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Arpita Datta

Post- Sister Tutor,
Department of Health and
Family Welfare, GNM
Training School, Jhargram
Government Medical College &
Hospital, West Bengal, India

Effect of educational package on knowledge regarding preparation of menarche among girls in selected school of West Bengal

Arpita Datta

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Abstract

Introduction: Adolescence girls has been recognized as a turbulent period which signifies the transition from girlhood to womanhood and marked with the onset of "MENARCHE". The first menstruation is often traumatic to an premenarcheal girl because it usually occurs without her prior knowing about it. Therefore, health education program to prepare girls to face menarche by increasing their knowledge of menstruation and their readiness to face the menarche.

Objectives: To determine the effect of educational package on knowledge regarding preparation of menarche among girls in selected school of West Bengal.

Method: I conduct a one group pre-test post-test research design study among 60 school girls whose menstruation not yet started. A convenience sampling technique was adopted with structured knowledge questionnaire.

Result: There was significant relation between pre-test knowledge with education of mother (X^2 5.83 $p < 0.05$).

Conclusion: Present study reveals that knowledge regarding menarche being prepared physically and emotionally would lead to more positive attitudes and behaviors with respect to reproductive health.

Keywords: Knowledge, menarche, girls, educational package

Introduction

Adolescence girls has been recognized as a turbulent period which signifies the transition from girlhood to womanhood and considered as a land mark of female puberty. This transitional period is marked with the onset of "MENARCHE" which is generally accepted by young girls, as a sign of maturity. During this period, girl's passes through physical & mental changes that are important in the psychological perception of sexual identity and that is considerably influence mental maturity

Objectives

1. To assess the knowledge of girls regarding preparation of menarche before administration of educational package.
2. To assess the knowledge of girls regarding the preparation of menarche after administration of educational package.
3. To find out the effect of educational package regarding preparation of menarche.
4. To find out the association between pre-test knowledge with demographic variables.

Materials & Methods

A one group pre-test post-test research design study conducted from 6.3.2023 to 1.04 2023 to determine the effect of educational package on knowledge regarding preparation of menarche among girls in selected school of West Bengal. The study setting was Priyanath Roy Sishu Sikha Niketan.

Measurement of tools & content validity

The tool consist unstructured demographic (7 items) & structured knowledge questionnaire (20 items), each correct response score as 1 and wrong score as 0 marks.

Corresponding Author:

Arpita Datta

Post- Sister Tutor,
Department of Health and
Family Welfare, GNM
Training School, Jhargram
Government Medical College &
Hospital, West Bengal, India

The score categorized as Good (>Mean+1SD), Average (Mean -1SD to Mean +1SD), Poor (<Mean-1SD). The tool and educational package was validated by seven experts among them one expert from department of gynecological and obstetrics, two experts from department of community medicine, two experts from department of gynecological and obstetrics nursing, three experts from department of community health nursing. I-CVI & S-CVI of each tool were calculated (Calculated SCVI of tool I was 1, calculated SCVI of tool I was. 97, calculated SCVI of tool III was. 85. In educational package there was 100% agreement.

Inclusion exclusion criteria

- The girls in the 4th & 5th standard in classes.
- The girls whose menstruation is not yet started.
- The girls who are willing to participate

Exclusion criteria

Mentally challenged girls.

Ethical permission informed consent was taken from-

- Ethics Committee, R. G. Kar Medical College & Hospital, Kolkata.
- Informed consent from respondents

Data collection procedure

- After obtaining approval of institutional Ethics Committee from R.G. kar Medical College and Hospital formal administrative permission was taken from the head mistress of Priyanath Roy Sishu Sikha Niketan for data collection.
- Reach to the Priyanath Roy Sishu Sikha Niketan on 6.03.2023 at 11 am.
- Self-introduction was given, the purpose of the study was explained, participants was informed regarding maintaining confidentiality of the information and informed consent was taken from before the study.
- Convenience sampling technique were applied for data collection. Firstly investigator collected name list of the girls from the school register of the respective class and then took the subjects who had meet the sampling criteria
- Pre-test are conducted through structured interview schedule on preparation of menarche.
- Average time taken by each respondent for completion of their response to all the tools was 20 minutes.
- After completion of their response educational package was administer.
- On 8th day after administration of educational package collect post-test data from same respondents.

- The investigator was able to collect data from 10 participant per day.
- Thanked and appreciate the respondents and all resource persons.

