

A Quasi Experimental Study to Assess the Effectiveness of Planned Teaching Program in Promoting Knowledge Regarding Sexual Health Among Adolescent Girls at Selected School of Jhajjar Haryana.

Pinki Devi*

Assistant Professor, Faculty of Nursing in PDM University
Bahadurgarh (Haryana).

*Corresponding author

Pinki Devi, Assistant Professor, Faculty of Nursing in PDM University
Bahadurgarh (Haryana).

Submitted: 20 Dec 2021; Accepted: 25 Dec 2021; Published: 31 Dec 2021

Citation: Pinki Devi (2021) A Quasi Experimental Study to Assess the Effectiveness of Planned Teaching Program in Promoting Knowledge Regarding Sexual Health Among Adolescent Girls at Selected School of Jhajjar Haryana, *Journal of Nursing & Healthcare* 6(4): 1-13.

Abstract

Adolescence is a transitional stage of physical and mental human development that occurs between childhood and adulthood. This transition involves biological (i.e. pubertal), social and psychological changes. Sexual Health of adolescence is the foundation of a healthy adult and this therefore becomes an important phase to concentrate upon by all the concerned stakeholders. The statement of problem is, "a quasi experimental study to assess the effectiveness of planned teaching program in promoting knowledge regarding sexual health among adolescent girls at selected school of Jhajjar Haryana", and the objectives were

- To assess the level of pretest knowledge regarding sexual health among adolescent girls,
- To assess the level of posttest knowledge regarding sexual health among adolescent girls
- To find out the association between the level of post test knowledge regarding sexual health among adolescent girls and selected demographic variables.

A quasi experimental approach and research design was non-randomized control group were used. 150 adolescent girls were selected as sample through Non probability convenient sampling method, 75 samples are from experimental group and 75 samples are from control group. A self-structured questionnaire on knowledge was administered. The collected data was analyzed by using descriptive statistics and inferential statistics.

The pre-test result of experimental group showed that 4% of adolescent girls had inadequate level of knowledge, 93.3% of adolescent girls had moderate level of knowledge and 2.67% of adolescent girls had adequate level of knowledge, and in control group, 6.67% of adolescent girls had inadequate level of knowledge, 92% of adolescent girls had moderate level of knowledge and 1.33% of adolescent girls had adequate level of knowledge. In post test result of experimental group showed that 28% of adolescent girls had moderate level of knowledge and 72% of adolescent girls had adequate level of knowledge and in control group, 74.6% of adolescent girls had moderate level of knowledge and 25.33% of adolescent girls had adequate level of knowledge.

Hence, the study concluded that the research hypothesis H1 was accepted due to significant difference between pre-test and post-test knowledge score of experimental group at 0.05 level of significance.

Keywords: Adolescent girls, Sexual health, Sexual health among adolescent girls, planned teaching programme on adolescent girls, Planned teaching program on sexual health.

Background

"An adolescent is a traveler who has left one place, has not reached the next".

-Sorenson

India has the second largest population of adolescents in the world being home to 243 million individuals aged 10-19 yrs [4]. It constitutes about 1.2 billion, one fifth of the world's population, and 22.8% of population in India. Hence adolescents form a large

section of the population. This period needs special attention because of turmoil of adolescence faces due to different stages of development, different circumstances, different needs and diverse problems [5].

In Indian culture, people used to hesitate to discuss about Sex, Sexual needs and Sexual problems which is a very personal issue. Even parents do not talk to their children openly on such topic. Talking about sex to any one else is taboo in Indian Society. The adolescents cannot approach freely to their parents and elders for help and guidance regarding sexual problems. Thus Sex is probably one area of our lives about which youth know very little [6].

Recently sexual function and sexual problems have been openly discussed in most societies and cultures (Tiefer, 2001), few epidemiologic data exist until the middle of the twentieth century. The large population-based study of normative data on female sexuality was published by Kinsey and coworkers in 1953. Recent studies, however, have presented a more accurate picture of sexual dysfunction prevalence.

A study was conducted to assess the type and frequency of problem related to menstruation in adolescent girls and the effects of these problem on daily routine in Maulana Azad medical college, New Delhi, India in 2008. 198 adolescent girls have been studied. Results showed that mean age of study participants was calculated to be 16.2 years. Dysmenorrhea (67.2%) was one of the major problems and 63.1% had one or the other symptom of premenstrual syndrome. Study concluded that for adolescent girls with menstruation related problem and provides them with counseling services and relevant information on possible treatment options. Besides there is a need to emphasize on designing menstrual health programmes for adolescents [7].

A cross-sectional study was conducted on 1420 female between ages 6 and 17 years of different part of Tehran to assess the development of secondary sexual characteristics in 2006. Findings revealed that in 1136 girls' age of pubic hair development was 9.74 years and 10.49 years respectively. The mean age of menarche in 399 was 12.68 years. Study concluded that the need for educating about the pubertal changes in early adolescent period is an important aspect [8].

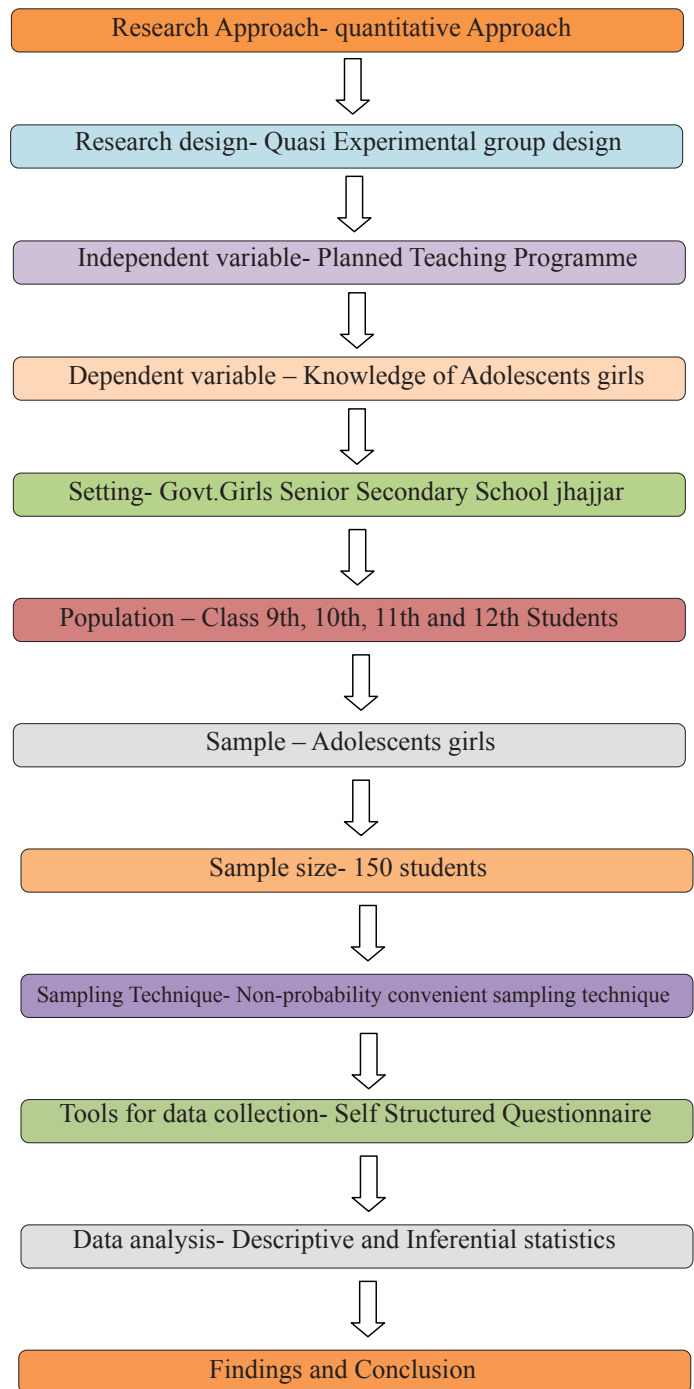
So, there is an urgent need to institute services for adolescence by government and voluntary agencies such as health clinics, educational institutes. Not many studies have been done to reveal what the school girls know about sexual matters and sexual health, hence there is a need to explore and a study like this provide data for planning need based sex educational programme.

