Special Investigations Division (2004). U. S. House of Representatives, Committee on Government Reform *The Content of Federally Funded Abstinence-Only Education Programs.* Washington, DC: Author.

80. Thomas, N.; Murray, E & Rogstad K. (2006). Confidentiality is essential if young people are to access sexual health services. *Int. J. STD & AIDS*; 17 : 525 – 9 .

81. UNAIDS (1997). *Impact of HIV and Sexual Health Education on the Sexual Behaviour of Young People: a Review Update.* Geneva, Switzerland : UNAIDS.

82. UNAIDS (2010). Impact of HIV and sexual health education on the sexual behaviour of young people. A review update by UNAIDS 2007. (Online) (Cited 2010 April). Available from URL: http://data.unaids.org/publications/IRC-pub01/jc010-impactyoungpeople_en.pdf.
UNESCO's Sex-ed GuidelinesSeptember 10th, 2009

83. Vipan, B. K. & Pratibha, K. (2011). Right to Sexuality Education as a Human Right. *The Journal of Family Welfare*,Vol. 57, No.2.

84. Weinstock, H. *et al.* (2004). Sexually transmitted diseases among American youth: incidence and prevalence estimates, 2000. *Perspectives on Reproductive & Sexual Health*, 36(1) : 6 – 10.

85. Wellings, K.; Wadsworth, J.; Johnson, A. M.; Field, J.; Whitaker, L.; Field, B. Provision of sex education and early sexual experience: the relation examined. BMJ 1995; 311: 417-20.

86. WHO (2000). The World Health Report 2000 – Health System :Improving Performa Genevance. *Indian Journal of Public Health*, Vol.51, No.1,

87. World Health Organization and Federal Centre for Health Education (BZgA), (2010) *Standards for Sexuality Education in Europe: A Framework for Policy Makers, Educational and Health Authorities and Specialists,* Cologne, Germany: BZgA, http://www.bzga-hocc.de/pdf, accessed May 1, 2012.

88. Ziyani, I. S.; Ehlers & V. J. (2006). 'Swazi Youths' attitudes and perceptions concerning adolescent pregnancies and contraception', *Health SA Gesondheid* 11(1) : 31 – 42.

APPENDICES

APPENDIX – I

QUESTIONNAIRE – KNOWLEDGE TEST

(ENGLISH VERSION)

Research Topic

AN INVESTIGATION INTO THE KNOWLEDGE AND ATTITUDE TOWARDS SEX EDUCATION AMONG ADOLESCENTS AND ITS INFLUENCE ON ACADEMIC ACHIEVEMENT AT SECONDARY LEVEL

The tool has been prepared for collecting data from different schools in West Bengal for Ph. D. Degree.

Researcher

Kalyani Mitra (Sanyal)

Supervisor

Dr. Dibyendu Bhattacharyya

Necessary Instruction

Every question has five options. You are requested to give (✓) mark for the correct choice. Students are advised to read every question and give their answers clearly. The answers will only be used for research purpose and will be kept confidential.

Name _____ Roll No. _____

Name of the School _____

Class _____ District _____

Score obtained in Madhyamik Examination : [ ]

	Agree	Partially Agree	Neutral	Partially Disagree	Disagree
1. It should be aimed to give content based sexual knowledge in school.	☐	☐	☐	☐	☐
2. Family are the primary organization of sex education.	☐	☐	☐	☐	☐
3. In society sex education introduced by scientific way through different types of seminars.	☐	☐	☐	☐	☐
4. In a particular area when social communication increases, then the probability of sexual diseases occur in high rates.	☐	☐	☐	☐	☐
5. In the period of pregnancy sexual diseases transfer from mother's body to her child.	☐	☐	☐	☐	☐
6. The sexual diseases identified in a human body by blood test.	☐	☐	☐	☐	☐
7. Sexual disease to be cured through proper treatment.	☐	☐	☐	☐	☐
8. Economical backwardness can produce sex worker and sex worker produces sexual diseases	☐	☐	☐	☐	☐
9. The main cause to spread sexual diseases is sexual curiosity.	☐	☐	☐	☐	☐
10. Sex education is not essential to prevent sexual disease.	☐	☐	☐	☐	☐
11. Sexual diseases are not cured by medicines. But a person can survive long time through treatment.	☐	☐	☐	☐	☐

	Agree	Partially Agree	Neutral	Partially Disagree	Disagree
12. Aged people did not support morally sex related discussions with their adolescents.	☐	☐	☐	☐	☐
13. Sex education does not only explain sexual-biological theory	☐	☐	☐	☐	☐
14. Parental healthy sexual knowledge is not always healthy for their children.	☐	☐	☐	☐	☐
15. Television does not play main role in publicity of sex education.	☐	☐	☐	☐	☐
16. Adolescents acquire sexual knowledge from social environment.	☐	☐	☐	☐	☐
17. Different sexual diseases help to spread virus so everybody should be aware from these diseases.	☐	☐	☐	☐	☐
18. In preliminary stage, from outside it is not possible to identify an infected person.	☐	☐	☐	☐	☐
19. A person who are infected by sexual diseases should not be marriage	☐	☐	☐	☐	☐
20. For economic condition a person is drug addicted and go to red light areas.	☐	☐	☐	☐	☐
21. The influence of sexual disease is found in truck driver.	☐	☐	☐	☐	☐
22. Sex education is compulsory for children and adolescents.	☐	☐	☐	☐	☐

