

# Attitude regarding reproductive health among the second PUC students from the colleges of Bengaluru city

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## ABSTRACT


**Background:** India has the second largest population in the world. Majority of the health problems in women are due to the reproductive health. A positive attitude towards reproductive health is very important to our young adults as they are the future mothers and they have to impart this information to their children, and hence, we decided to conduct a study on the attitude regarding reproductive health among the second PUC science and non-science students in Bangalore. **Objective:** The objective of this study is to find the difference in the attitude among the science and non-science students regarding the reproductive health and to find the relationship between the attitude scores with respect to select variables. **Materials and Methods:** This was a cross-sectional study done for a period of 7 months from July 2000 to January 2001, on 600 female students (300 each from science and 300 from non-science stream) using a pre-validated self-administered questionnaire among II PUC students. **Results:** The mean attitude score of the non-science students was 66.01, and the attitude score of the science students was 73.93. The difference in the mean attitude scores within the science and the non-science students with respect to the socioeconomic status was significant. The mean attitude score was highest for those who desired for a professional course among both the groups. **Conclusions:** The group of science students had a better attitude towards the reproductive health when compared to the group of non-science students. The study suggests that education on reproductive health should be given by the health professionals which can improve the attitude of the adolescent students.

**KEY WORDS:** Science Students; Non-science Students; Reproductive Health; Sexually Transmitted Diseases/ Reproductive Tract Infections; Attitude

## INTRODUCTION

Adolescence is the period following the onset of puberty, during which a young person develops from a child into an adult. This is the age between 10 and 19 years according to the WHO.<sup>[1]</sup> This is the period whereby the adolescent females should physically and mentally prepare themselves for a safe

motherhood.<sup>[2]</sup> The WHO defines reproductive health as “a state of complete physical, mental, social well-being, and not just the absence of disease or debility, relating to the functions and processes of the reproductive system.”<sup>[3]</sup> The positive attitude towards menarche is very important for the adolescents which greatly influences the reproductive health.<sup>[4]</sup> Early marriage leads to a high fertility which is a health risk to both the mother and child.<sup>[5]</sup> Following family planning is a great help as the spacing helps in restoring the health of the mother and having a small family improves the care given to the children.<sup>[6]</sup> There is a limit to which a mother can provide sex education to the children and the same limitation extends to the schools also.<sup>[7]</sup> Several taboos and myths regarding menarche lead to a lack of menstrual hygiene.<sup>[8]</sup> Lack of menstrual hygiene could definitely lead to sexually transmitted diseases (STDs).<sup>[9,10]</sup>

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The population of teenagers in India is one of the largest population which is almost 26% of the total population in the world. Although there are effective methods available for the contraception and the prevention of STDS, they are not known and not available to all the sexually active individuals.<sup>[11]</sup> The WHO estimates that more than 150 million die every year from pregnancy-related causes.<sup>[12]</sup> Hence, this study was conducted to know the attitude towards reproductive health among the second PUC students who are at the adolescent age. This study will enhance our knowledge about the attitude of the students towards reproductive health, and we can accordingly conduct classes to these students to upgrade their awareness.

## MATERIALS AND METHODS

The study was conducted in Bengaluru colleges. This was done during July 2000–January 2001. The total number of P.U. colleges in Bengaluru (North and South) is 270. Of the 270 colleges, the colleges only for the females were 38. The 38 colleges were listed alphabetically and 10 colleges were selected by simple random sampling method. From the selected colleges, the list of non-science and science students was collected and arranged in an order. From the list that was arranged, 300 students from the science group and 300 from the non-science group were selected using simple random sampling method. The study is part of my thesis, and the ethical clearance was not needed at that time.

### Statistical Analysis

The data were entered into the Excel spreadsheet and analyzed using open EPI info. It was expressed in percentages and proportions. For qualitative data,  $\chi^2$  test was used for analysis, and for quantitative data,  $t$ -test and ANOVA were used.

### Sample Size

After the standardization of the study instrument, the sample size was estimated based on the instrument values using the formula,  $n = \frac{(Z)^2 (\sigma)^2}{(E)^2}$  at 1% level of significance (99% confidence level) and taking the allowable error of 2. The mean score was = 166.87 and standard deviation  $\sigma = 10.71$ .

Sample size  $n$ ,  $z$  (Standard Normal Deviate) = 2.58,  $\sigma$  (standard deviation) = 10.71, allowable error  $E = 2$ .

$$n = \frac{(Z)^2 (\sigma)^2}{(E)^2} = \frac{(2.58)^2 (10.71)^2}{(2)^2} = 190.88 \cong 191$$

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Taking into consideration (nonresponse and incomplete response), the final sample size was decided to be 300 from each stream (science and non-science).