The investigator could not locate studies of this specific type done in Haryana. Hence the investigator felt the need to conduct a study on senior school girls knowledge about sexual health and disorders. So that it would provide a basis for structuring health promotion activities.

It is in this contest, the importance of education regarding sexual health among adolescent girls. It helps to maintain sexual health of adolescent girls. Hence, I hope that after giving sexual health education the adolescent girls are able to maintain their sexual health and prevent themselves from various sexual disorders. Sex-

ual health education is a right for all individuals and is an important tool for preparing all adolescents for future relationships and interactions.

Methodology



Result

The data analysis was based on the following objectives of the study:

1. To assess the level of pretest knowledge regarding sexual health among adolescent girls.

2. To assess the level of posttest knowledge regarding sexual health among adolescent girls.
3. To find out the association between the level of post test knowledge regarding sexual health among adolescent girls and selected demographic variables

Hypothesis

H1 - There will be a significant difference between the pretest and post test knowledge score regarding sexual health among adolescent girls.

H2 – There will be a significant association between post-test scores of knowledge level regarding sexual health among adolescent girls and their selected demographic variables.

Organization of data for analysis

The raw data was collected and entered in a master sheet. The data was analyzed by using descriptive statistics (frequency, percentage distribution and graphs) and inferential statistics (unpaired t-test and chi-square).

The analyzed data was presented under the following major headings:

1. **SECTION I:** Demographic Variables of the study subjects.
2. **SECTION II:** Objective wise analysis
 - a). To assess the level of pre-test knowledge of experimental and control group.
 - b). Comparison of pre test knowledge scores between experimental and control group.
 - c). To assess the level of post-test knowledge of experimental and control group.
 - d). Comparison of post test knowledge scores between experimental and control group.
 - e). Chi square association between post test knowledge scores and selected demographic variables of experimental and control group.

SECTION 1 Demographic Variables

Table 1: Frequency and percentage distribution of Demographic Variables

DEMOGRAPHIC EXPERIMENTAL GROUP VARIABLES			CONTROL GROUP		
S. NO.	f	%age		f	%age
1.	Age				
a.	<14	10	13.33	16	21.33
b.	14-16	36	48	34	45.34
c.	>16	29	38.67	25	33.33
2.	Religion				
a.	Hindu	70	93.3	70	93.3
b.	Christian	3	4	3	4
c.	Muslim	2	2.7	2	2.7
3.	Family type				
a.	Nuclear	29	38.67	28	37.33
b.	Extended	9	12	12	5.33
c.	Joint	37	49.33	43	57.34
4.	Place of residence				
a.	Rural	70	93.33	70	93.33
b.	Urban	3	2.7	2	2.7
c.	Semi-urban	2	4	3	4
5.	Monthly income of family				
a.	Below 10,000	27	36	45	60
b.	10,000- 15,000	26	34.67	14	18.67
c.	Above 15,000	22	29.33	16	21.33

6.	Stream of education				
a.	Medical	7	9.33	12	16
b.	Non-medical	10	13.33	12	16
c.	Others	58	77.34	51	68
7.	Occupation of father				
a.	Private job	45	60	35	46.67
b.	Government job	16	16	13	17.33
c.	Unemployment	24	24	27	36
8.	Occupation of mother				
a.	Housewife	64	85.33	68	90.67
b.	Government job	3	4	3	4
c.	Private job	8	10.67	4	5.33
9.	Source of information				
a.	Mass media	16	21.33	9	12
b.	Books and magazines	52	69.34	61	81.33
c.	Peer groups	7	9.33	5	6.67

Table 1 reveals the frequency and percentage distribution of characteristics of the study subjects. Total number of 150 adolescent girls were selected from Girls Senior Secondary School, Nuna mra (jhajjar) Haryana were studied to assess the effectiveness of planned teaching program in promoting knowledge regarding sexual health. Among the 150 adolescent girls, 75 were in experimental group and 75 were in the control group for whom the sample characteristics were mentioned separately in frequency and percentages. According to Age, it was revealed that in control group majority (48%) adolescents girls were in the age group of 14-16 years, (38.67%) in age group of >16 years and (13.33%) in age group < 14 years and in experimental group majority (45.34%) adolescent girls in age group of 14-16 years, (33.33%) in age group of >16 years and (21.33%) in age group of <14 years. According to Religion, it was revealed that in control group majority (93.3%) of adolescent girls were belong to Hindu religion, (4%) belong to Christian religion, (2.7%) belong to Muslim religion and in experimental group majority (93.3%) of adolescent girls were belong to hindu religion, (4%) belong to Christian religion, (2.7%) belong to Muslim religion. According to Family type, it was revealed that in control group majority (49.33%) of adolescent girl lived in joint family, (38.67%) lived in nuclear family, (12%) had an extended family and in experimental group majority (57.34%) of adolescent girls lived in joint family, (37.33%) lived in nuclear family, (5.33%) lived in extended family. According to Place of residence, it was revealed that in control group majority (93.33%) of adolescent girls belonged to rural area, (2.7%) of adolescent girls were from urban area, (4%) of adolescent girls were from semi-urban area and in experimental group majority (93.3%) of adolescent girls belonged to rural area, (2.7%) of adolescent girls were belonged to urban area, (4%) of adolescent girls from semi-urban area. According to Monthly income of family, it was revealed that in control group majority (36%) of adolescent girl's fathers had be-