	Agree	Partially Agree	Neutral	Partially Disagree	Disagree
23. A person who is infected by sexual disease loss weight slowly and slowly.	☐	☐	☐	☐	☐
24. Most people in our society nurture a negative attitude about sex education.	☐	☐	☐	☐	☐
25. In Life Science, the depth of sex education is very low so the students can easily understand this part.	☐	☐	☐	☐	☐
26. The duties of the parents to neutralize the curiosity of their children about sex education.	☐	☐	☐	☐	☐
27. To control sexual disease the role of mass media should be neglected.	☐	☐	☐	☐	☐
28. To cure sexual diseases voluntary organization take important roles.	☐	☐	☐	☐	☐
29. In human body sexual disease is transferred through blood.	☐	☐	☐	☐	☐
30. For the improvement of the society, the persons who are sufferer of sexual disease are to be identified.	☐	☐	☐	☐	☐
31. Sexual diseases are to be prevented by controlling unrestricted sexual relations.	☐	☐	☐	☐	☐
32. Due to lack of proper educational opportunity, accurate knowledge in every person is not developed	☐	☐	☐	☐	☐

	Agree	Partially Agree	Neutral	Partially Disagree	Disagree
33. No tendency is found in the people of hilly areas to establish uncontrolled sexual relationship.	☐	☐	☐	☐	☐
34. It is necessary to acquire sexual knowledge through authentic books or relevant resources.	☐	☐	☐	☐	☐
35. Work power of the persons decrease slowly who are infected by sexual diseases.	☐	☐	☐	☐	☐
36. A person when use a dress of an infected person will be affected by sexual diseases.	☐	☐	☐	☐	☐
37. The objective of school sex education is to control the students' ill sexual imagination.	☐	☐	☐	☐	☐
38. The duties of the parents to deliver to their children the total significance of sexuality in simple language.	☐	☐	☐	☐	☐
39. In the daily newspaper there should be no publication on severity of sexual disease related subjects.	☐	☐	☐	☐	☐
40. Wrong information on sexuality provided by the friends guide the people in a wrong way.	☐	☐	☐	☐	☐
41. Before reaching the adolescent period, there should not be any discrimination between the boys and girls for free relationship.	☐	☐	☐	☐	☐

	Agree	Partially Agree	Neutral	Partially Disagree	Disagree
42. There will occur sexual disease on free sexual mating of male and female.	☐	☐	☐	☐	☐
43. In between the infected male and female, it should not be remembered that the number of female is higher than male.	☐	☐	☐	☐	☐
44. It is possible to control sexuality through accurate knowledge gained by boys and girls.	☐	☐	☐	☐	☐
45. In poor family, adolescent married woman.are found to have the tendency of unwanted pregnancy.	☐	☐	☐	☐	☐
46. Due to ignorance of sexual life the boys and girls of slum dwellers indulge in different types of illegal sexual relationship.	☐	☐	☐	☐	☐
47. Excessive drug addiction force a person for illegal relationship.	☐	☐	☐	☐	☐
48. Health related education does not help the person to prevent sexual diseases.	☐	☐	☐	☐	☐
49. Infected persons gradually die.	☐	☐	☐	☐	☐
50. Parents should not ask any sex related question with their children.	☐	☐	☐	☐	☐
51. Every year there should be organized seminar in schools.	☐	☐	☐	☐	☐

	Agree	Partially Agree	Neutral	Partially Disagree	Disagree
52. Parents are not the actual media for sex education.	☐	☐	☐	☐	☐
53. The role of different newspapers are ignored in controlling sexual diseases.	☐	☐	☐	☐	☐
54. Sexual diseases are transferred to healthy person who live together with infected person.	☐	☐	☐	☐	☐
55. It is shown that sexual diseases are observed higher among the slum dwellers.	☐	☐	☐	☐	☐
56. It is not possible to cure sexual diseases by taking medicines.	☐	☐	☐	☐	☐
57. For healthy sexual life, it is essential to educated illiterate persons about sex education.	☐	☐	☐	☐	☐
58. Unhealthy environment habituate the person to uncontrolled life.	☐	☐	☐	☐	☐
59. The probability of sexual diseases increases if people do not control their sexual behaviours.	☐	☐	☐	☐	☐
60. Sexual workers are the media of transmission of sexual diseases.	☐	☐	☐	☐	☐
61. Illiteracy is not only a cause in spreading sexual diseases.	☐	☐	☐	☐	☐

APPENDIX – II

QUESTIONNAIRE – ATTITUDE TEST

(ENGLISH VERSION)

Research Topic

AN INVESTIGATION INTO THE KNOWLEDGE AND ATTITUDE TOWARDS SEX EDUCATION AMONG ADOLESCENTS AND ITS INFLUENCE ON ACADEMIC ACHIEVEMENT AT SECONDARY LEVEL

The tool has been prepared for collecting data from different schools in West Bengal for Ph. D. Degree.

Researcher

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Necessary Instruction

Every question has five options. You are requested to give (✓) mark for the correct choice. Students are advised to read every question and give their answers clearly. The answers will only be used for research purpose and will be kept confidential.

