ORIGINAL RESEARCH PAPER

Nursing

KEY WORDS: Adolescent Girls, Dysmenorrhea, Acupressure, Turmeric Therapy, Rice Heat Pad, Hydrotherapy, Knowledge, Self-Learning Booklet.

EFFECTIVENESS OF SELF LEARNING BOOKLET REGARDING COMPREHENSIVE NURSING INTERVENTIONS ON DYSMENORRHEA AMONG ADOLESCENT GIRLS IN SELECTED SETTINGS AT CHENNAI.

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ABSTRACT

Girls are suffering from menstrual pain every month, and they are unaware of the remedies to get relief from the dysmenorrhea due to insufficient knowledge, so providing adequate information about the interventions on dysmenorrhea management enhances productivity, builds confidence, and improves quality of life. **Aim:** The present study was aimed to assess the effectiveness of Self-Learning Booklet regarding Comprehensive Nursing Interventions on Dysmenorrhea among adolescent girls in selected settings, Chennai. **Objectives:** 1. To assess the pre-test knowledge of adolescent girls regarding the comprehensive nursing interventions on dysmenorrhea. 2. To assess the post-test knowledge of adolescent girls regarding the comprehensive nursing interventions on dysmenorrhea. 3. To find out the effectiveness of self-learning booklet on improving the knowledge of adolescent girls. 4. To associate the post-test level of knowledge with selected demographic variables such as age, class, type of family, family history, occupation of parents, education of parents, place of living, age at menarche, duration of menstrual cycle, Previous remedies for menstruation. **Methods:** A Pre experimental one group pre-test, post-test research was adopted. Sixty adolescent girls were selected using non probability convenient sampling technique. The knowledge regarding the Comprehensive Nursing Intervention on dysmenorrhea were assessed before and after administering a self-learning booklet to adolescent girls. The data collection tool used to assess the adolescent girls' knowledge was based on structured questionnaire. **Major Findings of the Study:** The overall analysis of level of Knowledge of adolescent girls regarding comprehensive nursing intervention on Dysmenorrhea showed that mean knowledge scores of the subjects at pre-test were 9.9 (39.60%) with standard deviation 3.08 found to be inadequate Knowledge regarding comprehensive nursing intervention on Dysmenorrhea. After administration of Self-Learning Booklet mean knowledge scores of the subjects were 20.23 (80.92%) with standard deviation 2.09 found to be improvement in the level of knowledge among adolescent girls. Among the participants 81.67% of the adolescent girls had inadequate Knowledge and 11.33% had moderate Knowledge in the pre-test. After administration of the Self-Learning Booklet 76.67 % of the subjects had adequate Knowledge, 23.33% had moderate Knowledge regarding comprehensive nursing intervention on Dysmenorrhea in the post test. The chi square value shows that there is significant association between the post-test level of knowledge score and adolescents demographic variable. (age in year, class standard and living area) and menstrual variable (age at menarche) had more adequate knowledge score than others. It was tested using chi square test. **Conclusion:** Findings of the study show that there was a significant difference in pre-test and post-test level of Knowledge of adolescent girls. From this it is concluded that the Self-Learning Booklet is effective in improving the level of Knowledge of adolescent girls. And there was a significant association between level of Knowledge of adolescent girls and selected demographic variables such as Age, class, family history, type of family, parent's education, parent's occupation, place of living, and selected menstrual variables such as age at menarche, duration of menstrual cycle and previous remedies for menstruation.

INTRODUCTION

One of the most prevalent and underappreciated gynaecological illnesses affecting women who menstruate is dysmenorrhea, better known as menstrual discomfort. Lower abdominal cramps and discomfort radiating to the legs and lower back characterize it, however the symptoms and impact can vary widely. Sometimes it is accompanied by other symptoms like nausea, loose stool, dizziness, etc. Several complementary and alternative tactics have been used to treat dysmenorrhea in order to enhance women's health. One such strategy is the use of medicinal plants having analgesic effects. Among the numerous complementary therapies accepted, practice of water intake, acupressure, rice heat pad and turmeric therapy has been added to the list. The entirety of knowledge, abilities, and customs derived from indigenous theories, beliefs, and experiences across various cultures—whether or not they can be explained—applied to the preservation of health in traditional medicine.

Significance Of The Study

"***As our knowledge grows, so too does our awareness of the vast realms of our ignorance.***"

Bernardi M, et al, 2017 stated that Regardless of age, nationality, or socioeconomic level, dysmenorrhea is the primary cause of gynaecological morbidity in women of reproductive age, carrying a heavier burden than any other gynaecological complaint. Beyond female teenagers, the repercussions affect society as a whole, leading to a significant annual loss in output. According to the World Health Organization, dysmenorrhea is the primary cause of chronic pelvic pain.

In a recent large-scale survey of senior high school females reported having menstruation pain for 93% of teenagers. With rates ranging from 15% to 75%, studies on adult women are less reliable in determining the prevalence of dysmenorrhea and frequently concentrate on a particular group. Although 7%–15% of women experience severe enough discomfort to limit their daily activities, a study of teenagers and young people under the age of 26 found that 41% of individuals had dysmenorrhea-related limits in their daily activities.

Thus, the reason for this study was to evaluate the knowledge by utilizing a self-learning booklet to consider adolescent girls accountable for the reading of all interventions prior to administering the comprehensive nursing interventions. The study also explored with the adolescent girls how self-

learning booklets can encourage them to peruse and acquire needed information with the factual materials constantly.