### Standardization of Questions on Attitude; Likert Scale<sup>[13]</sup>

Likert scale was used for the attitude questions. In this scale, the respondent is asked to respond to each of the statements in terms of several degrees, usually five degrees of agreement or disagreement. It assigns a scale value to each of the five responses. The same is repeated with each and every item in the instrument. Thus, a total score for each respondent is got, which measures the subject favorableness towards that particular point.

## RESULTS

The non-science students have strong viewpoints about reproductive health. A study of their answers to the different questions on attitude shows that the non-science students are very strong about their feelings on women's issues and women's rights. They give women more importance in decision-making, in particular regarding "physical relationship." The select responses are as follows:

- They disagree with the opinion that husbands should always have the right to decide on what contraceptive should be used.
- They think that women should have the right to decide on the number of children they want to have.
- Women should be allowed to go to holy places during periods.
- They are even fair to the male sex by stating that husbands need not always undergo family planning - it should be a mutual decision between husband and wife.
- They strongly agree that irrespective of sex one should not have more than two children.
- They strongly disagree that vasectomy makes the person weak and strongly disagree that, after vasectomy, it is difficult to carry on with normal sexual life.
- They strongly disagree that a female is not compete until she gives birth to a child.

It is very interesting to note that both science and non-science students agree on issues such as:

- High school students should be taught regarding sexually transmitted diseases.
- Different methods of contraceptives should be taught in high schools and colleges
- Sexual intercourse should not be indulged before marriage.

Table 1 shows that the mean attitude scores of the non-science students were 66.01 and that of the science students were 73.93, and the differences were significant.

**Socioeconomic Status**

The difference in the mean attitude scores within the science and the non-science students with respect to the socioeconomic status is significant. The mean attitude score is highest for Class I in both the groups. It is least in Class IV in both the groups. Among the non-science students, the difference in the mean attitude scores within the students belonging to SES I and II, SES I and III, and SES I and IV is statistically significant. Among the science students, the difference in the mean attitude scores within the students belonging to SES I and IV, SES II and IV, and SES III and IV is statistically significant. SES IV has got a definite impact on the mean attitude score among science students [Table 2].

**Desire for Further Studies**

The mean attitude score is highest for those who desired for a professional course among both the groups. The difference in

the mean attitude scores within the non-science students who desired to go for professional, PG, and degree course was not statistically significant, but it was significant among the science students. The difference is not statistically significant between students who desired to go in for professional and PG courses [Table 2].

Thus, aspiring to being a professional or a PG, the mean attitude scores were higher and the difference in the mean attitude scores was statistically significant when compared to those who aspired for a degree among the science students [Table 2].

**Health Problems**

The difference in the mean attitude scores among both the groups discussing their health problems with the doctor, mother, and friends is not significant. The mean attitude score is highest for the students discussing the health problems with the doctors for both the groups [Table 2].

**Family Problems**

The difference in the mean attitude scores among both the groups with respect to discussing their family problems with the doctor, mother, and friends was not statistically significant [Table 2].

**Table 1:** Attitude scores of the study population

Group	Mean±SD	DF	t	P
Non-science (n=300)	66.01±19.71	598	4.99	P<0.05
Science (n=300)	73.93±19.18			

SD: Standard deviation

**Table 2:** Attitude scores within the study groups regarding reproductive health with respect to socioeconomic status, desire for further studies, discussion with health problems, and family problems

Characteristics	Non-science		Science	
	n	Mean±SD	n	Mean±SD
SES				
I	10	79.60±7.21	143	75.12±18.12
II	123	68.22±18.02	83	77.00±17.02
III	129	65.22±20.51	64	70.36±19.03
IV	38	57.97±21.62	10	54.30±35.29
Total	300	F=4.422, P<0.05	300	F=5.345, P<0.05
Desire for further studies				
Professional	36	72.42±10.08	109	75.11±16.56
PG	96	65.96±21.61	157	74.73±19.25
Degree	168	64.67±19.96	34	66.44±24.89
Total	300	F=2.312, P<0.05	300	F=2.973, P<0.05
Discussion with health problems				
Doctor	37	71.14±19.80	38	77.95±16.43
Mother	227	65.09±20.30	212	73.79±19.76
Friends	36	67.53±15.09	50	72.28±18.56
Total	300	F=1.162, P>0.05	300	F=1.050, P<0.05
Discussion with Family Problems				
Doctor	3	44.67±39.15	43	79.91±12.23
Mother	220	65.88±19.55	207	72.68±20.08
Friends	77	67.21±19.18	77	74.02±19.58
Total	300	F=1.917, P>0.05	300	F=2.563, P<0.05

SD: Standard deviation

### SES Status

The difference in the mean attitude scores between the two groups belonging to SES I and III and SES I and IV is not significant [Table 3].