Name _____ Roll No. _____

Name of the School _____

Class _____ District _____

Score obtained in Madhyamik Examination : [ ]

	Agree	Partially Agree	Neutral	Partially Disagree	Disagree
1. Sex education is essential to develop appropriate concept about sexuality.	☐	☐	☐	☐	☐
2. Open discussion should be done between father, mother and their children about sexuality.	☐	☐	☐	☐	☐
3. It is unnecessary to develop the concept of birth control in school students.	☐	☐	☐	☐	☐
4. Various information should not be telecasted on sexuality through mass media.	☐	☐	☐	☐	☐
5. The customs of polygamy in society should be abolished.	☐	☐	☐	☐	☐
6. The family structure can break in absence of sexual discipline.	☐	☐	☐	☐	☐
7. Persons should not go to red light areas to prevent sexual disease.	☐	☐	☐	☐	☐
8. Medical treatments by government and private enterprises should be arranged for sexually infected patients.	☐	☐	☐	☐	☐
9. Dresses used by sexually infected persons should not be wore.	☐	☐	☐	☐	☐
10. It is essential to do blood test of man and woman before marriage.	☐	☐	☐	☐	☐

	Agree	Partially Agree	Neutral	Partially Disagree	Disagree
11. It is essential to hit the sex workers who are burden of our society.	☐	☐	☐	☐	☐
12. Communication process should not be developed to control the sexual diseases.	☐	☐	☐	☐	☐
13. Sexually infected woman should desists from bearing child in her womb.	☐	☐	☐	☐	☐
14. Educational facilities should be arranged for the children of sexual workers.	☐	☐	☐	☐	☐
15. In Indian society, parents think their children should know about sexuality before marriage.	☐	☐	☐	☐	☐
16. Sex education should be taught in schools as a part of curriculum	☐	☐	☐	☐	☐
17. Television should make public conscious of the severity of sexual diseases.	☐	☐	☐	☐	☐
18. Food from road side should not be bought or eaten to avoid sexual diseases.	☐	☐	☐	☐	☐
19. Sexual relationship should not be established before marriage.	☐	☐	☐	☐	☐
20. A woman should not establish relationship with many persons to control the sexual diseases.	☐	☐	☐	☐	☐
21. Virus free syringe should not be used which helps to spread virus of sexual diseases.	☐	☐	☐	☐	☐

	Agree	Partially Agree	Neutral	Partially Disagree	Disagree
22. Sexually infected persons are easily identified by sex educated people.	☐	☐	☐	☐	☐
23. The life style of slum dwellers should be increased by providing them opportunities.	☐	☐	☐	☐	☐
24. Special observations to be given to communicate easily with the external world.	☐	☐	☐	☐	☐
25. Effective sex education helps to develop value oriented sexual issues.	☐	☐	☐	☐	☐
26. The role of parents is important to control their children's sexual behavior.	☐	☐	☐	☐	☐
27. Sexual health programme should be done in classroom situation.	☐	☐	☐	☐	☐
28. Newspaper should be considered as a help to sex education.	☐	☐	☐	☐	☐
29. Establishing sexual relationships with unknown persons is to be alerted.	☐	☐	☐	☐	☐
30. Sex education is the preparatory stage of healthy marriage life.	☐	☐	☐	☐	☐
31. Extra marital sexual relationship should not be allowed.	☐	☐	☐	☐	☐
32. Work power of sexually infected persons can come back through proper nursing.	☐	☐	☐	☐	☐
33. Sexually infected persons should be rejected from the society.	☐	☐	☐	☐	☐

	Agree	Partially Agree	Neutral	Partially Disagree	Disagree
34. It is not proper to think that the educated person can easily identify sexually infected persons.	☐	☐	☐	☐	☐
35. Lower class people should be prevented from taking drug related substances.	☐	☐	☐	☐	☐
36. To aware to buy dresses from footpath.	☐	☐	☐	☐	☐
37. To increase consciousness to prevent teenage marriage.	☐	☐	☐	☐	☐
38. Feeding of breast milk from sexually infected mother should be stopped.	☐	☐	☐	☐	☐
39. Mental diseases develops due to lack of scientific sex education and suppression of sex power.	☐	☐	☐	☐	☐
40. The role of mother is important to control the sexual behavior of her daughter.	☐	☐	☐	☐	☐
41. The duty of the teachers is to desist the curiosity of their pupils.	☐	☐	☐	☐	☐
42. The publication of sex related concepts in different newspapers help to develop proper knowledge of the children.	☐	☐	☐	☐	☐
43. The sexual curiosity can be met with proper method.	☐	☐	☐	☐	☐

	Agree	Partially Agree	Neutral	Partially Disagree	Disagree
44. The industrial workers can be prevented from uncontrolled sexual life style.	☐	☐	☐	☐	☐
45. It is possible to deliver actual concept about transition of sexual diseases in village people.	☐	☐	☐	☐	☐
46. It is possible to think that sexual diseases are infectious.	☐	☐	☐	☐	☐
47. Proper treatment must be arranged for persons suffering from sexual diseases..	☐	☐	☐	☐	☐
48. Sex workers should join the main stream of society.	☐	☐	☐	☐	☐
49. Girls should be protected from unwanted pregnancy in adolescent period.	☐	☐	☐	☐	☐
50. Persons infected by sexual diseases should not involve in sexual relationship with their wives.	☐	☐	☐	☐	☐
51. The development of communication system helps to spread sex education.	☐	☐	☐	☐	☐
52. Educational facilities should be arranged to the illiterate persons who live under the poverty line .	☐	☐	☐	☐	☐
53. Sexually infected patient should be cured and return them in social life.	☐	☐	☐	☐	☐

	Agree	Partially Agree	Neutral	Partially Disagree	Disagree
54. Internet and cinema work s as proper teachers for appropriate sex education.	☐	☐	☐	☐	☐
55. Wealthy and polished attitude of the teacher help to develop students' wealthy and polished attitude .	☐	☐	☐	☐	☐
56. The duty of the parents is to teach the total significance of sexual power in easy language to their children.	☐	☐	☐	☐	☐
57. It is essential to make conscious the pupils in school about sexual health.	☐	☐	☐	☐	☐
58. The teachers' self experience and concept on sexuality are transmitted to their pupil.	☐	☐	☐	☐	☐
59. Sex education is the education for the establishment of morality and politeness between the relationship of male and female .	☐	☐	☐	☐	☐
60. The sexual shyness and prejudice are the barriers of healthy social life.	☐	☐	☐	☐	☐