Result

Description of sample characteristics related to demographic data

Table 1: Frequency and percentage distribution of girls sample characteristics related to demographic data

Characteristics	Frequency	Percentage (%)
Age in Yrs.		
9-10	35	58.33
11-12	25	41.67
Educational status		
Class IV	31	51.67
Class V	29	48.33
Religion		
Hindu	53	88.33
Muslim	7	11.67
Education of mother		
Primary	12	20
Secondary	26	43.33
H.S.	16	26.67
Occupation of father		
Daily labour	34	56.67
Business	11	18.33
Service	15	25
Type of family		
Nuclear	22	36.67
Joint	38	63.33
Total family income		
< Rs.10000/-	31	51.67
>Rs.10000/- to <20000	21	35
>Rs.20000	8	13.33
Food habits		
Non-veg	60	100
Others	-	-

Table 1 shows majority of the respondents (58.33%) are belongs to 9-10 years of age group. Majority (51.67%) respondents educational status are class IV in standards. Maximum (88.33%) respondents are Hindu. Near about half (43.33%) of the respondent’s mother have secondary education, most (56.67%) of the respondent’s fathers are daily labour. Most of the respondents (63.33%) are belongs to joint family. Majority (51.67%) respondent’s monthly family income are up to Rs.10000/ per month. All respondents (100%) are non-vegetarian.

Table 2: Frequency and percentage distribution of knowledge of girls regarding preparation of menarche before administration of educational package n=60

Knowledge levels	Pre-test	
	Frequency	Percentage (%)
Good (>Mean+1SD) >9	5	8.33
Average (Mean-1SD) to (Mean+ 1SD) 6 – 9	47	78.34
Poor (<Mean-1SD) <6	8	13.33

Maximum score = 20 Minimum score = 0

Table 2 depicts that majority (78.34%) respondents have average knowledge of preparation of menarche before

administration of educational package.

Table 3: Frequency and percentage distribution of knowledge of girls regarding preparation of menarche after administration of educational package. n=60

Knowledge levels	Post-test	
	Frequency	Percentage (%)
Good (>Mean+1SD) >18	12	20
Average (Mean-1SD) to (Mean+1SD) 16 – 18	48	80
Poor (<Mean-1SD) <16	-	-

Maximum score = 20 Minimum score = 0

Table 3 shows that most respondent’s (80%) have average knowledge of preparation of menarche after administration of educational package.

Table 4: Mean, Mean difference, Median, SD and ‘t’ value of pre-test and post-test knowledge scores of girls regarding preparation of menarche. n = 60

Knowledge score	Mean	Mean Difference	Median	Standard Deviation	't' value
Pretest	7.62		8	1.55	
		9.68			46.27*
Posttest	17.30		17	1.11	

t(59)= 2.00, p<0.05, * Significant

Data presents in table 4 shows that the mean post-test knowledge score 17.30 is higher than mean pre-test score 7.62 with a mean difference of 9.68. The obtained mean difference is found to be statistically significant as evident from ‘t’ value of 46.27 is greater than the table value of 2.00 at 0.05 level of significance in the degree of freedom is 59.

Table 5 Chi square value showing association between selected variables (Age, education, religion, education of mother) and pre-test knowledge level of girls regarding preparation of menarche n-60

Variables	Knowledge score		Value of χ^2
	≥Median	<Median	
Religion			0.18
Hindu	24	29	
Muslim	2	5	
Education of mother			5.83*
Up to Secondary	12	26	
Above Secondary	14	8	

χ^2 (df1) 3.841 p< 0.05, * Significant

Data presents in table 5 shows that association between pretest knowledge score with selected variables education of the respondents mother is significant at 0.05 level of significance as evident from Chi-square (χ^2) value after Yates Correction which is higher than the table value.

significantly higher than the mean pre-test knowledge score after administration of educational package at 0.05 level of significance.

H1: The mean post-test knowledge score of the girls regarding knowledge of preparation of menarche is

H01: There is no significant difference between the knowledge score of the girls regarding preparation of menarche after administration of educational package at 0.05 level of significance.

Table 6: Mean, Mean difference, Median, SD and ‘t’ value of pre-test and post-test knowledgescores of girls regarding preparation of menarche. n = 60

Knowledge score	Mean	Mean Difference	Median	Standard Deviation	't' value
Pretest	7.62		8	1.55	
		9.68			46.27*
Posttest	17.30		17	1.11	

t(59)= 2.00, p<0.05, * Significant

Data presents in table 6 shows that the mean post-test knowledge score 17.30 is higher than mean pre-test score 7.62 with a mean difference of 9.68. The obtained mean difference is found to be statistically significant as evident from ‘t’ value of 46.27 is greater than the table value of 2.00 at 0.05 level of significance in the degree of freedom is 59. This shows the mean difference pre-test and post-test

knowledge score is true difference and not by chance. Here the null hypothesis (H01) is rejected and research hypothesis (H1) is accepted. This indicates that educational package is effective in increasing the knowledge of girls regarding preparation of menarche in selected school of West Bengal. n=60

