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EFFECTIVENESS OF A PUBESCENT EDUCATIONAL PACKAGE ON KNOWLEDGE AND ATTITUDE REGARDING MENSTRUAL HEALTH AMONG ADOLESCENT GIRLS AT A SELECTED SCHOOL

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ABSTRACT

Background: Menstruation is a natural process that starts from early adolescence and ends in late adulthood. It is the shedding of thickened endometrium with some blood, which occurs each month. This physiological process occurring in females continues to be a myth and mystery in many societies. **Aim and Objective:** To assess the effectiveness of the Pubescent Educational Package (PEP) on knowledge and attitude regarding menstrual health among adolescent girls. **Method & Materials:** The study was conducted using a quantitative research approach with pre-experimental one-group pre-test and post-test design. A total of 63 adolescent girls who fulfilled the inclusion and exclusion criteria were selected as samples by using the non-probability purposive sampling technique. A structured knowledge questionnaire and a modified 5-point Likert scale were used to assess knowledge and attitude respectively. **Result:** The study findings revealed that the comparison of pre and post-test levels of knowledge and attitude regarding menstrual health among adolescent girls. The calculated paired 't' value for knowledge and attitude was $t=22.96$ and $t=17.86$ respectively, which showed a very high statistically significant difference at $p<0.001$ level. **Conclusion:** The study findings showed that there was a significant difference in the level of knowledge and attitude regarding menstrual health among adolescent girls after the administration of PEP, thus favouring more positivity relating to the maintenance of menstrual health.

Keywords: Pubescent Educational Package, knowledge, attitude, menstrual health, adolescent girls.

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I INTRODUCTION

The word adolescent is derived from the Latin word “adolescere” which means grow into maturity. The World Health Organization (WHO) defines adolescents as individuals between 10-19 years of age. The adolescent population occupies 1/5th of the world’s population and in India, 20.9% of the population falls into this age group.¹

The current adolescent population of India is 243 million. Adolescent girls lack access to the right kind of information regarding menstrual health and hygiene. They end up with repeated use of unclean menstrual absorbents that result in the harbouring of microorganisms that increase susceptibility to urinary, perineal, vaginal and pelvic infections, low birth weight babies, and toxic shock syndrome. For giving more emphasis to menstrual health, a day is being celebrated on May 28th as Menstrual Hygiene Day by Water, Sanitation, and Hygiene (WASH) United. By recognising the importance of the promotion of menstrual hygiene, the Government of India started a scheme of making available subsidised sanitary napkins to adolescent girls in rural parts of India in August 2011.²

Adolescents belong to a vital group, not only because they are the entrant population to parenthood but also because they are on the threshold between childhood and adulthood. As they attempt to cross this threshold, they face various physiological, psychological, and developmental changes. One such process of maturity is attaining menarche, the critical life event for girls which takes place during this period and takes the girls across the major milestones on the way to womanhood.³

The reproductive health decisions that the younger generations make today will affect the health and well-being of this upcoming generation and their community. A major section of adolescent girls do not have prior awareness about the menstrual cycle and its hygiene practices leading to poor menstrual hygiene. Hence, this study was conducted among adolescent girls regarding their menstrual health, hygiene and related personal hygiene practices to prevent gynaecological infection and its serious consequences in future.⁴

Statement of the problem

A pre-experimental study to assess the effectiveness of a Pubescent Educational Package on knowledge and attitude regarding menstrual health among adolescent girls at a selected school.

Objectives

1. To assess and compare the pre-test and post-test levels of knowledge and attitude regarding menstrual health among adolescent girls.
2. To assess the effectiveness of the Pubescent Educational Package on knowledge and attitude regarding menstrual health among adolescent girls.
3. To correlate the mean differed levels of knowledge and attitude regarding menstrual health among adolescent girls.
4. To associate the selected demographic variables with the mean differed level of knowledge and attitude regarding menstrual health among adolescent girls.

Null Hypotheses

NH₁: There is no significant difference between the pre-test and post-test levels of knowledge and attitude on menstrual health among adolescent girls.

NH₂: There is no significant correlation of mean differed knowledge score with attitude score on menstrual health among adolescent girls.

NH₃: There is no significant association between mean differed knowledge and attitude score with selected demographic variables.

II MATERIALS AND METHODS

A quantitative research approach was adopted with pre-experimental one group pre and post-test design. The study was conducted at Day Spring Matriculation School in Thiruvallur district with 63 adolescent girls who fulfilled the inclusion criteria, chosen as samples of the study using a non-probability purposive sampling technique.