APPENDIX – III

প্রশ্নপত্র - যৌনশিক্ষা সংক্রান্ত জ্ঞান বা ধারণার অভীক্ষা
(BENGALI VERSION)

গবেষণার বিষয়

"An Investigation into the knowledge and attitude towards sex education among adolescents and its influence on academic achievement at secondary level"

কল্যাণী বিশ্ববিদ্যালয়ে শিক্ষা বিভাগের পি. এইচ. ডি. গবেষণা কাজের জন্য প্রশ্নপত্রটি শিক্ষার্থীদের কাছে প্রদত্ত করা হল।

গবেষিকা – কল্যানী মিত্র (সান্যাল)

গবেষণা নির্দেশক – ডঃ দিব্যেন্দু ভট্টাচার্য্য

প্রয়োজনীয় নির্দেশনা

প্রতিটি প্রশ্নের জন্য পাঁচটি পছন্দের তালিকা দেওয়া আছে। তোমার পছন্দমত উত্তরটির পাশে "✓" দাও। শিক্ষার্থীদের প্রতিটি প্রশ্ন পড়ে তাদের নিজস্ব সঠিক মতামত স্পষ্টভাবে জানাতে হবে। স্বাভাবিক কারণেই এই মতামতের গোপনীয়তা অবলম্বন করা হবে এবং কেবলমাত্র গবেষণা কাজে ব্যবহার করা হবে।

ছাত্র / ছাত্রীর নাম .....

শ্রেণী ..... রোল নং .....

বিদ্যালয়ের নাম .....

জেলা .....।

মাধ্যমিক পরীক্ষায় প্রাপ্ত নম্বর [ ]

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
১.	বিদ্যালয়ে বস্তুনিষ্ঠ যৌন বিষয়ক জ্ঞানদানই যৌনশিক্ষার লক্ষ্য হওয়া উচিৎ।	☐	☐	☐	☐	☐
২.	যৌনশিক্ষার প্রাথমিক সংস্থা হল পরিবার।	☐	☐	☐	☐	☐
৩.	সমাজে বিভিন্ন ধরনের আলোচনাচক্রের মাধ্যমেও বিজ্ঞানসম্মতভাবে যৌনশিক্ষা দেওয়া যায়।	☐	☐	☐	☐	☐
৪.	কোন নির্দিষ্ট এলাকাতে বাইরের লোকের আদানপ্রদান বেশী হলে যৌনরোগের সম্ভাবনা বেশী দেখা যায়।	☐	☐	☐	☐	☐
৫.	গর্ভাবস্থায় মাতৃদেহ থেকে যৌনরোগ সন্তানের দেহে সঞ্চালিত হয়।	☐	☐	☐	☐	☐
৬.	মানবদেহে রক্ত পরীক্ষার মাধ্যমে যৌনরোগ সনাক্ত করা হয়।	☐	☐	☐	☐	☐
৭.	যৌনরোগ সঠিক চিকিৎসার মাধ্যমে সারানো যায়।	☐	☐	☐	☐	☐
৮.	অর্থনৈতিক অস্বচ্ছলতা সৃষ্টি করে যৌনকর্মী, যৌনকর্মী সৃষ্টি করে যৌনরোগ।	☐	☐	☐	☐	☐
৯.	যৌনকৌতুহলই যৌনরোগ প্রসারের প্রধান কারণ।	☐	☐	☐	☐	☐

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
১০.	যৌনরোগ প্রতিকারের জন্য যৌনশিক্ষা প্রয়োজন নয়।	☐	☐	☐	☐	☐
১১.	মেডিসিনের দ্বারা যৌনরোগ সারানো যায় না। কিন্তু চিকিৎসা দ্বারা ব্যক্তি বহুদিন বেঁচে থাকতে পারে।	☐	☐	☐	☐	☐
১২.	বয়স্ক ব্যক্তিরা কিশোর কিশোরীদের সাথে যৌনতা সম্পর্কিত আলোচনা নৈতিকভাবে সমর্থন করেন না।	☐	☐	☐	☐	☐
১৩.	যৌনশিক্ষা কেবলমাত্র যৌনতার জীবত্ত্বমূলক ব্যাখ্যা নয়।	☐	☐	☐	☐	☐
১৪.	পিতামাতার যৌনবিষয়ক সুস্থ জ্ঞান শিশুর পক্ষে স্বাস্থ্যকর হয় না।	☐	☐	☐	☐	☐
১৫.	যৌনশিক্ষার প্রসারে টেলিভিশন মুখ্য ভূমিকা গ্রহণ করে না।	☐	☐	☐	☐	☐
১৬.	কিশোরকিশোরীরা সামাজিক পরিবেশ থেকে যৌন বিষয়ক জ্ঞানার্জন করে।	☐	☐	☐	☐	☐
১৭.	বিভিন্ন যৌনরোগ ভাইরাস ছাড়ানোর সহায়ক হয় তাই এর থেকে সাবধান হওয়া উচিৎ।	☐	☐	☐	☐	☐
১৮.	প্রাথমিক অবস্থায় যৌনরোগাক্রান্ত ব্যক্তিকে বাইরে থেকে দেখলে বোঝা যায় না।	☐	☐	☐	☐	☐