low 10000 income per month, (34.67%) of adolescent girl's fathers had 10000-15000 income per month, (29.33%) of adolescent girl's fathers had above 15000 income per month and in experimental group majority (60%) of adolescent girl's fathers had below 10000 income per month, (21.33%) of adolescent girl's fathers had above 15000 income per month, (18.67%) of adolescent girl's fathers had 10000-15000 income per month. According to Stream of education, it was revealed that in control group majority (77.34%) had other stream, (13.33%) had non-medical stream, (9.33%) had medical stream and in experimental group majority (68%) had other stream, (16%) had medical stream, (16%) had non-medical stream of education. According to Occupation of father, it was revealed that in control group majority (60%) of adolescent girl's fathers were having private job, (24%) of adolescent girl's fathers were unemployed, (16%) of adolescent girl's fathers were having government job and in experimental data (36%) of adolescent girl's fathers were unemployed, (17.33%) of adolescent girl's fathers were having government job and majority (46.67%) of adolescent girl's fathers were having private job. According to Occupation of mother, it was revealed that in control group majority (85.33%) of adolescent girl's mothers were housewife, (10.67%) of adolescent girl's mothers were having private job, (4%) of adolescent girl's mothers were having government job and in experimental data majority (90.67%) of adolescent girl's mothers were housewife, (5.33%) of adolescent girl's mothers were having private job, (4%) of adolescent girl's mothers were having government job. According to Source of information, it was revealed that in control group majority (69.34%) of adolescent girls have information about sexual health from Books /magazines, (21.33%) of adolescent girls have information about sexual health from mass media, (9.33%) of adolescent girls have information about sexual health from peer groups and in experimental data majority (81.33%) of adolescent girls have information about sexual health from books /magazines,

(12%) of adolescent girls have information about sexual health from mass media, (6.67%) of adolescent girls have information about sexual health from peer groups.

The above description showed that experimental and control groups were heterogeneous in characteristics. Hence, it was concluded that maximum number of subject in the age group 14-16 years and most of the candidates belong to hindu religion. Major-

ity of the subjects were lived in joint family and most of the candidates belong to rural area. Maximum candidate's families have monthly income 10000-15000 and stream of education of subjects were other than medical and non-medical. Majority of subject's father occupation was private job and mother's occupation was housewife. Source of information for maximum subjects was books/magazines.

SECTION 2 OBJECTIVE WISE ANALYSIS

OBJECTIVE 1: To assess the level of pretest knowledge regarding sexual health among adolescent girls.

Table2 (a): Frequency and percentage distribution of adolescent girls according to pre-test knowledge regarding sexual health among adolescent girls of experimental and control group.

Level of knowledge	Experimental Group		Control Group	
	Frequency	% age	Frequency	% age
Inadequate	3	4	5	6.67
Moderate	70	93.33	69	92
Adequate	2	2.67	1	1.33

Table 2 (a) depicts that pre-test knowledge of adolescent girls in experimental group majority (93.33%) of adolescent girls have moderate knowledge followed by (4%) of adolescent girls have inadequate knowledge followed by (2.67%) of adolescent girls have adequate knowledge where as in control group majority (92%) of adolescent girls have moderate knowledge followed by (6.67%) of adolescent girls have inadequate knowledge followed by (1.33%) of adolescent girls have adequate knowledge.

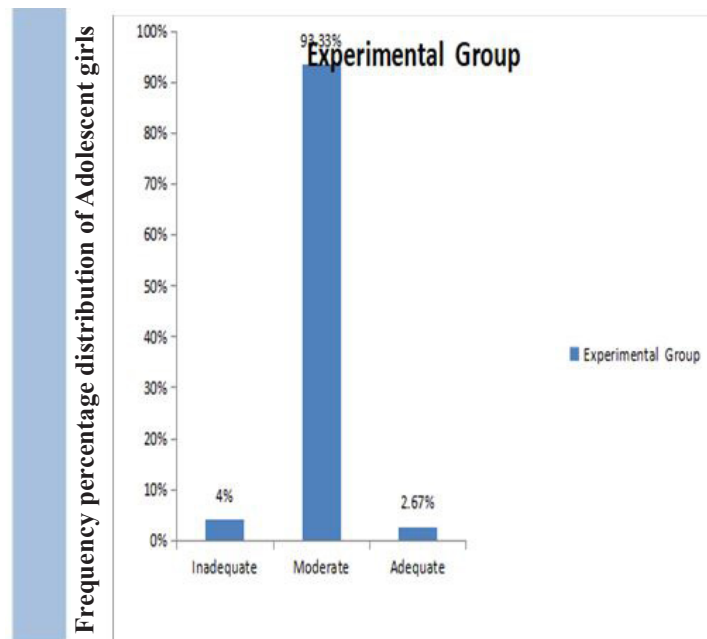
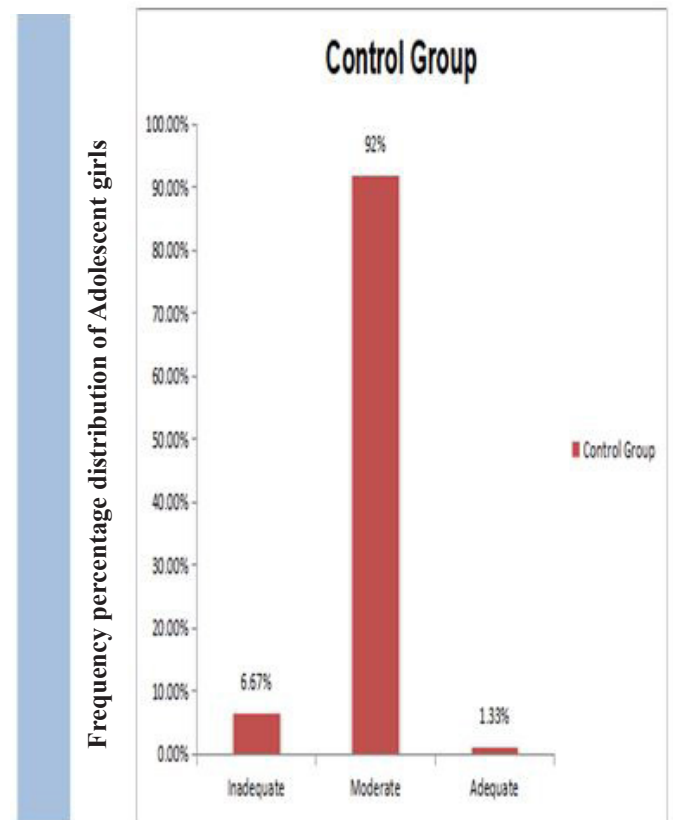
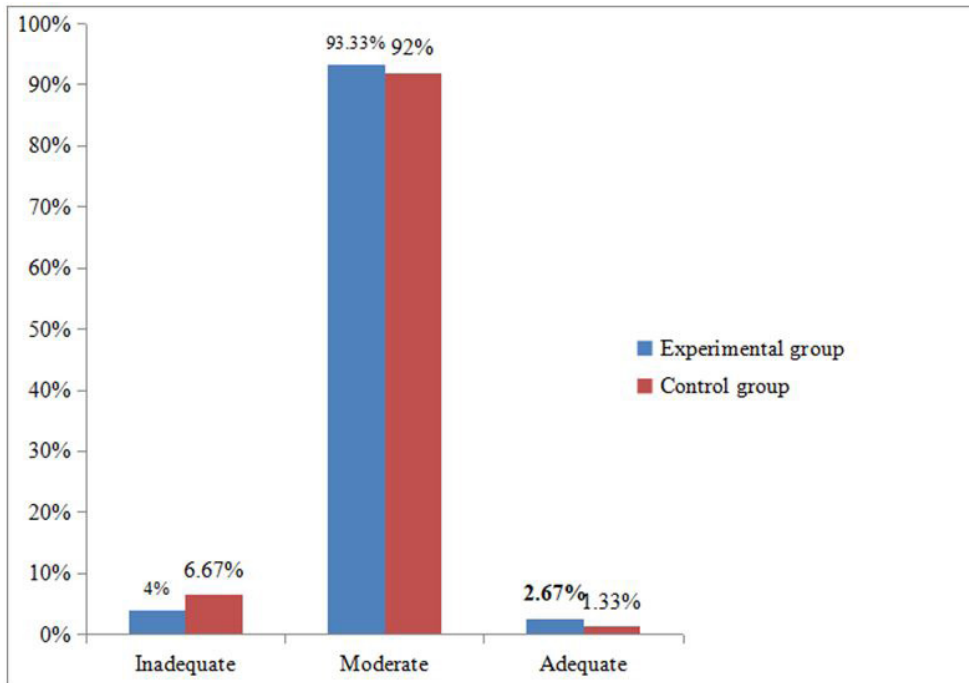