The samples were selected based on the following:

Inclusion criteria

Adolescent girls

- who were between 11 and 14 years of age
- who can understand Tamil or English

Exclusion criteria

Adolescent girls

- who were ill during the study period
- who were not available during data collection period

Development and description of the tool

The tool constructed for the study was divided into two parts:

Part 1- Data collection tool

Part 2- Intervention tool for menstrual health

Section A: Assessment of background variables: It consisted of -

Demographic variables comprising age, education, type of school, medium of study, religion, family monthly income, dietary pattern and source of information.

Section B: Structured knowledge questionnaire to assess the level of knowledge regarding menstrual health

Items	No of questions
General information on puberty and menstruation	12
Importance of iron and folic acid	6
Management of menstrual hygiene	12
Total	30

Scoring key: Each item was an objective type and closed-ended questionnaire with a single correct answer. Every correct answer was given a score of a “1” mark and the wrong answer was given a “0” mark and the total score was 30. The raw score was converted to percentage to interpret the level of knowledge.

Interpretation of scores

Score	Level of knowledge
<50%	Inadequate
50-75%	Moderately adequate
>75%	Adequate

Section C: Modified 5-point Likert Scale to assess the level of attitude regarding menstrual health

Scoring key: It included 10 items and the minimum score was “1” and the maximum score was “5”. The total score was 50. The raw score was converted to percentage to interpret the level of attitude.

Interpretation of scores

Score	Level of attitude
<50%	Unfavourable
50-75%	Moderately favourable
>75%	Highly favourable

Data collection procedure

The investigator obtained formal permission to proceed with the main study from the Headmistress of Day Spring Matriculation School in Thiruvallur district. The study was conducted in the selected school in the month of January, for a period of one week. The investigator conducted the study by selecting 63 adolescent girls who fulfilled the sample selection criteria by using the non-probability purposive sampling technique. The investigator made the samples sit comfortably in a well-ventilated room and gave a brief introduction about herself and the purpose of the study, following which informed consent was obtained from the samples.

Information regarding the demographic variables was collected and the pre-test level of knowledge and attitude regarding menstrual health was assessed by using the Structured Knowledge Questionnaire and the Modified 5-Point Likert Scale. The Pubescent Educational Package was explained to the adolescent girls with the help of a PowerPoint presentation for about 30-40mins. Reinforcement was given through pamphlets. The post-test was conducted after 7 days of intervention using the same tool.

Ethical consideration

The ethical aspects of research were maintained throughout the study by obtaining an ethical clearance certificate from ICCR, and formal permission from the Principal of the school. Confidentiality was maintained throughout the data collection period and the collected data was used only for research purposes.

III RESULT

The demographic variables of the adolescent girls are depicted in Table 1 and 2. The pre and post-test level of knowledge and attitude are depicted in Table 3, 4, 5 & 6.

Table 1: Frequency and percentage distribution of demographic variables of adolescent girls with respect to age, education, medium, school, religion

N=63

S. No.	Demographic Variables	n	%
1.	Age (in years)		
	10 -11	11	17.5
	11 -12	19	30.2
	12 -13	10	15.9
	13 -14	23	36.5
2.	Education		
	5th standard	7	11.2
	6th standard	21	33.3
	7th standard	21	33.3
	8th standard	14	22.2
3.	Religion		
	Hindu	42	63.5
	Christian	21	33.3
	Muslim	2	03.2

The above Table 1 reveals that most of the adolescent girls were between 13-14 years of age, studying in 6th and 7th standard and belonged to Hindu religion.

Table 2: Frequency and percentage distribution of demographic variables of adolescent girls with respect to type of family, residence, family monthly income, and source of information N=63

S. No.	Demographic Variables	n	%
4.	Type of family		
	Nuclear	36	57.1
	Joint	23	36.6
	Extended	4	06.3
5.	Residence		
	Rural	58	92.1
	Urban	5	07.9
6.	Family monthly income (in rupees)		
	>Rs. 36017	3	04.8
	Rs.18000-36016	10	15.9
	Rs.13495-17999	18	28.6
	Rs.8989-13494	6	09.5
	Rs.5387-8988	5	07.9
	Rs.1803-5386	10	15.9
	< Rs.1802	11	17.5
7.	Source of information regarding menstruation		
	Family members	53	84.1
	Teacher	3	04.8
	Friends	5	07.9
	Mass media	2	03.2

The above Table 2 shows that most of the adolescent girls were from a nuclear family and the majority were residing in rural areas. Most of their family monthly incomes were between Rs.13,495-17,999 and they had received some information regarding menstruation from their family members.

