

A STUDY TO EVALUATE THE EFFECTIVENESS OF A PLANNED TEACHING PROGRAM ON THE KNOWLEDGE REGARDING MENARCHE AMONG PRE-PUBERTAL GIRLS AT SELECTED HIGH SCHOOLS IN URBAN AREA AT UDAIPUR

SARIKA SAMSON^{1*}, DIGPAL SINGH CHUNDAWAT², HARIBALA PALIWAL³

¹Department of Obstetrical and Gynaecological Nursing, Late R. P. Patel Nursing College, Ode, Gujarat, India, ²Department of, AIIMS Bhopal, Madhya Pradesh, India, ³Department of, Tirupati College of Nursing, Udaipur, Rajasthan, India. Email: sarikasam07@gmail.com

Received: 23 October 2020, Revised and Accepted: 27 November 2020

ABSTRACT

Objective: Menarche is the culmination of a series of physiological and anatomical process of puberty such as secretion of estrogen by ovaries in response to pituitary hormones. When menarche occurs, it confirms that the girl has had a gradual estrogen induced growth of uterus, the fluctuations of hormone levels can result in changes of adequacy of blood supply to the parts of the endometrium.

Methods: The method adopted for the present study was evaluative approach. In this study, samples were drawn using non-probability convenient sampling method.

Results: The result showed that the calculated value is greater than the table value at 0.05 levels. Hence, the research hypothesis (H_1) is accepted that there is a significant difference between pre-test and post-test knowledge score. With regard to the knowledge assessment, the mean pre-test score was 11.33 and mean post-test score 18.81. The paired value of pre-test and post-test score was 7.48. This indicated that the planned teaching program (PTP) was effective.

Conclusion: Further, effectiveness of PTP was tested by inferential statistics using the paired "t"-test. A significant difference was found between pre- and post-test knowledge scores of respondents indicating significant increase in knowledge after PTP. Hence, research hypothesis H_1 was accepted and PTP was found to be effective in improving the knowledge of pre-pubertal girls regarding menarche.

Keywords: Effectiveness, Planned teaching program, Pre-pubertal girls, Menarche.

INTRODUCTION

Menarche is the culmination of a series of physiological and anatomical process of puberty such as secretion of estrogen by ovaries in response to pituitary hormones [1].

Several researchers have found that girls who report being adequately prepared have more positive initial experiences with menstruation [2-9].

Knowledge of girls regarding the location and the function of the reproductive structure were faulty and they did not understand how they were related. Girls associated a variety of negative physical and psychological changes with menstruation, indicating that although they did not get learn the biology of menstruation. They already had learned and internalized the cultural stereo types and myths about menstruation [2].

One hundred and eighty-seven (53.1%) had attained menarche. About 40% of subjects were deficient in knowledge about menstruation. Girls' menstrual knowledge was positively associated with parental education. The mean duration of menstrual flow was 4.32 ± 1.15 days (mean \pm SD) with a range of 3-7 days in 95.2% of the study population [3].

Adolescence is the period of transition between puberty and adulthood. Menarche is one of the markers of puberty and therefore can be considered as an important event in the life of adolescent girls [4]. Studies suggested that menarche tends to appear earlier in life as the sanitary, nutritional, and economic conditions of a society improve [5]. For most females, it occurs between the age of 10 and 16 years; however, it shows a remarkable range of variation [6].

When menarche occurs, it confirms that the girl has had a gradual estrogen-induced growth of uterus, the fluctuations of hormone levels can result in changes of adequacy of blood supply to the parts of the

endometrium [1]. Hence, the present study was conducted to evaluate the effectiveness of a planned teaching program (PTP) on the knowledge regarding menarche among pre-pubertal girls at selected high schools in urban area at Udaipur.

METHODS

The method adopted for the present study was evaluative approach as the study aimed at development of an intervention (PTP) for assessing the knowledge of 60 pre-pubertal girls in St. Joseph's Secondary School and St. Patricks Senior Secondary School at Udaipur. This approach would help the investigator to evaluate the effect of specific intervention that is "PTP" on the variable that is knowledge of prepubertal girls in selected high school at Udaipur. In this study, samples were drawn using non-probability convenient sampling method. Data were collected using structured knowledge questionnaire.