Figure 4: Frequency and percentage distribution of pre-test knowledge score regarding sexual health among adolescent girls of experimental group.



Pre-test experimental knowledge score of adolescent girls

Figure 5: Frequency and percentage distribution of pretest knowledge score regarding sexual health among adolescent girls of control group.



Pre-test experimental knowledge score of adolescent girls

Figure 6: Frequency and percentage distribution of pre-test knowledge score regarding sexual health among adolescent girls of experimental and control group.

Table 2 (b) Comparison of pre-test knowledge score among experimental and control group

Pre-test	Frequency (f)	Mean	Mean Difference	Standard Error Mean	Standard Error Difference	df	Unpaired t- test
Experimental Group	75	20	0.43	3.058	0.35	148	0.893 ^{NS}
Control Group	75	19.57	0.43	3.44	0.397	148	0.893 ^{NS}

NOTE: NS - Not Significant, * - Significant

Table 2 (b) Depicts the comparison of pre-test knowledge of experimental and control group. The mean difference between experimental and control group was found not significant at level of $p > 0.05$ ($t = 0.803$). Hence, it was concluded that here is not much difference was observed in the pre-test knowledge of experimental and control group.

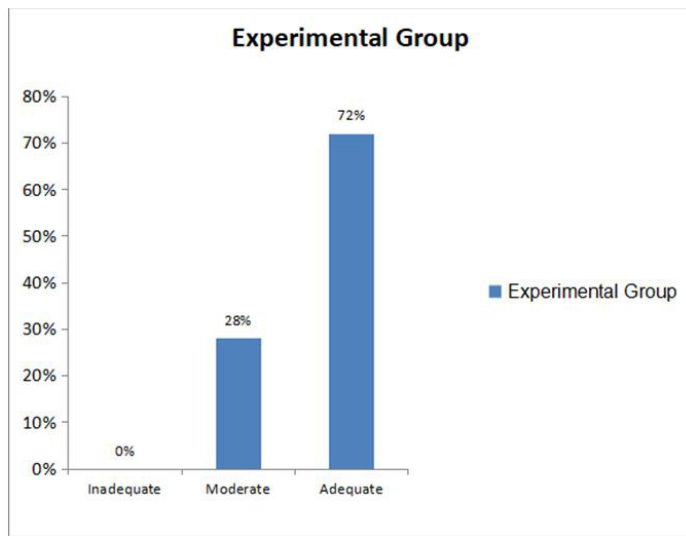
OBJECTIVE 2: To assess the level of posttest knowledge regarding sexual health among adolescent girls.

Table3 (a): Frequency and percentage distribution of adolescent girls according to post-test knowledge regarding sexual health among adolescent girls of experimental and control group.

Level of knowledge	Experimental Group		Control Group	
	Frequency	% age	Frequency	% age
Inadequate	00	00	00	00
Moderate	21	28	56	74.67
Adequate	54	72	19	25.33

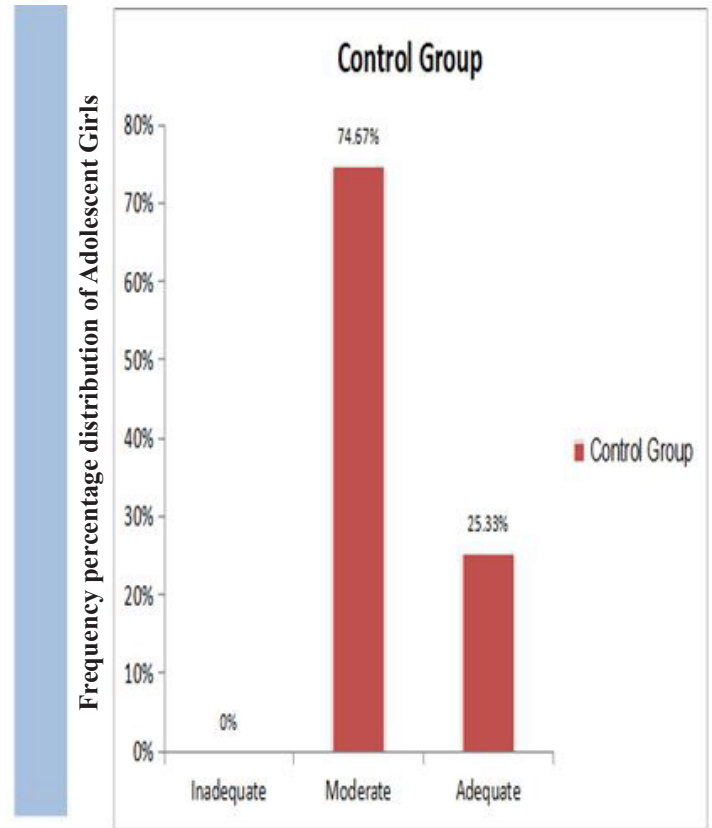
Table 3 (a) depicts that post-test knowledge of adolescent girls in experimental group Majority (72%) of adolescent girls had adequate knowledge followed by (28%) of adolescent girls who had moderate knowledge whereas in control group majority (74.67%) of adolescent girls had moderate knowledge followed by (25.33%) of adolescent girls who had adequate knowledge. None of the adolescent girls in the experimental as well as control group had inadequate level of knowledge.

Therefore the obtained main difference was a true difference and not by chance so the research hypothesis was accepted. This shows that PTP was effective in enhancing the knowledge of adolescent girls.



