Adolescence can be defined biologically, as the physical transition marked by the onset of puberty and the termination of physical growth; cognitively, as changes in the ability to think abstractly and multi-dimensionally or socially, as a period of preparation for adult roles. Major pubertal and biological changes include changes to the sex organs, height, weight, and muscle mass, as well as major changes in brain structure and organization. Cognitive advances encompass both increment in knowledge and in the ability to think abstractly and to reason more effectively. A quantitative and non-experimental research approach with a descriptive survey design was adopted for the study. Sample consisted of 100 adolescents of age 13 to 16 years studying in 9 to 11th class, Tagore Senior Secondary School, New Delhi, selected using systematic random sampling technique. Structured knowledge questionnaire (SKQ) to assess the knowledge regarding sexual health among adolescents and attitude scale to assess the attitude regarding sexual health among adolescents was used. Results showed that approximately 50% were having good knowledge, 32% were having fair knowledge and 18% were having poor knowledge regarding sexual health. More than half of the adolescents had unfavorable attitude regarding sexual health. The study revealed that there was significant relationship between knowledge and demographic profiles of the study subjects, i.e. religion, father's educational status and mother's educational status.

Keywords: Adolescents, Knowledge and attitude, Sexual health

Introduction
World Health Organization (WHO) defines adolescence as the period of life between 10 to 19 years of age in human growth and development that occurs after childhood and before adulthood. It represents one of the critical transitions in the life span and is characterized by a tremendous pace in growth and change that is second only to that of infancy. Adolescence is a stressfull period of physical growth and intellectual attainment at its peak and coupled with set of personality traits, decision regarding future profession, and extreme emotional instability. This is also a period of identity crisis - physical, sexual and spiritual. They will have strong feelings of stress, confusion, fear, and uncertainty, as well as pressure to succeed. Adolescent have always remained in a dilemma, as they are neither considered children nor adults. Since 2011, Government of India has started using the term adolescent’s health which includes adolescent’s reproductive and sexual health, school health and menstrual hygiene. Internationally, Adolescent Sexual and Reproductive Health (ASRH) is a more widely accepted term.1

Adolescence is a period of transition from childhood to adulthood. It is characterized by physical, emotional, biological and psychological changes, putting the adolescents at risk for early marriages, unwanted pregnancies, unsafe abortions, sexually transmitted infections (STIs), HIV and
AIDS, sexual abuse and exploitation. It is also the period in which sexual habits and decisions about risk and protection are formed and many adolescents adopt risky behaviors without having adequate or correct information on how to protect them from adverse consequences such as HIV and AIDS, unwanted pregnancies and abortions etc.²

Youthfulness presents some very special problems and consideration. This is the period of adolescence which is full of many challenges such as stress of physiological and physical change, generation gap, unjust and cruel world among other problems. The adolescents have serious development tasks to handle such as peer identification and individualization from their family, sexual identification, societal and vocational role identification and negotiating issues of authority, power and independence are primary.³

Sexual assault and rape cases are on the rise in India. Rape cases have doubled between 1990 and 2008 and in 2012, almost 25,000 rape cases were reported across India. Research has shown a link between the rise of sexual crimes and the lack of sexual awareness and education among other factors.³

Thus, in the current scenario, sexuality education and awareness are paramount. Sexuality education comprises of physiological, psychological and social issues related to sex, a lack of which may lead to inappropriate attitudes and practices. Sex education can help children transform into well-adjusted adults with established sexual identity, functioning, and ability.⁴

Objectives of the Study
The objectives of the study are:

- To assess the knowledge on sexual health among adolescents in selected school of New Delhi
- To assess the attitude on sexual health among adolescents in selected school of New Delhi
- To seek relationship between knowledge on sexual health and selected demographic variables like age, sex, religion, type of family, class in which studying, father’s and mother’s educational status