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
১৯.	যৌনরোগ আক্রান্ত ব্যক্তিদের বিবাহ না করা উচিৎ।	☐	☐	☐	☐	☐
২০.	অর্থনৈতিক অভাবের ব্যক্তি মাদকাসক্ত হয় এবং যৌনপল্লিতে অবাধ যাতায়াত করে।	☐	☐	☐	☐	☐
২১.	যৌনরোগের প্রভাব ট্রাক ড্রাইভারদের মধ্যে বেশী দেখা যায়।	☐	☐	☐	☐	☐
২২.	যৌনশিক্ষা শিশু এবং কিশোর কিশোরীদের ক্ষেত্রে আবশ্যিক হওয়া উচিৎ।	☐	☐	☐	☐	☐
২৩.	যৌনরোগ আক্রান্ত ব্যক্তির ওজন ধীরে ধীরে কমতে থাকে।	☐	☐	☐	☐	☐
২৪.	সমাজে বেশীরভাগ মানুষই যৌনশিক্ষা বিষয়ে নেতিবাচক মনোভাব পোষন করেন।	☐	☐	☐	☐	☐
২৫.	জীবনবিজ্ঞানে যৌনশিক্ষার অংশের গভীরতা কম হওয়ার ফলে শিক্ষার্থীরা সহজে তা বুঝতে পারে।	☐	☐	☐	☐	☐
২৬.	পিতামাতার কর্তব্য হওযা উচিৎ সন্তানের বিভিন্ন যৌনতা সংক্রান্ত কৌতুহলকে প্রশমিত করা।	☐	☐	☐	☐	☐
২৭.	যৌনরোগ নিয়ন্ত্রনে গণমাধ্যমের ভূমিকা উপেক্ষা করা উচিৎ।	☐	☐	☐	☐	☐

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
২৮.	যৌনরোগ প্রতিকারে স্বেচ্ছাসেবী সংস্থাগুলি গুরুত্বপূর্ণ ভূমিকা পালন করে।	☐	☐	☐	☐	☐
২৯.	যৌনরোগ মানবদেহে রক্তের মাধ্যমে সঞ্চালিত হয়।	☐	☐	☐	☐	☐
৩০.	সমাজের উন্নতির স্বার্থে যৌনরোগীদের সনাক্ত করা হয়।	☐	☐	☐	☐	☐
৩১.	অবাধ যৌনমিলন নিয়ন্ত্রের মাধ্যমে যৌনরোগ প্রতিরোধ সম্ভব।	☐	☐	☐	☐	☐
৩২.	শিক্ষার সুযোগের অভাবে ব্যক্তির মধ্যে যৌনতা সম্পর্কে সঠিক জ্ঞানলাভ হয় না।	☐	☐	☐	☐	☐
৩৩.	পার্বত্য এলাকার মানুষের মধ্যে অসংযমী যৌন সম্পর্ক স্থাপনের প্রবণতা দেখা যায় না।	☐	☐	☐	☐	☐
৩৪.	যৌনতা সম্পর্কে বই বা বিশ্বাসযোগ্য উৎস থেকে জ্ঞান আহরণ করা উচিৎ।	☐	☐	☐	☐	☐
৩৫.	যে সব ব্যক্তি যৌনরোগের দ্বারা আক্রান্ত হয় তাদের কর্মক্ষমতা ধীরে ধীরে কমতে থাকে।	☐	☐	☐	☐	☐
৩৬.	যৌনরোগাক্রান্ত ব্যক্তির পোষাক পরিধান করলে যৌনরোগ হয়।	☐	☐	☐	☐	☐
৩৭.	বিদ্যালয়ে যৌনশিক্ষা দানের উদ্দেশ্য হল শিক্ষার্থীদের অসুস্থ যৌন কল্পনা নিয়ন্ত্রণ করা।	☐	☐	☐	☐	☐

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
৩৮.	যৌনশিক্ষার সামগ্রিক তাৎপর্য সহজ সরল ভাষায় সন্তানদের বুঝিয়ে দেওয়া পিতামাতার একান্ত কর্তব্য।	☐	☐	☐	☐	☐
৩৯.	সংবাদপত্রে প্রতিদিন যৌনরোগের ভয়াবহতা সম্পর্কিত বিষয়বস্তু প্রকাশিত হওয়া উচিৎ নয়।	☐	☐	☐	☐	☐
৪০.	বন্ধুকৃত যৌনতা সম্পর্কিত ভুল তথ্য ব্যক্তিকে বিপথে পরিচালিত করে।	☐	☐	☐	☐	☐
৪১.	বয়ঃপ্রাপ্তির পূর্ব পর্যন্ত ছেলেমেয়েদের মেলা মেশার মধ্যে যৌন পৃথকীকরণ করা উচিৎ নয়।	☐	☐	☐	☐	☐
৪২.	নারী-পুরুষের অবাধ মেলা মেশার ফলে যৌনরোগ ঘটে।	☐	☐	☐	☐	☐
৪৩.	যৌনরোগ সংক্রান্ত ব্যক্তিদের মধ্যে মহিলাদের সংখ্যা বেশী বলে মনে করা উচিৎ নয়।	☐	☐	☐	☐	☐
৪৪.	যৌনতা সম্পর্কে ছেলেমেয়েদের সঠিক জ্ঞান অর্জনের মাধ্যমে এটিকে নিয়ন্ত্রন সম্ভব।	☐	☐	☐	☐	☐
৪৫.	দরিদ্র পরিবারের বিবাহিত মেয়েদের মধ্যে কৈশোরকালীন অবাঞ্ছিত গর্ভধারণ করার প্রবণতা দেখা যায়।	☐	☐	☐	☐	☐