FINDINGS/RESULTS

Demographic variables of the respondents

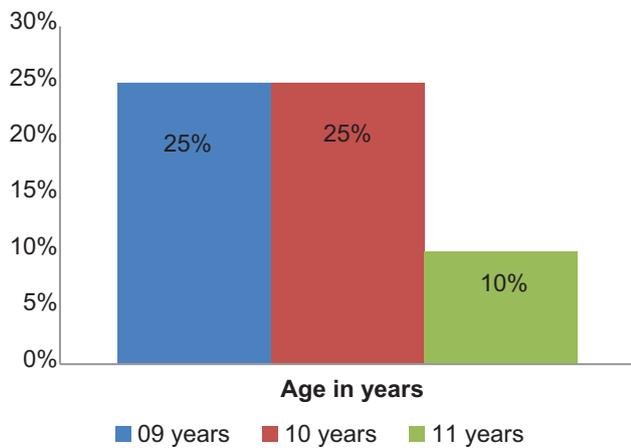
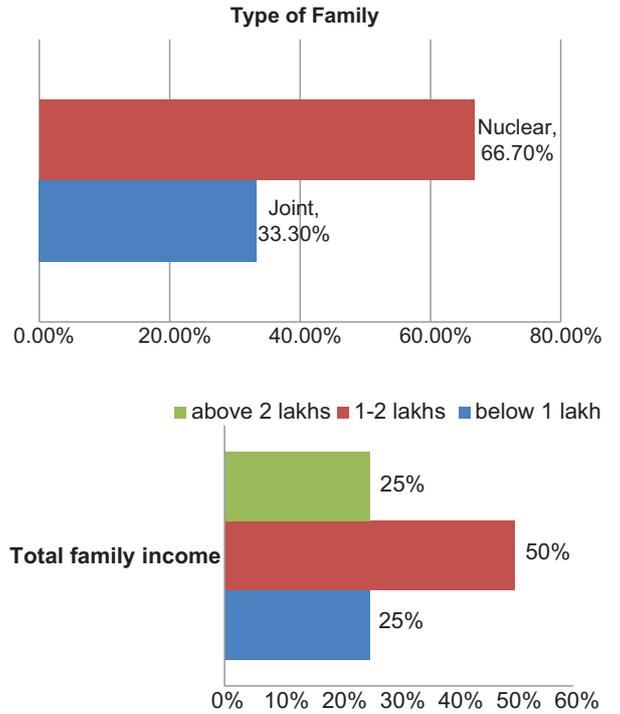
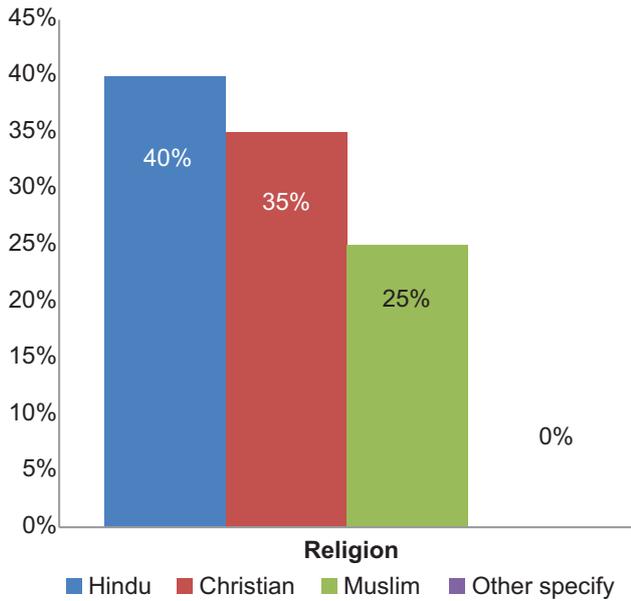
In the present study, it was found that 25 (41.7%) participants were in the age group of both 9 and 10 years and 10 (16.6%) participants were in the age group of 11 years.

Distribution of samples based on religion shows that 24 (40%) participants were Hindu, 21 (35%) were Christians, and 15 (25%) were Muslims.

Distribution of samples based on education of mother shows that 15 (25%) participants had primary education, 24 (40%) participants had secondary education, and 21 (35%) participants had P.U.C level education.