Materials and Methods
A quantitative, non-experimental research approach with a descriptive survey design was adopted for the study. Sample comprised of 100 adolescents of age 13 to 16 years studying in 9th to 11th class, Tagore Senior Secondary School, New Delhi, selected using systematic random sampling technique. The data was collected from 25th October 2017 to 27th October 2017. Structured knowledge questionnaire (SKQ) to assess the knowledge regarding sexual health among adolescents and attitude scale to assess the attitude regarding sexual health among adolescents was used. Reliability of knowledge questionnaire was established by using Kuder Richardson – 20 formula and it was found to be 0.9. Reliability of the attitude scale was established by using Cronbach’s alpha formula, and it was found to be 0.8. The lesser the variation the higher the reliability. In order to ensure the validity, the tools were given to seven experts from the nursing and related fields. Experts were requested to judge the items on the basis of relevance, clarity, feasibility and organization of items included in the study.

For the collection of the data, a formal administrative approval was sought from the school’s authorities to conduct the study. The purpose of the study was explained to respondents and their consent to participate in the study taken. The data obtained was subjected to analysis using descriptive statistics. The tool used was structured knowledge questionnaire to assess the knowledge regarding sexual health. There were 54 questions in the structured knowledge questionnaire. Every correct answer was given 1 mark for right answer and 0 marks for wrong answer. The maximum possible score was 54 and minimum was 0. The interpretation of scores was done in three categories i.e. ‘good’, ‘fair’ and ‘poor’. The scoring was done after the results were obtained using statistical scoring techniques. The possible range of scores was from 1 to 54.

The other tool used was Attitude scale with positive and negative statements. Scoring for the positive statement were: strongly agree (SD) = 4, agree (A) = 3, strongly disagree (SD) = 2 and disagree (D) = 1. Reverse scoring was done for negative items that is strongly agree (SD) = 1, agree (A) = 2, strongly disagree (SD) = 3 and disagree (D) = 4. Interpretation of scores were: Favorable attitude: 1-9 and Unfavorable attitude: 10-17.

Results
Demographic Characteristics of Adolescents
The demographic characteristics are described in terms of age, gender, religion, type of family, father’s education and mother’s education.

Table 1. Frequency and percentage distribution of the demographic characteristics of adolescents (n=100)

| S. No. | Sample characteristics | Frequency | Percentage |
|-------|------------------------|-----------|------------|
| 1.    | Age in years           |           |            |
| 13 years | 17                    | 17%       |
| 14 years | 21                    | 21%       |
| 15 years | 29                    | 29%       |
| 16 years | 33                    | 33%       |
| 2.    | Gender                 |           |            |
| Male   | 51                     | 51%       |
Findings on the Assessment of Knowledge regarding Sexual Health among Adolescents

Table 2. Frequency and percentage distribution of the adolescents based on their knowledge level on sexual health

| Knowledge category | Frequency | Percentage |
|--------------------|-----------|------------|
| Good (0-18)        | 50        | 50%        |
| Fair (19-36)       | 32        | 32%        |
| Poor (37-54)       | 18        | 18%        |

The data in Table 2, depicts that out of 100 students of the study, 50 (50%) were having good knowledge, 32 (32%) were having fair knowledge and 18 (18%) were having poor knowledge regarding sexual health.

Findings on the Assessment of Attitude regarding Sexual Health among Adolescents

Table 3. Frequency and percentage distribution of the adolescents based on their attitude on sexual health

| Attitude category | Frequency | Percentage |
|-------------------|-----------|------------|
| Favorable attitude (1-9 score) | 48 | 48% |
| Unfavorable attitude (10-17 score) | 52 | 52% |

Finding related to the Relationship between the Knowledge and selected Demographic Variables

The data in this section illustrates the relationship of the knowledge of adolescents with selected demographic variables such as age, gender, religion, educational status of father and mother using Fisher’s Exact test.

Table 4. Computation of Fisher’s exact value to find relationship between age and knowledge of adolescents

| Age (in years) | Good | Fair | Poor | p value |
|----------------|------|------|------|---------|
| 13 years       | 5    | 6    | 5    | 0.41808 |
| 14 years       | 9    | 10   | 3    |         |
| 15 years       | 10   | 15   | 4    |         |
| 16 years       | 18   | 10   | 5    |         |

Fisher’s exact value p value>0.05 level of the significance, *non-significant.