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
৪৬.	যৌনজীবন সম্পর্কে অজ্ঞতার কারণে বস্তিবাসী ছেলেমেয়েরা বিভিন্ন ধরনের অবৈধ সম্পর্ক স্থাপন করে।	☐	☐	☐	☐	☐
৪৭.	অতিরিক্ত মদ্যপান ব্যক্তিকে অবৈধ প্রতিরোধে সাহায্য করে না।	☐	☐	☐	☐	☐
৪৮	স্বাস্থ্যবিষযক শিক্ষা যৌনরোগ প্রতিরোধে সাহায্য করে না।	☐	☐	☐	☐	☐
৪৯.	যৌনরোগাক্রান্ত ব্যক্তিরা ধীরে ধীরে মৃত্যুর দিকে এগিয়ে যায়।	☐	☐	☐	☐	☐
৫০.	পিতামাতা সন্তানের যৌনতা সম্পর্কিত প্রশ্নকে প্রশ্রয় দেন না।	☐	☐	☐	☐	☐
৫১.	বিদ্যালয়ে প্রতিবছর যৌনশিক্ষা সংক্রান্ত সেমিনার / প্রদর্শনী সংগঠিত হওয়া উচিৎ।	☐	☐	☐	☐	☐
৫২.	পিতামাতা যৌনবিষয়ক শিক্ষাদানের সঠিক মাধ্যম নন।	☐	☐	☐	☐	☐
৫৩.	যৌনরোগের নিয়ন্ত্রনে বিভিন্ন সংবাদমাধ্যমের ভূমিকা উপেক্ষনীয়।	☐	☐	☐	☐	☐
৫৪.	যৌনরোগাক্রান্ত ব্যক্তির সাথে এক ঘরে থাকলে যৌনরোগ সুস্থদেহে সঞ্চালিত হয়।	☐	☐	☐	☐	☐

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
৫৫.	যারা বস্তিবাসী তাদের মধ্যে যৌনরোগ বেশী দেখা যায়।	☐	☐	☐	☐	☐
৫৬.	ওষুধ সেবনের দ্বারা যৌনরোগের প্রতিকার সম্ভব নয়।	☐	☐	☐	☐	☐
৫৭.	যৌনজীবনকে স্বাস্থ্যসম্মত করে তুলতে হলে যৌনবিষয়ক শিক্ষা অশিক্ষিত ব্যক্তিদের ক্ষেত্রে অপরিহার্য।	☐	☐	☐	☐	☐
৫৮.	অস্বাস্থ্য পরিবেশ ব্যক্তিকে অসংয়মী জীবন যাপনে অভ্যস্থ করে তোলে।	☐	☐	☐	☐	☐
৫৯.	আচরণ সংযত না করলে ব্যক্তির মধ্যে যৌনরোগ হবার সম্ভাবনা বৃদ্ধি পায়।	☐	☐	☐	☐	☐
৬০.	যৌনকর্মীরাই যৌনরোগ সংক্রমনের অন্যতম মাধ্যম।	☐	☐	☐	☐	☐
৬১.	নিরক্ষরতা যৌনরোগ প্রসারের একমাত্র কারণ নয়।	☐	☐	☐	☐	☐

APPENDIX – IV

প্রশ্নপত্র - যৌনশিক্ষা সংক্রান্ত মনোভাবের অভীক্ষা
(BENGALI VERSION)

গবেষণার বিষয়

"An Investigation into the knowledge and attitude towards sex education among adolescents and its influence on academic achievement at secondary level"

কল্যাণী বিশ্ববিদ্যালয়ে শিক্ষা বিভাগের পি. এইচ. ডি. গবেষণা কাজের জন্য প্রশ্নপত্রটি শিক্ষার্থীদের কাছে প্রদত্ত করা হল।

গবেষিকা – কল্যানী মিত্র (সান্যাল)

গবেষণা নির্দেশক – ডঃ দিব্যেন্দু ভট্টাচার্য্য

প্রয়োজনীয় নির্দেশনা

প্রতিটি প্রশ্নের জন্য পাঁচটি পছন্দের তালিকা দেওয়া আছে। তোমার পছন্দমত উত্তরটির পাশে "✓" দাও। শিক্ষার্থীদের প্রতিটি প্রশ্ন পড়ে তাদের নিজস্ব সঠিক মতামত স্পষ্টভাবে জানাতে হবে। স্বাভাবিক কারণেই এই মতামতের গোপনীয়তা অবলম্বন করা হবে এবং কেবলমাত্র গবেষণা কাজে ব্যবহার করা হবে।

ছাত্র / ছাত্রীর নাম .....

শ্রেণী ..... রোল নং .....

বিদ্যালয়ের নাম .....

জেলা ..... ।

মাধ্যমিক পরীক্ষায় প্রাপ্ত নম্বর ☐

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
১.	যৌনতা সম্পর্কে সঠিক ধারণা গঠনে যৌনশিক্ষা আবশ্যিক।	☐	☐	☐	☐	☐
২.	পিতামাতা ও সন্তানদের মধ্যে পারস্পরিক যৌনবিষয়ক খোলামেলা আলোচনা হওয়া উচিত।	☐	☐	☐	☐	☐
৩.	বিদ্যালয়ে শিক্ষার্থীদের জন্মনিয়ন্ত্রন সম্পর্কে কোন ধারণা গঠনের প্রয়োজন নেই।	☐	☐	☐	☐	☐
৪.	বিভিন্ন গণমাধ্যমের সাহায্যে যৌনতা সম্পর্কে বিস্তৃত তথ্য প্রচার করা উচিত নয়।	☐	☐	☐	☐	☐
৫.	সমাজ থেকে বহু বিবাহ প্রথা তুলে দেওয়া উচিত।	☐	☐	☐	☐	☐
৬.	সমাজে যৌনশৃঙ্খলা না থাকলে পারিবারিক কাঠামো ভেঙে পড়ে।	☐	☐	☐	☐	☐
৭.	যৌনরোগ থেকে রক্ষা পাবার জন্য নিষিদ্ধপল্লীতে যাওয়া উচিত নয়।	☐	☐	☐	☐	☐
৮.	যৌনরোগে আক্রান্ত ব্যক্তিদের সরকারী ও বেসরকারী প্রচেষ্টায় চিকিৎসার ব্যবস্থা করা উচিত।	☐	☐	☐	☐	☐
৯.	যৌনরোগীদের ব্যবহৃত পোষাক পরিধান করা উচিত নয়।	☐	☐	☐	☐	☐