### Desire for Further Studies

The difference in the mean attitude scores between the two groups who desired for a PG course is statistically significant. However, the difference in the mean attitude scores between the two groups who desired for professional and degree courses was not statistically significant [Table 3].

### Health Problems

The difference in the mean attitude scores between the science and the non-science students in discussing their health problems with the doctor and mother was statistically significant. However, the difference in the mean attitude scores between the science and the non-science students in discussing their health problems with the friends was not statistically significant [Table 3].

### Family Problems

The difference in the mean attitude scores between the science and the non-science students in discussing their family problems with the doctor, mother, and friends was statistically significant. Moreover, the mean attitude scores

among the science students in discussing the family problems with the doctor/mother/friends were higher than the non-science students [Table 3].

### DISCUSSIONS

Our study shows that 17% of non-science and 4.33% of the science students strongly disagreed that it is difficult to conceive after discontinuing the contraceptives. They agreed that contraceptives are more desirable than abortions. Our study showed that the study group agreed that lesser the spacing more the complications and that husbands should take part in the family planning.

Half the students had a positive attitude toward menstrual hygiene in our study [Table 4].

Majority of the students preferred to discuss the health problems with their parents. 18.66% of the non-science and 13.66% of the science strongly agreed that condoms should be used before marriage [Table 2].

17% of non-science and 4.33% of the science students strongly disagreed that it is difficult to conceive after discontinuing the contraceptives. In a study by Sara<sup>[14]</sup> among the interns, it was found that one among the 5 interns falsely believed that contraceptives can cause infertility. Majority thought that it can cause cancer.

**Table 3:** Attitude scores between the study groups regarding reproductive health with respect to socioeconomic status, desire for further studies, discussion with health problems, and family problems

Characteristics	Non-science		Science		t	D.F	P
	n=300	Mean±SD	n=300	Mean±SD			
SES							
I	10	79.60±7.21	143	75.12±18.12	0.775	598	P<0.05
II	123	68.22±18.02	83	77.00±17.02	3.506	598	P<0.05
III	129	65.22±20.51	64	70.36±19.03	1.678	598	P<0.05
IV	38	57.97±21.62	10	54.30±35.29	0.414	598	P<0.05
Desire for further studies					P<0.05		
Professional	36	72.42±10.08	109	75.11±16.56	0.919	598	P<0.05
PG	96	65.96±21.61	157	74.73±19.25	3.355	598	P<0.05
Degree	168	64.67±19.96	34	66.44±24.89	0.451	598	P<0.05
Discussion with health problems					P<0.05		
Doctor	37	71.14±19.80	38	77.95±16.43	1.861	598	P<0.05
Mother	227	65.09±20.30	212	73.79±19.76	4.545	598	P<0.05
Friends	36	67.53±15.09	50	72.28±18.56	1.263	598	P<0.05
Discussion with family problems					P<0.05		
Doctor	3	44.67±39.15	43	79.91±12.23	4.048	598	P<0.05
Mother	220	65.88±19.55	207	72.68±20.08	3.545	598	P<0.05
Friends	77	67.21±19.18	77	74.02±19.58	2.180	598	P<0.05