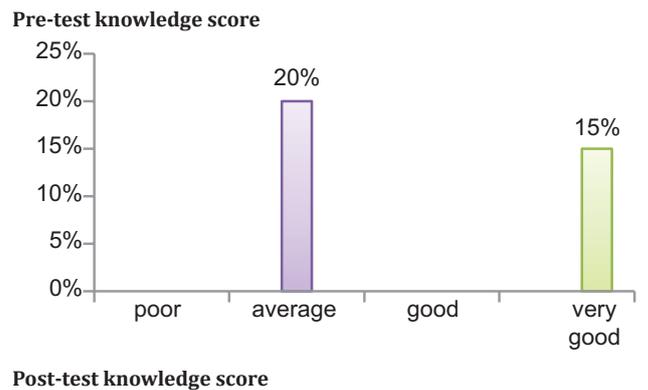
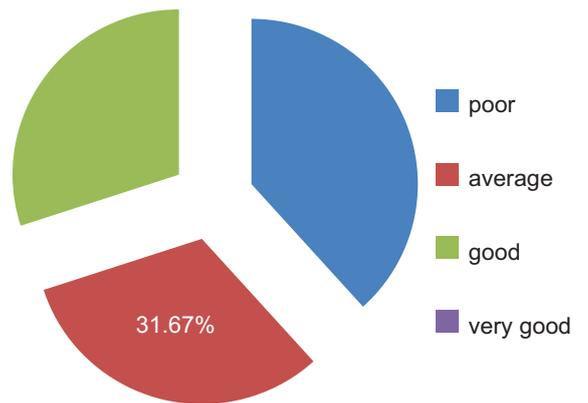
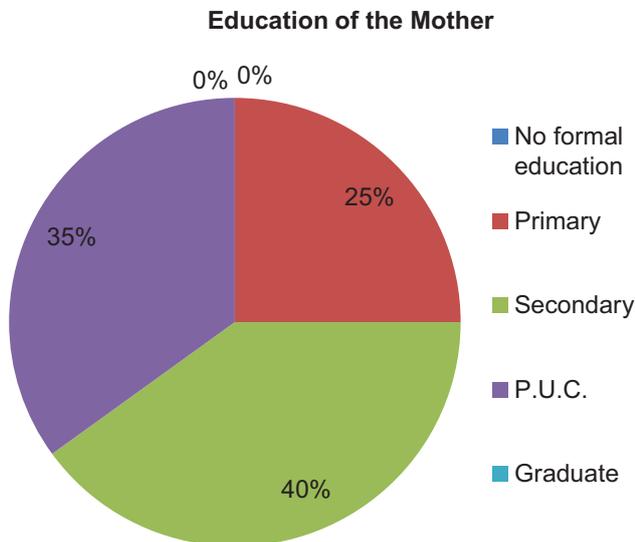
Distribution of samples based on types of family area shows 40 (66.7%) participants from nuclear family and 20 (33.3%) from joint family.

Distribution of samples based on total family income shows that 30 (50%) participants have 1-2 lakhs/month, 15 (25%) have both below 1 lakh, and 15 (25%) have above 2 lakhs.



Findings related to the association between pre-test knowledge score and selected demographic variables

Findings reveals that the Chi-square value of age ($\chi^2 = 1.48$), religion ($\chi^2 = 4.2$), education of the mother ($\chi^2 = 1.2$), and total family income ($\chi^2 = 2.88$) was not significant at 0.05% level of significance but types of family ($\chi^2 = 4.20$) are significant at 0.05% level of significance. Hence, H_2 was accepted.



Findings related to effectiveness of PTP among pre-pubertal girls regarding menarche

The mean post-test knowledge score (18.81) was higher than the mean pre-test score (11.33). The paired value of pre-test and post-test knowledge score (7.48) was significant at 0.05% level, as " t " = 17.57 * p < 0.05. Hence, research hypothesis H_1 was accepted. This indicates that the PTP was effective in increasing the knowledge of pre-pubertal girls regarding menarche (Table 1).

DISCUSSION

Several researches have expressed concerns about the observation that post-menarche girls, even when they are intellectually well prepared for menstruation, report more feelings of shame, apprehension, and disgust and less pride than their pre-menarche peers [8]. If girls are mentally prepared for menarche, then the chances of depression or low self-esteem after experiencing menarche decrease; Ulman has reported such a finding [10].

Discussions in accordance with the objectives of the study and hypothesis. The present study has been undertaken to evaluate the effectiveness of a PTP on the knowledge regarding menarche among pre-pubertal girls at selected high schools in urban area at Udaipur.

Data collected from 60 selected respondents were tabulated, analyzed, and interpreted using descriptive and inferential statistics based on the formulated objectives of the study.

The study attempted to test the following hypotheses:

H_1 : The mean post-test knowledge score of will be significantly higher than their mean pre-test knowledge score regarding menarche among pre-pubertal girls at selected high schools in urban area at Udaipur.

H_2 : There will be significant association between the mean pre-test knowledge score and with their selected demographic variables regarding menarche among pre-pubertal girls at selected high schools in urban area at Udaipur.

For better clarity and thorough understanding, the findings were discussed under the demographic characteristics and objectives.