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
১০.	বিবাহের পূর্বে পাত্র-পাত্রীর রক্ত পরীক্ষা করা উচিত।	☐	☐	☐	☐	☐
১১.	যৌনকর্মীরা সমাজের বোঝা, তাই এদের ঘৃণা করা উচিত।	☐	☐	☐	☐	☐
১২.	যৌনরোগ নিয়ন্ত্রনের জন্য যোগাযোগ ব্যবস্থার উন্নতি না ঘটানোই উচিত।	☐	☐	☐	☐	☐
১৩.	যৌনরোগে আক্রান্ত মহিলাদের সন্তান ধারণ থেকে বিরত থাকা উচিত।	☐	☐	☐	☐	☐
১৪.	যৌনকর্মীদের সন্তানদের শিক্ষার ব্যবস্থা করা উচিত।	☐	☐	☐	☐	☐
১৫.	ভারতীয় সমাজে বিবাহের পূর্বে যৌনজীবন সম্পর্কে জানা গর্হিত কর্ম বলে পিতামাতা মনে করেন।	☐	☐	☐	☐	☐
১৬.	যৌনশিক্ষা পাঠক্রমের অংশ হিসাবে বিদ্যালয়ে পড়ানো উচিত।	☐	☐	☐	☐	☐
১৭.	যৌনরোগ এর ভয়াবহতা সম্পর্কে টেলিভিশনের মাধ্যমে জনগণকে সচেতন করে তুলতে হবে।	☐	☐	☐	☐	☐
১৮.	যৌনরোগকে এড়িয়ে চলতে হলে রাস্তায় বিক্রি করা খাবার না খাওয়া উচিত।	☐	☐	☐	☐	☐

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
১৯.	বিবাহের পূর্বে কোনরূপ শারীরিক সম্পর্ক স্থাপন করা উচিত নয়।	☐	☐	☐	☐	☐
২০.	যৌনরোগের নিয়ন্ত্রনে বহুব্যক্তির সম্পর্ক না করা উচিত।	☐	☐	☐	☐	☐
২১.	জীবানুমুক্ত সিরিঞ্জ ব্যবহার না করলে তা যৌনরোগের জীবানু ছড়াতে সাহায্য করে।	☐	☐	☐	☐	☐
২২.	যৌনরোগশিক্ষায় শিক্ষিত ব্যক্তি যৌনরোগাক্রান্ত ব্যক্তিদের সহজে চিনতে পারবে।	☐	☐	☐	☐	☐
২৩.	বস্তিবাসীদের সুযোগ সুবিধা দিয়ে তাদের জীবনযাত্রার মান উন্নত করা উচিত।	☐	☐	☐	☐	☐
২৪.	বহির্বিশ্বের সাথে অবাধ যোগাযোগের ক্ষেত্রে বিশেষ নজর দেওয়া উচিত।	☐	☐	☐	☐	☐
২৫.	কার্যকরী যৌনশিক্ষা যৌনতা সংক্রান্ত মূল্যবোধ গড়ে তোলার সহায়ক।	☐	☐	☐	☐	☐
২৬.	ছেলেমেয়েদের যৌন আচরণ সংযত করার ক্ষেত্রে পিতামাতার ভূমিকা যথেষ্ট গুরুত্বপূর্ণ।	☐	☐	☐	☐	☐
২৭.	যৌনস্বাস্থ্য সম্পর্কিত কর্মসূচী শ্রেণীকক্ষে সম্পাদিত হওয়া উচিত।	☐	☐	☐	☐	☐
২৮.	সংবাদপত্রকে যৌন শিক্ষার সহায়ক হিসাবে গণ্য করা উচিত।	☐	☐	☐	☐	☐

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
২৯.	অপরিচিত ব্যক্তির সঙ্গে সম্পর্ক স্থাপনে সতর্কতা অবলম্বন করা উচিত।	☐	☐	☐	☐	☐
৩০.	যৌনশিক্ষা মূলত সুস্থ বিবাহিত জীবনের প্রস্তুতিপর্ব।	☐	☐	☐	☐	☐
৩১.	বিবাহ বহির্ভূত সম্পর্ককে প্রশ্রয় দেওয়া উচিত নয়।	☐	☐	☐	☐	☐
৩২.	সঠিক পরিষেবার মাধ্যমে যৌনরোগীদের কর্মক্ষমতা ফিরিয়ে আনার চেষ্টা করা উচিত।	☐	☐	☐	☐	☐
৩৩.	যৌনরোগীদের সমাজ থেকে বিতারিত করা উচিত।	☐	☐	☐	☐	☐
৩৪.	শিক্ষিত হলেই যে যৌনরোগীদের সনাক্ত করতে পারবে এমন ভাবার কোন কারণ নেই।	☐	☐	☐	☐	☐
৩৫.	নিম্নশ্রেণীর ব্যক্তিদের নেশাজাত দ্রব্যাদি থেকে বিরত করা উচিত।	☐	☐	☐	☐	☐
৩৬.	ফুটপাতে বিক্রিত পোষাক কেনার ক্ষেত্রে সতর্কতা অবলম্বন করা উচিত।	☐	☐	☐	☐	☐
৩৭.	নাবালিকা বিবাহ বন্ধ করার ক্ষেত্রে সচেতনতা বৃদ্ধির প্রয়োজন।	☐	☐	☐	☐	☐
৩৮.	যৌনরোগাক্রান্ত মায়েদের স্তনদুগ্ধ পান করা থেকে বিরত থাকা উচিত।	☐	☐	☐	☐	☐