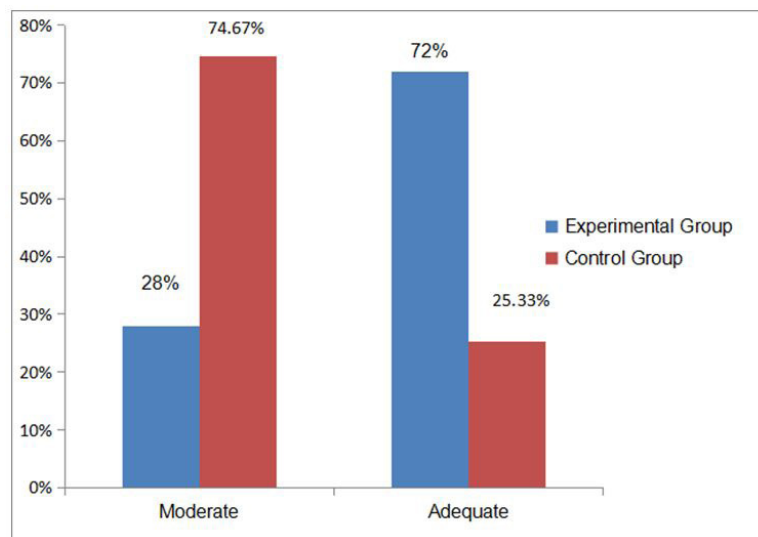
Post-test knowledge score of adolescent girls

Figure 7: Frequency and percentage distribution of post-test knowledge score regarding sexual health among adolescent girls of experimental group.



Post-test knowledge score of adolescent girls

Figure 8: Frequency and percentage distribution of post-test knowledge score regarding sexual health among adolescent girls of control group.



Post-test knowledge score of adolescent girls

Figure 9: Frequency and percentage distribution of post-test knowledge score regarding sexual health among adolescent girls of experimental and control group.

Table 3 (b): Comparison of post-test knowledge score among experimental and control group

Pre-test	Frequency (f)	Mean	Mean Difference	Standard Error Mean	Standard Error Difference	df	Unpaired t- test
Experimental Group	75	31.09	8.59	6.90	0.80	148	9.162*
Control Group	75	22.51	8.59	4.28	0.49	0.49	9.162*

NOTE: * - Significant, Significant if $p < 0.05$

Table 3 (b) Depicts the comparison of post-test knowledge of experimental and control group. The mean difference between experimental and control group was found statistically significant

at the level of $p > 0.05$ ($t = 9.162$). Hence, it was concluded that not much difference was observed in the pre-test knowledge of experimental and control group.

OBJECTIVE 3

Chi square showing between post-test knowledge scores and selected demographic variables.

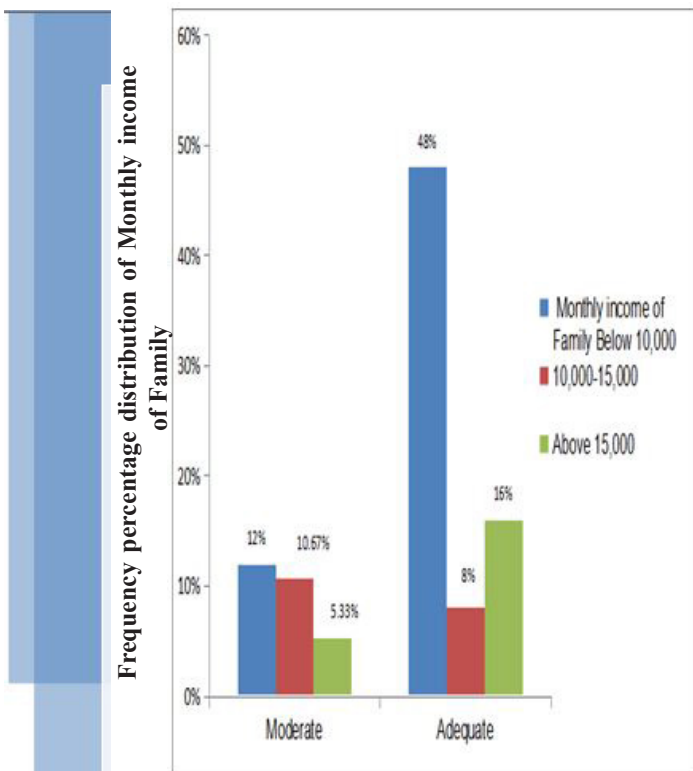
Table 4: Demographic variables of Experimental Group

S.NO.	Demographic Variables	Moderate	Adequate	Chi- df Square				p-value
		f	%	f	%			
1.	Age							
a.	<14	5	6.67	16	14.67			
b.	14-16	11	14.67	34	32	0.899 ^{NS}	2	0.638
c.	>16	5	6.67	19	25.33			
2.	Religion							
a.	Hindu	19	25.33	51	68			
b.	Christian	1	1.33	2	2.67	0.548 ^{NS}	2	0.760
c.	Muslim	1	1.33	1	1.33			
3.	Family type							
a.	Nuclear	10	13.33	18	24			
b.	Extended	2	2.67	2	2.67	5.258 ^{NS}	2	0.240
c.	Joint	9	12	34	45.33			
4.	Place of residence							
a.	Rural	19	25.33	51	68			
b.	Urban	1	1.33	1	1.33	0.548 ^{NS}	2	0.760
c.	Semi-urban	1	1.33	2	2.67			
5.	Monthly income of family							
a.	Below 10,000	9	12	36	48			
b.	10,000- 15,000	8	10.67	6	8	7.398 *	2	0.025
c.	Above 15,000	4	5.33	12	16			
6.	Stream of education							
a.	Medical	5	13.33	25	33.33			
b.	Non-medical	6	9.33	6	8	6.642*	2	0.0361
c.	Others	10	5.33	23	30.67			
8.	Occupation of mother							
a.	Housewife	19	25.33	48	64	0.205 ^{NS}	2	0.902

b.	Government job	1	1.33	2	2.67			
c.	Private job	1	1.33	4	5.33			
9.	Source of information							
a.	Mass media	2	2.67	6	8			
b.	Books and Magazines	18	24	43	57.33	0.487 ^{NS}	2	0.784
c.	Peer groups	1	1.33	5	6.67			

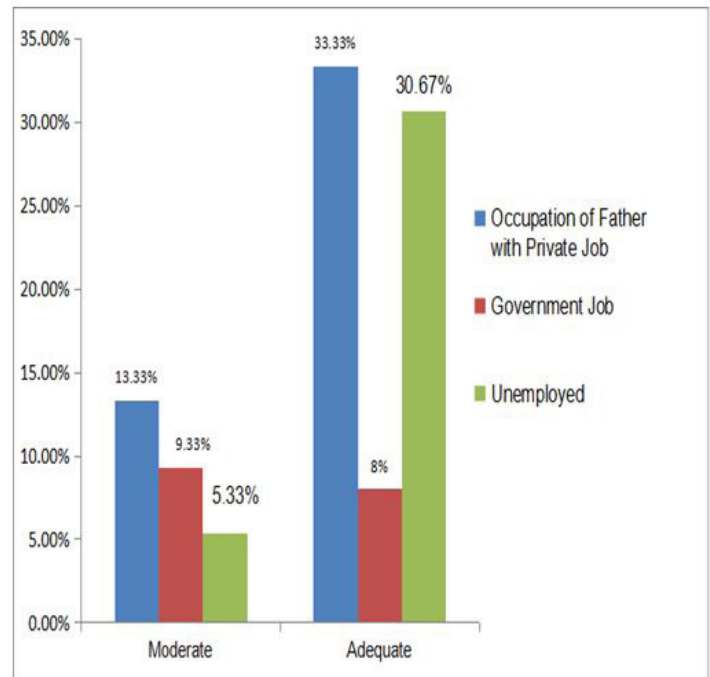
NOTE:- NS - Not significant, * - Significant

Therefore the obtained main difference was a true difference and not by chance so the research hypothesis was accepted. This shows that PTP was effective in enhancing the knowledge of adolescent girls.