Description of demographic variables

Distribution of the respondents according to age in years revealed that majority 25 (41.7%) participants were in the age group of both 9 and 10 years and 10 (16.6%) participants were in the age group of 11 years. In relation to religion shows that 24 (40%) participants were Hindu, 21 (35%) were Christians, and 15 (25%) were Muslims. In relation to education of the mother, majority 24 (40%) of respondents had secondary education followed by 21(35%) respondents had education up to P.U.C and 15(25%) participants had primary education. Findings of the study indicate that majority 40 (66.67%) of respondents related to nuclear family and remaining 20 (33.33%) related to joint family. Finding based on total family income shows that 30 (50%) participants have 1-2 lakhs/month, 15 (25%) have both below 1 lakh, and 15 (25%) have above 2 lakhs. The mean knowledge score of respondents was ranged between 11.33% and 18.81%. Further, 20% of respondents found with average knowledge level, 65% of respondents found good knowledge level, and 15% of respondents found very good knowledge.

Table 1: Effectiveness of planned teaching program among pre-pubertal girls regarding menarche

Knowledge assessment	Mean	Mean difference	SD	df	Paired "t" valve	P < 0.05
Pre-test	11.33	7.48	4.73	59	17.57	1.96
Post-test	18.81		4.22			

$t_{(tab)}$ = 1.96 significance at 0.05 level

Association between knowledge levels with demographic variables

However, there was no significant association between demographic variables such as age in years ($\chi^2 = 1.48$), religion ($\chi^2 = 4.20$), education of the mother ($\chi^2 = 1.20$), and total family income ($\chi^2 = 2.88$) but there was a significant association between types of family ($\chi^2 = 4.20$).

The relationship of age, religion, education of the mother, and total family income with the level of knowledge is statistically not significant but types of family significance indicates that there is association between the pre-test knowledge score and the selected demographic variables.

Association between PTP for pre-pubertal girls on menarche

The mean post-test knowledge score (18.81) was higher than the mean pre-test score (11.33). The paired value of pre-test and post-test knowledge score (7.48) was significant at 0.05% level, as " t " = 17.57 * p < 0.05. Hence, research hypothesis H_1 was accepted. This indicates that the PTP was effective in increasing the knowledge of pre-pubertal girls regarding menarche.

CONCLUSION

Adolescent girls in their teenage have many questions and many uncertainties regarding their physical maturation. In many cases, menstrual hygiene is insufficient, resulting from lack of information and education in the family. The onset of menarche introduces a new dimension of life. To cope with it, competent advice is essential in these habit-forming years. This can correct misconception and lead to proper health [7].

The study supports the concept that PTP for adolescence girls is an effective strategy to improve knowledge regarding menstruation. Education program with effective teaching strategies motives adolescence girls to follow healthy practices in day-to-day life. Based on the present study results, it can be concluded that the effectiveness of PTP was tested by inferential statistics using the paired " t " test. A significant difference was found between pre- and post-test knowledge scores of respondents indicating significant increase in knowledge after PTP. Hence, research hypothesis H_1 was accepted and PTP was found to be effective in improving the knowledge of pre-pubertal girls regarding menarche.

ETHICAL CLEARANCE

Taken from the Institutional Ethics Committee.

CONFLICTS OF INTEREST

There are no conflicts of interest in my study.

SOURCE OF FUNDING

None.

REFERENCES

- Ozdemir F, Nazik EE, Pasinlioglu T. Womens' Health and Disease. Tamil Nadu: Department of Nursing; 2009. p. 9-29.
- Koff E, Rierdan J. Preparing girls for menstruation: Recommendations from adolescent girls. *Adolescence* 1995;30:795-811.
- Abioge-Kuteyi EA. Menstrual knowledge and practice amongst secondary schools. *J R Soc* 2000;120:23-6.
- Kaplowitz P. Pubertal development in girl: Secular trends. *Curr Opin Obstet Gynecol* 2006;18:487-91.
- Abioye-Kuteyl EA, Ojofeitimi EO, Aina OI, Kio F, Aluko Y, Mosuro O, et al. The influence of socioeconomic and nutritional status on menarche in Nigerian school girls. *Nutr Health* 1997;11:185-95.
- Diaz A, Laufer MR, Breech LL, American Academy of Pediatrics Committee on Adolescence, American College of Obstetricians and Gynecologists Committee on Adolescent Health Care. Menstruation in girls and adolescents: Using the menstrual cycle as a vital sign. *Pediatrics* 2006;118:2245-50.

7. Fakeye O, Adegoke A. Characteristics of menstrual cycle. *Afr J Med Sci* 1994;23:13-7.
8. Rierdan J, Koff E. Timing of menarche and initial menstrual experience. *J Youth Adolescence* 1985;14:237-43.
9. Rierdan J. Variations in the experience of menarche as a function of preparedness. In: Golub S, editor. *Menarche*. Lexington, Massachusetts: Lexington Books; 1983. p. 119-26.
10. Ulman KH. Impact of Menarche on Self-image and Mood in Adolescent Girls. Toronto: Paper Presented at the Meeting of the American Psychological Association; 1984.