Table 5. Computation of Fisher’s exact value to find relationship between gender and knowledge of adolescents

| Gender | Good | Fair | Poor | p value |
|--------|------|------|------|---------|
| Male   | 25   | 14   | 12   | 0.760   |
| Female | 22   | 12   | 15   |         |

Fisher’s exact value p value>0.05 level of the significance, *non-significant.

Table 6. Computation of Fisher’s exact value to find relationship between religion and knowledge of adolescents

| Religion | Good | Fair | Poor | p value |
|----------|------|------|------|---------|
| Hindu    | 45   | 10   | 8    | 0.019*  |
| Muslim   | 2    | 5    | 3    |         |
| Sikh     | 3    | 2    | 3    |         |
| Christian| 8    | 5    | 3    |         |
| Others   | 1    | 1    | 1    |         |

Fisher’s exact value p value>0.05 level of the significance, *non-significant.
Table 7. Computation of Fisher’s exact value to find relationship between educational status and knowledge of adolescents 

| Class   | Good | Fair | Poor | p value |
|---------|------|------|------|---------|
| 9th     | 10   | 15   | 10   | 0.046   |
| 10th    | 15   | 15   | 5    |         |
| 11th    | 17   | 12   | 1    |         |
| 12th    | 0    | 0    | 0    |         |

Fisher’s exact value p value>0.05 level of the significance, *significant.

Table 8. Computation of Fisher’s exact value to find relationship between type of family and knowledge of adolescents 

| Type of family | Good | Fair | Poor | p value |
|----------------|------|------|------|---------|
| Joint          | 15   | 7    | 25   | 0.089   |
| Nuclear        | 27   | 5    | 18   |         |

Fisher’s exact value p value>0.05 level of the significance, non-significant.

Table 9. Computation of Fisher’s exact value to find relationship between fathers educational status and knowledge of adolescents 

| Fathers educational status | Good | Fair | Poor | p value |
|----------------------------|------|------|------|---------|
| Illiterate                 | 0    | 2    | 2    | 0.053   |
| 1st to 5th class           | 3    | 2    | 4    |         |
| 6th to 12th class          | 27   | 10   | 5    |         |
| Graduate                   | 26   | 12   | 7    |         |

Fisher’s exact value p value>0.05 level of the significance, non-significant.

Table 10. Computation of Fisher’s Exact Value to find Relationship between Mothers Educational Status and Knowledge of Adolescents 

| Mothers educational status | Good | Fair | Poor | p value |
|----------------------------|------|------|------|---------|
| Illiterate                 | 2    | 4    | 2    | 0.038   |
| 1st to 5th class           | 3    | 2    | 4    |         |
| 6th to 12th class          | 40   | 20   | 8    |         |
| Graduate                   | 11   | 4    | 0    |         |

Fisher’s exact value p value>0.05 level of the significance, *significant.

Discussion

The present study depicts that out of 100 students, 50 (50%) were having good knowledge, 32 (32%) were having fair knowledge and 18 (18%) were having poor knowledge regarding sexual health. The data revealed that out of 100 students of the study, out of 17 statements 48 (48%) had favorable attitude and 52 (52%) had unfavorable attitude. A cross sectional study was conducted by Kumar et al.7 conducted to assess the attitude and perception of sex education among school going adolescents in Ambala district, Haryana, India. A total of 74 adolescents from age group 13-19 year were studied, using self-designed semi-structured questionnaire to assess the knowledge regarding reproductive and sexual health among adolescents. Result finding shows that 93.5% adolescents favor sex education, 86.3% said sex education can prevent the occurrence of AIDS and 91.5% of adolescents prefer doctors should give them sex education.

Conclusion

There is lack of awareness related to sexual health. Adolescents are vulnerable to contracting STDs due to early onset of sexual activity, low contraceptive use and likelihood of partner change. There is risk of physical, psychological, social problems therefore, education regarding mental health must be provided in schools to bring awareness among the youth.

Conflict of Interest: None

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