Association of post-test knowledge score of experimental group regarding sexual health among adolescent girls with monthly income of family

Figure 10: The findings depicted that chi-square showing significant association between post-test knowledge score with monthly income of family. It was found that adolescent girls of experimental group whose family income was below 10,000, (12%) had moderate knowledge, (48%) had adequate knowledge and in monthly income of father 10,000-15,000 had (10.67%) moderate knowledge, (8%) had adequate knowledge and in monthly income of father above 15,000 had (5.33%) moderate knowledge, (16%) had adequate knowledge. This statistical data found significant at level of $p < 0.05$.

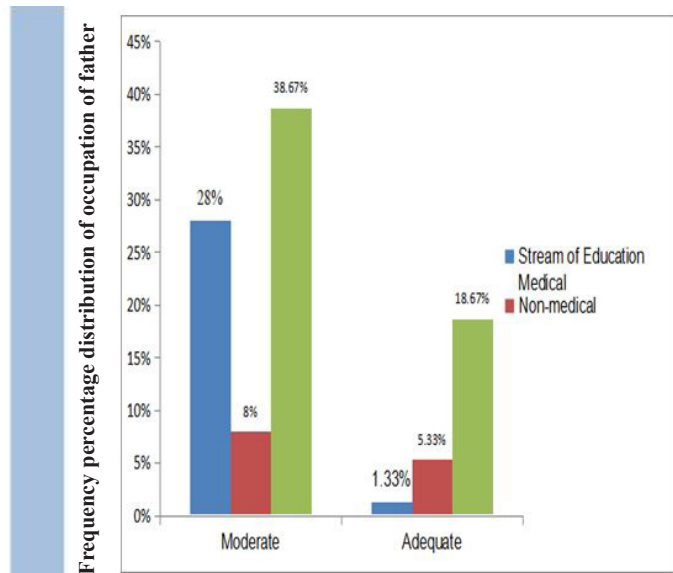


Association of post-test knowledge score of experimental group regarding sexual health among adolescent girls with occupation of father

Figure 11: The findings depicted that chi-square shows significant association between post-test knowledge score with job of father. Out of 75 adolescent girls of experimental group with private job father's (13.33%) had moderate knowledge, (33.33%) had adequate knowledge and father with government job (9.33%) had moderate knowledge, (8%) had adequate knowledge and unemployed father's (5.33%) had moderate knowledge, (30.67%) had adequate knowledge. This statistical data found significant at level of $p < 0.05$.

S.NO.	Demographic Variables	Moderate	Adequate	Chi- df Square				p-value
		f	%	f	%			
1.	Age							
a.	<14	5	6.67	5	6.67			
b.	14-16	30	40	6	8	4.724 ^{NS}	2	0.0942
c.	>16	21	28	8	10.67			
2.	Religion							
a.	Hindu	53	70.67	17	22.67			
b.	Christian	2	2.67	1	1.33	0.7854 ^{NS}	2	0.675
c.	Muslim	1	1.33	1	1.33			
3.	Family type							
a.	Nuclear	20	26.67	9	12			
b.	Extended	7	9.33	2	2.67	0.8139 ^{NS}	2	0.667
c.	Joint	29	38.67	8	10.67			
4.	Place of residence							
a.	Rural	53	70.67	17	22.67			
b.	Urban	1	1.33	1	1.33	0.785 ^{NS}	2	0.675
c.	Semi-urban	2	2.67	1	1.33			
5.	Monthly income of family							
a.	Below 10,000	19	25.33	9	12			
b.	10,000- 15,000	20	26.67	6	8	1.195 ^{NS}	2	0.550
c.	Above 15,000	17	22.67	4	5.33			
6.	Stream of education							
a.	Medical	21	28	1	1.33			
b.	Non-medical	6	8	4	5.33	7.3498*	2	0.025
c.	Others	29	38.67	14	18.67			
7.	Occupation of father							
a.	Private job	34	45.33	12	16			
b.	Government job	10	13.33	1	1.33	2.157 ^{NS}	2	0.340
c.	Unemployment	12	16	6	8			
8.	Occupation of mother							
a.	Housewife	48	64	16	21.33			
b.	Government job	3	4	1	1.33	0.043 ^{NS}	2	0.979
c.	Private job	5	6.67	2	2.67			
9.	Source of information							
a.	Mass media	13	17.33	3	4			
b.	Books and Magazines	37	49.33	14	18.67	0.488 ^{NS}	2	0.784
c.	Peer groups	6	8	2	2.67			

NOTE:- NS - Not significant, * - Significant



Association of post-test knowledge score of control group regarding sexual health among adolescent girls with stream of education

Figure 12: The findings depicted that chi-square shows association between post-test knowledge score with demographic variables like stream of education medical (28%) had moderate knowledge, (1.33%) had adequate knowledge and non-medical (8%) had moderate knowledge, (5.33%) had adequate knowledge and others stream of education (38.67%) had moderate knowledge, (18.67%) had adequate knowledge. This statistical data found significant at level of $p < 0.05$.

MAJOR FINDINGS

Socio-Demographic Variables

- According to age, majority of adolescent girls (48%) in control group and (45.33%) in experimental group were in age of 14-16 years.
- According to religion, majority of adolescent girls (93.33%) in control group and (93.33%) in experimental group belonged to Hindu religion.
- According to family type, majority of adolescent girls (49.33%) in control group and (57.33%) in experimental group lived in joint family.
- According to place of residence, majority of adolescent girls (93.33%) in control group and (93.33%) in experimental group belonged in rural area.
- According to monthly income of family, majority of adolescent girl's family income i.e. (36%) in control group and (60%) in experimental group had below 10000 per month.
- According to stream of education, majority of adolescent girls had other stream of education i.e. (77.33%) in control group and (68%) in experimental group.
- According to occupation of father, majority of adolescent girl's father i.e. (60%) in control group and (46.67%) in experimental group had private job.
- According to occupation of mother, majority of adolescent girl's mother i.e. (85.33%) in control group and (90.67%) in

experimental group were housewife.