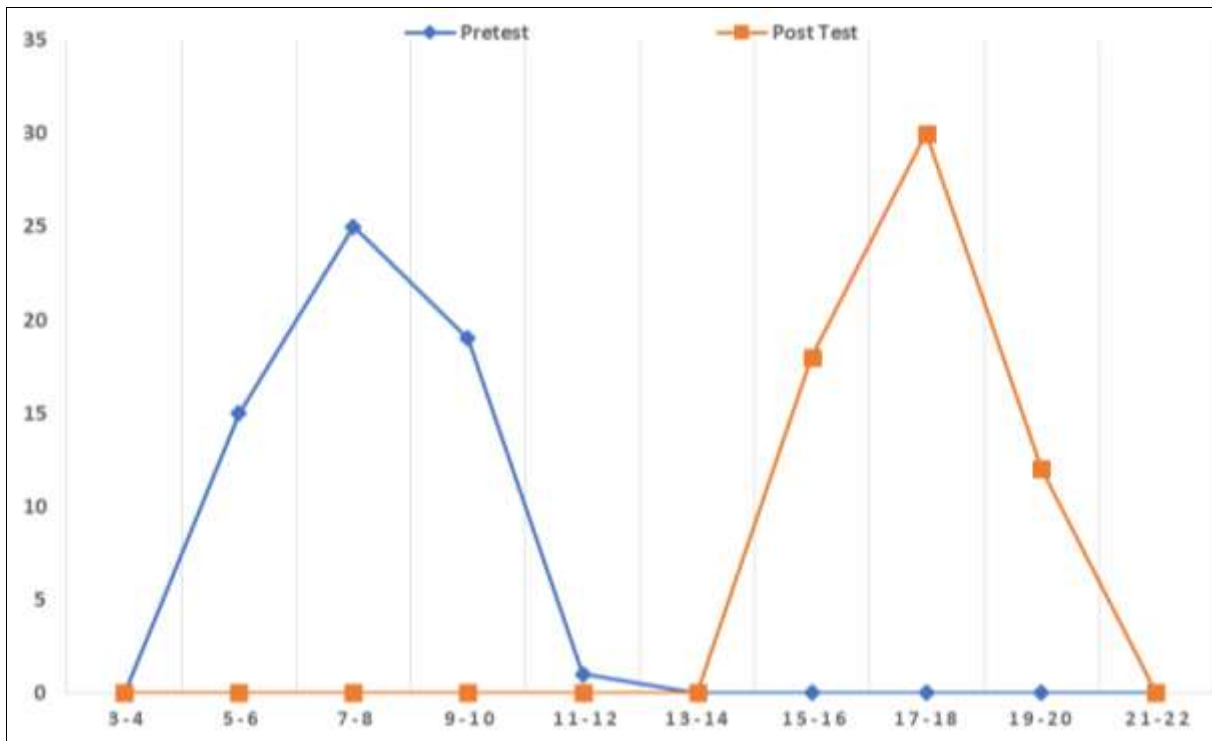


Fig 1: Frequency polygon showing distribution of pre-test and post-test knowledge scores of girls regarding preparation of menarche.

The frequency polygon in figure 1 shows the distribution of knowledge score of pre-test and post-test with the depiction of mean and median. The maximum frequency (25) of pre-test knowledge score lies in the class interval of 7-8 and in post-test knowledge score the maximum frequency (30) lies in the class interval of 17-18.

Mean pre-test knowledge score is 7.62 and median is 8. So mean lies on left side of median. Calculated skew coefficient in pre-test is -0.73, so the curve is found to be negatively skewed. Again, in post-test, mean knowledge score is 17.30 and median is 17. So mean lies right to the median. Calculated skew coefficient in post-test is 0.81. So the curve is positively skewed. So it is evident that the post-test scores of most participants fall beyond the pre-test scores which indicate that there is a considerable gain in knowledge after administration of educational package regarding preparation of menarche is effective.

Discussion in relation to other studies

Findings related to the knowledge of girls regarding menarche

In this study, knowledge level of girls 78.34% had average knowledge and 13.33% had poor knowledge

The finding was supported by another study conducted by Shibani Sharma, Kiran B Pebma (2019) on a descriptive study to assess the knowledge and Preparedness for menarche among pre-adolescent girls studying at selected schools, of Kurall Punjab which reveals that 73% girls had average knowledge about menarche.

Findings related to the effect of educational package in terms of change in pretest & post- test knowledge score

In this study the effect of educational package was measured in terms of change in knowledge score which is significant as the calculated t value (46.279) is more than the table value (2) for df 59 at 0.05 level of significance. This suggests that the educational package was effective in

enhancing the knowledge level of girls regarding preparation of menarche.

The finding was supported by another study conducted by Deepa Mukherjee (January 2022) on Impact of structured Teaching Programme on enhance the knowledge regarding Menstruation and Menstrual Hygiene among Adolescent Girls in Anand district Gujrat (Article no JESBS.79777) showed that there was a significant difference between the pre and post-test knowledge scores as evident from the calculated 't' value of 21.091 ($p \leq 0.05$)

Conclusion

On the basis of the findings, it can be concluded that the educational package was effective in increasing the knowledge of pre menarche girls with the pre-test and post-test knowledge score. It also concluded that the knowledge of girls had statistically significant association with the education of mother.

Author's Contribution

Not available

Conflict of Interest

Not available

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