SD: Standard deviation

**Table 4:** Distribution of the study population with respect to their attitude

Attitude questions	n (%)		Chi-square	DF	P
	Non-Science	Science			
Women should not go to holy places during periods (SD)	78 (26.00)	41 (13.66)	14.35	1	P<0.05
Pain during menstruation is avoidable (SA)	35 (11.66)	54 (18.00)	4.763	1	P<0.05
Medication should not be taken during periods (SD)	26 (8.66)	45 (15.00)	5.767	1	P<0.05
Difficult to conceive after stopping methods of contraception (SD)	17 (5.66)	13 (4.33)	0.56	1	P>0.05
Vasectomy makes the person weak (SD)	31 (10.33)	19 (6.33)	3.14	1	P>0.05
After tubectomy, person puts on weight (SD)	21 (17.00)	10 (3.33)	4.11	1	P>0.05
After vasectomy, it is difficult to carry on with sexual life (SD)	27 (9.00)	22 (7.33)	0.55	1	P>0.05
Contraceptives are a must if sexual intercourse is practiced before marriage (SD)	41 (13.66)	56 (18.66)	2.76	1	P>0.05
One should not use contraceptives as children are gods gifts (SD)	27 (9.00)	37 (12.33)	1.74	1	P>0.05
Contraceptives should not be used after the 1 <sup>st</sup> child and before the 2 <sup>nd</sup> child (SD)	22 (7.33)	12 (4.00)	3.11	1	P>0.05
Abortions should be avoided using contraceptives (SA)	39 (13.00)	70 (23.33)	10.77	1	P>0.05
Lesser the spacing between 2 children, greater the complications (SA)	43 (14.33)	58 (19.33)	2.67	1	P>0.05
Sexual intercourse should not be practiced before marriage (SA)	91 (30.33)	82 (27.33)	0.65	1	P>0.05
Only males should undergo family planning (SD)	21 (7.00)	19 (6.33)	0.107	1	P>0.05
A girl who masturbates will be able to lead a normal life (SA)	28 (9.33)	31 (10.33)	0.169	1	P>0.05
Husband should always decide on the contraception to be used (SD)	31 (10.33)	14 (4.66)	6.943	1	P>0.05
Girls should have a right to decide on how many children they want (SA)	111 (37.00)	96 (32.00)	1.65	1	P>0.05
One should not have >2 children irrespective of their sex (SA)	76 (25.33)	50 (19.66)	19.13	1	P>0.05
Different methods of contraceptives to be taught in high schools and colleges (SA)	73 (24.33)	81 (27.00)	0.559	1	P>0.05
High-school students to be taught regarding STDs (SA)	83 (27.66)	80 (26.66)	0.076	1	P>0.05
A female is not complete until she gives birth to a child (SD)	50 (16.66)	33 (11.00)	4.041	1	P>0.05
Poor personal hygiene can lead to RTI (SA)	29 (9.66)	73 (24.33)	28.86	1	P>0.05

Contraceptives are more desirable than abortions, and Katrina<sup>[15]</sup> in her study says majority agreed on it. Students in our study agreed that using family planning methods was solely the responsibility of the partner and the same is said by Katrina.<sup>[15]</sup>

Our study showed that the study group agreed that lesser, the spacing more the complications, and that husbands should take part in the family planning. Shafei *et al.*<sup>[16]</sup> also said that lesser the spacing, more the complications and also that husbands should take part in the family planning.

Half the students had a positive attitude toward menstrual hygiene in our study, and Yadav *et al.*<sup>[17]</sup> also found that half of the students had a positive attitude toward menstrual hygiene. Savanthe *et al.*<sup>[18]</sup> in their studies showed that half of the students had beliefs regarding menstruation and 78.9% of adolescent girls used sanitary napkins and only 25.6% used both cloth and napkins. Very few students agreed that masturbation will not lead to abnormal married life. Arlow *et al.*<sup>[19]</sup> also in his study stated that adolescents had the fear that masturbation leads to physical weakness and infertility.

The study shows that majority of the students preferred to discuss the health problems with their parents. According to Shor,<sup>[20]</sup> also majority of the adolescents took help from

their mothers regarding doubts on reproductive health. Kuberan *et al.*<sup>[21]</sup> also showed that majority (52.4%) agreed that they discussed their health problems with the parents. It is seen that 18.66% of the non-science and 13.66% of the science strongly agreed that condoms should be used before marriage. Kuberan *et al.*<sup>[21]</sup> also showed that majority of the girls (28.2%) strongly agreed on the use of condoms before marriage.

### Strength and Limitations of the Study

Articles on attitude are not many. Hence, this will be a useful study. Since the questionnaire was not one to one, there could have been discussions among the students before answering the questions.

### CONCLUSIONS

Health education to the adolescents is a must at the schools and colleges. Teachers and the parents find it very difficult to discuss the issues on reproductive health. They find it difficult to break the barrier of hesitation when discussions on reproductive health arise. The teachers usually ask the students to read the topics on reproductive health by themselves. This is a sensitive issue, and they lack the

confidence and skill needed to talk on the psychological and sexuality-related problems. This study suggests that the education on reproductive health by health professionals can improve the knowledge and perceptions of adolescent girls, especially in rural areas. Such educational intervention programs must be given due importance, which will help the adolescent girls to take care of their own health and protect themselves from the risks of STDs.

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