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
৩৯.	বিজ্ঞানভিত্তিক যৌন শিক্ষার অভাবে, যৌন শক্তির অবদমনের ফলে মানসিক রোগ হতে পারে।	☐	☐	☐	☐	☐
৪০.	মেয়েদের যৌনআচরণ নিয়ন্ত্রনের ক্ষেত্রে মায়েদের ভূমিকা গুরুত্বপূর্ণ।	☐	☐	☐	☐	☐
৪১.	শিক্ষার্থীদের যৌনতা বিষয়ক কৌতূহল নিবৃত্ত করা শিক্ষক শিক্ষিকাদের কর্তব্য।	☐	☐	☐	☐	☐
৪২.	বিভিন্ন পত্রপত্রিকায় প্রকাশিত যৌনতা সম্পর্কিত বিষয়বস্তু ছেলেমেয়েদের যৌনতা সম্পর্কে সঠিক ধারণা গঠনের সহায়ক।	☐	☐	☐	☐	☐
৪৩.	যৌনতা বিষয়ক কৌতুহল সঠিক পদ্ধতিতে নিবৃত্ত করা উচিত।	☐	☐	☐	☐	☐
৪৪.	শিল্পাঞ্চলের শ্রমিকদের অসংযমী জীবযাপনে বাঁধা দেওয়া উচিত।	☐	☐	☐	☐	☐
৪৫.	যৌনরোগের সংক্রমন সম্পর্কিত সঠিক ধারণা গ্রামবাসীদের দেওয়া উচিত।	☐	☐	☐	☐	☐
৪৬.	যৌনরোগ ছোঁয়াচে – এটি মনে করা উচিত নয়।	☐	☐	☐	☐	☐
৪৭.	যৌনরোগীদের সনাক্ত করে তাদের চিকিৎসার ব্যবস্থা করা উচিত।	☐	☐	☐	☐	☐

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
৪৮	যৌনকর্মীদের সমাজের মূলস্রোতে ফিরিয়ে আনা উচিত।	☐	☐	☐	☐	☐
৪৯.	কৈশোরকালীন অবাঞ্ছিত গর্ভধারণ থেকে মেয়েদের রক্ষা করা উচিত।	☐	☐	☐	☐	☐
৫০.	যৌনরোগে আক্রান্ত ব্যক্তিদের তাদের স্ত্রীদের সাথে দৈহিক সম্পর্কে লিপ্ত থাকা উচিত নয়।	☐	☐	☐	☐	☐
৫১.	যোগাযোগ ব্যবস্থার উন্নয়ন যৌনশিক্ষা প্রসারের সহায়ক।	☐	☐	☐	☐	☐
৫২.	দারিদ্রশ্রেণীর নিম্নে বসবাসকারী নিরক্ষর ব্যক্তিদের শিক্ষার ব্যবস্থা করা উচিত।	☐	☐	☐	☐	☐
৫৩.	যৌনরোগীদের সুস্থ করে সমাজ জীবনের ফিরিয়ে আনা উচিত।	☐	☐	☐	☐	☐
৫৪.	চলচ্চিত্র এবং ইন্টারনেট যৌনশিক্ষার সঠিক শিক্ষকের কাজ করে থাকে।	☐	☐	☐	☐	☐
৫৫.	বিদ্যালয়ে শিক্ষকদের উন্নত ও মার্জিত দৃষ্টিভঙ্গী শিক্ষার্থীদের উন্নত ও মার্জিত দৃষ্টিভঙ্গি এবং সুরুচি গঠনের সহায়ক।	☐	☐	☐	☐	☐
৫৬.	যৌনশিক্ষার সামগ্রিক তাৎপর্য সহজ সরল ভাষায় সন্তানদের বুঝিয়ে দেওয়া পিতামাতার একান্ত কর্তব্য।	☐	☐	☐	☐	☐

ক্রমিক নং	বক্তব্য	(ক) সম্পূর্ণ সহমত	(খ) আংশিক সহমত	(গ) নিরপেক্ষ	(ঘ) আংশিক ভিন্নমত	(ঙ) সম্পূর্ণ ভিন্নমত
৫৭.	বিদ্যালয়ে শিক্ষার্থীদের যৌনস্বাস্থ্য সম্পর্কিত বিষয়ে সচেতন করে তোলা উচিত।	☐	☐	☐	☐	☐
৫৮.	শিক্ষক-শিক্ষিকাদের নিজেদের যৌনবিষয়ক ধারণা ও অভিজ্ঞতা শিক্ষার্থীদের মধ্যে সঞ্চারিত হয়।	☐	☐	☐	☐	☐
৫৯.	যৌনশিক্ষা নারী পুরুষের সম্পর্কের মধ্যে একটা নীতি ও শালীনতা বজায় রাখার শিক্ষা।	☐	☐	☐	☐	☐
৬০.	যৌনবিষয়ক লজ্জা ও কুসংস্কার সুস্থ সমাজ জীবনের প্রতিবন্ধক।	☐	☐	☐	☐	☐