Assessment and comparison of the pre and post-test level of knowledge and attitude regarding menstrual health among adolescent girls

Table 3: Frequency and percentage distribution of pre and post-test level of knowledge regarding menstrual health among adolescent girls **N=63**

Level of knowledge	Pre-test		Post-test	
	n	%	n	%
Inadequate	53	84.1	00	00.0
Moderately adequate	10	15.9	23	36.5
Adequate	00	00.0	40	63.5
Total	63	100	63	100

The above Table 3 shows that most of the adolescent girls had inadequate level of knowledge regarding menstrual health in the pre-test, whereas most of them had gained adequate level of knowledge regarding menstrual health in the post-test.

Table 4: Frequency and percentage distribution of pre and post-test level of attitude regarding menstrual health among adolescent girls **N=63**

Level of attitude	Pre-test		Post-test	
	n	%	n	%
Unfavourable	19	30.2	00	00.0
Moderately favourable	41	65.1	21	33.3
Favourable	3	04.8	42	66.7
Total	63	100	63	100

The above Table 4 shows that most of the adolescent girls had moderately favourable attitude regarding menstrual health in the pre-test but there was an improvement in the post-test with most girls gaining a favourable attitude regarding menstrual health.

Effectiveness of Pubescent Educational Package on knowledge and attitude regarding menstrual health among adolescent girls

Table 5: Comparison of pre and post-test level of knowledge regarding menstrual health among adolescent girls **N=63**

Level of knowledge	Mean	S.D	Student's paired t-test t=22.96 P=0.001*** DF=62, (S)
Pre-test	11.92	3.82	
Post-test	23.02	2.36	

S- Significant ***p<0.001- Very highly significant

DF= Degrees of freedom

The above table 5 shows the comparison of pre and post-test level of knowledge regarding menstrual health among adolescent girls. In the pre-test, the knowledge mean score was 11.92 with S.D 3.82 and the post-test knowledge mean score was 23.02 with SD 2.36. The calculated paired 't' value, $t=22.96$, showed a very high statistically significant difference at $p<0.001$ level.

Table 6: Comparison of pre and post test level of attitude regarding menstrual health among adolescent girls **N=63**

Level of attitude	Mean	S.D	Student's paired t-test
Pre-test	28.03	4.87	t=17.86 P=0.001 *** DF= 62, (S)
Post-test	39.02	2.42	

S- Significant *p<0.001** **Very highly significant** **DF= Degrees of freedom**

The above table 6 shows the comparison of pre and post-test level of attitude regarding menstrual health among adolescent girls. In pre-test, attitude mean score was 28.03 with S.D 4.87 and the post-test attitude mean score was 39.02 with S.D 2.42. The calculated 't' value $t=17.8$, showed that there was a very high statistically significant difference at $p<0.001$ level.

IV DISCUSSION

The comparison of pre and post-test level of knowledge and attitude regarding menstrual health revealed the calculated 't' value $t=22.96$ and $t=17.86$ respectively, which showed a very high statistically significant difference at $p<0.001$ level. This indicates that the Pubescent Educational Package was highly effective in enhancing the knowledge and attitude of the adolescent girls regarding menstrual health.

Silvia SJ. et al., (2017) reported that the experimental study to assess the knowledge regarding menstrual health among adolescent girls at a selected school in Kolar revealed that in pre-test, 90.4% of the girls had inadequate level of knowledge which improved in the post-test with 39.4% gaining adequate level of knowledge and only 60.6% having inadequate level of knowledge regarding menstrual health. The study recommended that conducting planned teaching programmes will improve the knowledge regarding menstrual health among adolescent girls.⁵

Nursing Implications

The healthcare personnel have a vital role to work with the early reproductive age group girls to build their knowledge, understanding and informed decision-making in relation to menstrual health. Nurse Educators should conduct seminars, workshops and conferences for the students regarding menstrual health in order to provide upto date information to enhance their knowledge. Nurse Administrators should collaborate with governing bodies to create policies, mobilise resources and create coalition with non-governmental organisations in order to create awareness regarding menstrual health among adolescent girls. Nurse Researchers could utilise the Pubescent Educational Package in educational settings and also develop it further to improve the knowledge and attitude regarding menstrual health among a greater population of adolescent girls.

Limitations

The investigator found difficulty in collecting the responses as some of the samples felt shy to answer the questions about menstruation. This was managed by ensuring adequate privacy and providing a comfortable environment.

V CONCLUSION

The present study assessed the effectiveness of Pubescent Educational Package (PEP) on knowledge and attitude regarding menstrual health among adolescent girls. The study findings concluded that there was a significant difference in the level of knowledge and attitude regarding menstrual health among adolescent girls after the administration of the Pubescent Educational Package. Hence, the study recommended the utilisation of this package for creating better awareness and improved menstrual health among students in the school settings.

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X CONTRIBUTORS

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