- According to source of information, majority of adolescent girls i.e. (69.33%) in control group and (81.33%) in experimental group had information about sexual health from Books /magazines.

OBJECTIVE 1: To assess the level of pretest knowledge regarding sexual health among adolescent girls.

Regarding pre-test knowledge among adolescent girls in experimental group, majority (93.33%) of adolescent girls had moderate knowledge followed by (4%) of adolescent girls who had inadequate knowledge and (2.67%) adolescent girls who had adequate knowledge and in control group majority (92%) of adolescent girls had moderate knowledge followed by (6.67%) of adolescent girls who had inadequate knowledge followed by (1.33%) adolescent girls having adequate knowledge.

Prabhu P. 2008, Conducted a study regarding the effectiveness of teaching programme on pubertal changes and menarche among adolescent girls of Christian School, Udipi. The result of the study revealed that in the pre-test 60% of students had average knowledge, no one had good knowledge [39].

OBJECTIVE 2: To assess the level of posttest knowledge regarding sexual health among adolescent girls.

Regarding post-test knowledge, in experimental group majority (72%) of adolescent girls had adequate knowledge followed by (28%) of adolescent girls have moderate knowledge and in control group majority (74.67%) of adolescent girls had moderate knowledge followed by (25.33%) of adolescent girls who had adequate knowledge.

ITTI JG. (2009) conducted a study to evaluate the effectiveness of planned teaching programme on knowledge of selected aspects of reproductive health among rural adolescent girls studying in composite Junior College of Hirebagewadi. In this study the post test scores revealed that 96.5% of the subjects had good knowledge, 3.49% had an average knowledge regarding reproductive health [40].

OBJECTIVE 3: To find out the association between the level of post test knowledge regarding sexual health among adolescent girls and selected demographic variables

Regarding association of the post-test knowledge on sexual health among adolescent's girls in experimental group a significant association was found between post-test knowledge score with monthly income of family, occupation of father. The association was found to be significant as computed by analysis of variance at $p > 0.05$ and in control group a significant association was found between post-test knowledge score with occupation of mother. The association was found to be significant as computed by analysis of variance at $p > 0.05$

Das Leenardis, Kharbynngar, 2008, conducted a study to assess the knowledge of sexual health among senior school girls of selected schools in North East Region, Assam, and its relationship to selected back ground factors. The result revealed that the main source of information for school girls on sexual matters was from

their friends (49%) and a lower percentage of school girls reported parents, teachers, elderly relatives and health professionals and also the majority of the school girls (66%) felt comfortable to discuss on sexual health with their friends. In all the specific content area the Government school girls scored higher than the private schools. The mean percentage score range for Government school girls were (67.42% -72.9%) and for private school girls were (52.2% -65%). Girls from higher socio-economic group scored higher than school girls from lower socio-economic group [41].

Conclusion

In pre-test, 93.33% of adolescent girls had moderate level of knowledge and 4% of adolescent girls had inadequate knowledge and 2.67% adolescent girls had adequate knowledge in experimental group where as in control group 92% of adolescent girls had moderate knowledge and 6.67% of adolescent girls had inadequate knowledge and 1.33% adolescent girls had adequate knowledge. In post-test, 72% of adolescent girls had adequate knowledge and 28% of adolescent girls had moderate knowledge and in control group majority 74.67% of adolescent girls had moderate knowledge and 25.33% of adolescent girls had adequate knowledge. This concludes that the planned teaching program had significant effect in increasing knowledge of adolescent's girls regarding sexual health. Hence the research hypothesis H1 was accepted due to significant difference between pre-test and post-test knowledge of experimental group at 0.05 level of significance.

Acknowledgement

“To be grateful is to recognize love of God in everything”

Gratitude can never be expressed in words but this is only the deep perception which makes the words flow from one's heart to those who guided and helped me in this dissertation. This is perhaps the easiest and toughest chapter that I had to write. It will be simple to name all the people who helped me in doing this work completely and confidently. It's my privilege to express my thanks even though it's very little.

At the very outset, we would like to thank Almighty for showering his abundant grace, blessings, and unconditional guidance in helping us to complete this dissertation successfully. It was indeed a tough task which was made easier through tremendous help of several people, and we are extremely grateful to them.

I take opportunity to express our sincere gratitude to **Prof. (Mrs.) Santosh Mehta Dean, Faculty of Nursing SGT University Gurugram, Haryana** who gave me an opportunity to undertake this research project by providing facilities, constant support and valuable guidance for conducting the present study.

With a deep sense of gratitude I would like to acknowledge my guide **Prof. K.V.S. Chaudhary, Additional Dean, Faculty of Nursing SGT University Gurugram, Haryana** whose zealous interest, sustained availability, timely support and expert guidance made it possible for me to pursue and complete this study.

A sincere expression of gratitude is extended to the entire **M.Sc. Nursing faculty of college.**

My sincere thanks to the **teachers who have participated in final study.**

I extend my warm appreciation for their cooperation without which this project would not have reached to the completion phase.

My special thanks to **Mr. Mukesh Bharti**, senior **Librarian** (central library) and library staff for extending all needed help throughout the project.

I really thankful to **Mr. Sunil Chamola** who guided me in doing various statistical procedures and for his great cooperation.

I am very grateful to all **experts** for sparing their valuable time towards validating the tool and content of guidelines.

I extremely indebted to **my family members** for their untiring **support, love, concerns, and prayers.** I am immensely thankful to my family for their unconditional love and support throughout my life and being great guide to me during my research study.

Words fail me to express my appreciation to my friends whose dedication and love has helped me for completion of my thesis. Furthermore I would like to appreciate to all **my classmates** for their continuous support and guidance.

Lastly and most importantly I am forever grateful to Almighty for being my best strength and helping us to complete this thesis.

References

1. WHO. Formulating strategies for health for all by the year 2000. Health for All Series No. 2. Geneva: WHO; 1979.
2. Sex education Gulani K. K., Community Health Nursing Principles & Practices, 1st edition, Kumar Publishing House, New Delhi: 2009Pag no.;300.
3. R.Marlow, Babara A. Redding, Text book of Pediatric Nursing, sixth edition, Sanders publication, Page-1122.
4. World Health Organization. Programming for adolescent health and development. WHO Tech Rep Ser No.886;1999.
5. BlumRW, Mmari Kristin Nelson. Risk and Protective Factors Affecting Adolescent Reproductive Health in developing countries department of population and Family Health Sciences Johns Hopkins Bloomberg School of Public Health and Department of Child and Adolescent Health and Development (CAH) World Health Organization, 2005.
6. Marlow RD, Redding AB. Textbook of pediatric, 1st Ed. New Delhi: Harcourt India Private Ltd, : 1114-1116
7. Sharma P, Malhotra C, D.K.Taneja, Renuka Sanha. Problems related to menstruation among adolescent girls. Indian Journal of Pediatrics, Feb 2008;75(2):125-129.
8. Razzaghi AM, Sadigh N, Moghimi A. Age of the onset of puberty in girls and boys of Tehran. Annals of Human Biology 2006;33(5/6):628-33.
9. Bleakly A, Hennessy M. Fishbein M. Public opinion on sex education in US Schools. Archives of pediatrics and adolescent medicine [Online]. 2006 Nov [cited 2007 Nov. 19] ; 160(110) : 1151-1156. Available from : URL : <http://www.Arch Pediatr Adolesc Med> __ public opinion sex education at US Schools...
10. Mahajan P. Sharma N. Parents attitude towards imparting sex education to their adolescent girls. Anthropologists Journal 2008 ; 7(3) : 197-199.
11. Suchdev P. Sex on Campus. A Preliminary Study of Knowl-

- edge, Attitudes and Behavior of University Students in Delhi. *J. Biosoc. Sci* 2008, 30(2): 95-105.
12. Mbonile L Kayombo E, Assessing acceptability of parents / guardians of adolescents towards introduction of sex and reproductive health education in schools at Kinondoni Municipal in Dar es Salaam city. *Journals of Public Health*. 2008; 8 April; 5(1): 26-31.
 13. Haldar A, Ram Chatterjee, *Indian Journal of Community Medicine*, April- 2008.
 14. Kumar P. Study of Sex Related Myths in College Students. *Ind. J. Social Work*, 2009; 56 (8): 313-316.
 15. Mushi DL, Mpembeni RM, John A, *Indian Journal of Community Medicine*, 2009.
 16. R. Crosby, A. Hanson, K. Ranger, the Protective Value of Parental Sex Education: A Clinic-Based Exploratory Study of Adolescent Females. *Journal of Paediatric and Adolescent Gynaecology*. 2009; 22(3): 189-192.
 17. OA Esimai, Go Omoniyi Esan. Awareness of Abnormality among College Students in Urban Area of Life Osun State. *Indian Journal of Community Medicine*. 2010: Vol-35, 63-66.
 18. Razzaghi AM, Sadigh N, Moghimi A. Age of the onset of puberty in girls and boys of Tehran. *Annals of Human Biology* 2007; 33(5/6):628-33.
 19. Sinhababu, Mahapatra S. The level of awareness of about the onsequences of sex act among adolescent girls in Bankura. *India Journal community* [Online]. 2004-2007 sep [cited 2007 Nov. 19]; 29(3):113-116. Available from: URL:<http://www.indmedica.com/journals.php?journalid=7> and issue id=26 and article id=253.
 20. Behera D C. and Padte K. Unwanted Adolescent Pregnancy - Its Present Status. *Journal of Obstetrics and Gynecology of India*, 2007, 41(1):130-145.
 21. Nair P, Grover VL, Kannan A. Awareness and practice of menstruation and pubertal changes among unmarried female adolescents in a rural area of East Delhi. *Indian Journal of Community Medicine* 2007 Apr;32(2):156-7.
 22. Moawed S. *East Mediterr Health J*. 2007, Jan-Mar ; 7 (1-2) : 197-203.
 23. . El-Gilany AH, Badawi K, El-Fedawy S, *Reproductive Health matters* : 2007 Nov; 13 (26) : 147-52.
 24. Deo DS, Ghattargi H. Perception and practice regarding menstruation a comparative study in urban and rural adolescent girls. *Indian Journal of Community Medicine* 2008; 30(1):33-4.
 25. Bhat N. Mahajan P, Sohni M. Awareness regarding sex knowledge among adolescent girls (16-20 years). *Anthropologist Journal* 2008; 6(2) : 101-103.
 26. Das Leenardis, Kharbynngar. A study to ascertain knowledge of sexual health in senior school girls of selected schools at North East Region and its relationship to selected back ground factors, (Unpublished Masters of Science in Nursing Dissertation, University of Delhi, 2008).
 27. Remback GI, Hermansson E. Transition to puberty as experienced by 12 years old Swedish girls. *The Journal of School of Nursing* 2008 Oct;24(5):326-34.
 28. Sharma P, Malhotra C, D.K.Taneja, Renuka Sanha. Problems related to menstruation among adolescent girls. *Indian Journal of Pediatrics*, Feb 2008;75(2):125-129.
 29. Sequeira SJ. Are adolescent girls in urban slums empowered with reproductive health information? *Nightingale Nursing Times* 2009 Nov;5(8):28-30.
 30. Achala S, Sadhna G. Awareness about reproduction and adolescent changes among school girls of different socioeconom-ic status. *Journal of Obstetrics and Gynecology of India* 2009 Aug;56(4):324-8.
 31. Shenghui Li, Hong Huang, Yong Cai ,Gang Xu ,Fengrong Huang ,Xiaoming Shen. Characteristics and determinants of sexual behaviour among adolescents of migrant workers at Shangai (China). *BMC Public Health*. 2009; 9: 195. doi: 10, 1186/1471-2458-9-195
 32. Rondini S. Krugu, *African Journal of reproductive health*, 2009 Dec 13:(4), 51-66.
 33. Irinoye oo, Ogungbemi A, Ojo Ao, a journal on menstrual health, 2009 Mar 12(3), 42-49.
 34. Roy S. Education of adolescents on reproductive health: which way to go?. *Journals of Nepal Medical Association.(JMNA)*. 2010, January-March; 49(177): 88-91.
 35. Adali T, Koc I. Menarche age at Turkey: Secular trend and socio-demographic correlates. *Ann Hum Biol*. 2011 February 15. www.pubmed.com
 36. Prabhu P. Effectiveness of teaching programme on pubertal changes and menarche for pre-adolescent girls in selected school of Udupi district. Unpublished master of nursing dissertation submitted to Manipal university, Manipal; 2008.
 37. McManus A, Dhār L. Study of knowledge, perception and attitude of adolescent girls towards STIs/HIV, safer sex and sex education: (a cross sectional survey of urban adolescent school girls at South Delhi, India). *BMC Women's Health*. 2008 July 23 :8-12.
 38. . ITTI JG. (2009) "A study to evaluate the effectiveness of Planned Teaching Programme on selected aspects of reproduction health among the rural adolescent girls studying in Composite Junior College of Hirebagewadi." (Tq & Dist : Belgaum), Rajiv Gandhi University Of Health Sciences, Bangalore, Unpublished Thesis.
 39. Prabhu P. Effectiveness of teaching programme on pubertal changes and menarche for pre-adolescent girls in selected school of Udupi district. Unpublished master of nursing dissertation submitted to Manipal university, Manipal; 2008.
 40. ITTI JG. (2009) "A study to evaluate the effectiveness of Planned Teaching Programme on selected aspects of reproduction health among the rural adolescent girls studying in Composite Junior College of Hirebagewadi." (Tq & Dist : Belgaum), Rajiv Gandhi University Of Health Sciences, Bangalore, Unpublished Thesis.
 41. Das Leenardis, Kharbynngar. A study to ascertain knowledge of sexual health in senior school girls of selected schools at North East Region and its relationship to selected back ground factors, (Unpublished Masters of Science in Nursing Dissertation, University of Delhi, 2008).

Copyright: ©2021 Pinki Devi. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.