Problem Statement

A study to assess the effectiveness of self-learning booklet on knowledge regarding comprehensive nursing interventions on dysmenorrhea among adolescent girls in selected settings at Chennai.

OBJECTIVES

1) To assess the pre-test knowledge of adolescent girls regarding the comprehensive nursing interventions on dysmenorrhea.
2) To assess the post-test knowledge of adolescent girls regarding the comprehensive nursing interventions on dysmenorrhea.
3) To find out the effectiveness of self-learning booklet on improving the knowledge of adolescent girls.
4) To associate the post-test level of knowledge with selected demographic variables such as age, class, type of family, family history, occupation of parents, education of parents, place of living, age at menarche, duration of menstrual cycle, Previous remedies for menstruation.

Hypotheses

H_1: The mean of the post test score after intervention will be significantly higher than the mean pre-test score of knowledge of comprehensive nursing interventions on dysmenorrhea among adolescent girls.

H_2: There will be a significant association between the post-test level of knowledge and their selected demographic variables such as age, class, type of family, family history, occupation of parents, education of parents, place of living, age at menarche, duration of menstrual cycle, Previous remedies for menstruation.

Assumption

* The knowledge will be improved after reading the self-learning booklet regarding the comprehensive nursing interventions on dysmenorrhea.
* Selected demographic variable may influence the knowledge of adolescent girls.

MATERIAL & METHODS

A Quantitative Research approach, pre experimental (one group pre-test and post-test) design was adopted to assess the level of knowledge regarding comprehensive nursing Intervention on Dysmenorrhea among adolescent girls. Sample size consists of 60 adolescent girls who fulfils the inclusion criteria. The investigator explained the purpose of conducting the study and reassured the adolescent girls that collected data will be kept confidential.

The samples were selected by non-probability convenient sampling method who fulfilled the inclusion criteria. Inclusion criteria for the study includes adolescent girls who are suffering from primary dysmenorrhea, who are present at the time of data collection, who are interested in the study, who understands Tamil and Exclusion criteria for the study includes adolescent girls who are not present at the time of data collection procedure.

Description Of The Tool & Scoring Procedure

Section – A

Demographic variables such as age, class, type of family, family history, occupation of parents, education of parents, place of living and menstrual variable such as age at menarche, duration of menstrual cycle, previous remedies for menstruation.

The demographic variables are not scored but used for descriptive analysis.

Section – B

The Structured knowledge questionnaire was used to assess the knowledge regarding comprehensive nursing interventions on dysmenorrhea. The tool consists of 25 multiple choice questions. Each question has 3 choices, in that two distracters and one correct option. Every correct response was given the score of 1 and the wrong response 0 score was given. The maximum score was 25 the minimum score was 0.

Level Of Knowledge Scores

Level of Knowledge	Score
Inadequate	0-13
Moderately adequate	14-19
Adequate	20-25

Validity

Structured knowledge questionnaire on comprehensive nursing interventions on dysmenorrhea was developed by the investigator based on the review of the literature. To evaluate the content validity, the tool was given to one medical expert in obstetrical & gynaecology, 5 experts in obstetrics and gynaecological nursing and one bio statistician. They suggested certain modifications in tool. After the modifications they agreed this tool for assessing the effectiveness of self-learning booklet on knowledge regarding comprehensive nursing interventions on dysmenorrhea among adolescent girls of selected settings in Chennai.

Reliability

The tool's reliability was evaluated through the test-retest method. Reliability coefficient of knowledge score is (0.84). This correlation coefficient is very high and it is good tool for assessing effectiveness of self-learning booklet on knowledge regarding comprehensive nursing interventions on dysmenorrhea among adolescent girls of selected settings in Chennai.

Table 1: Effectiveness of Self Learning Module on Knowledge regarding comprehensive nursing intervention on Dysmenorrhea among adolescent girls.

Level of knowledge	Assessments				McNemar's test
	Pretest		Posttest		
	N	%	n	%	
Inadequate	49	81.67 %	0	0.00 %	$\chi 2$=53.46
Moderate	11	18.33 %	14	23.33 %	p=0.001*** (S)
Adequate	0	0.00 %	46	76.67 %	
Total	60	100.0 %	60	100.00 %	

***p>0.05 significant S= significant

Table 1 considered pretest level of knowledge score, 81.67% of them had inadequate level of knowledge score, 18.33% of them had moderate level of knowledge score, none of them had adequate level of knowledge score. Considering posttest level of knowledge score, none of them had inadequate level of knowledge score, 23.33% of them had moderate level of moderate level of score, 76.67% of them had adequate level of knowledge score. Statistically there is a significant difference between pre-test and post-test. It was confirmed using was calculated using McNemar's test.

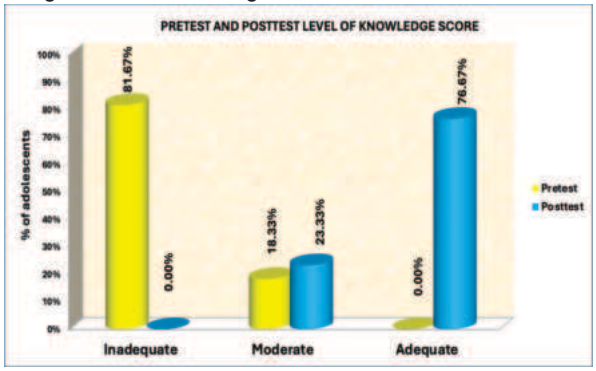
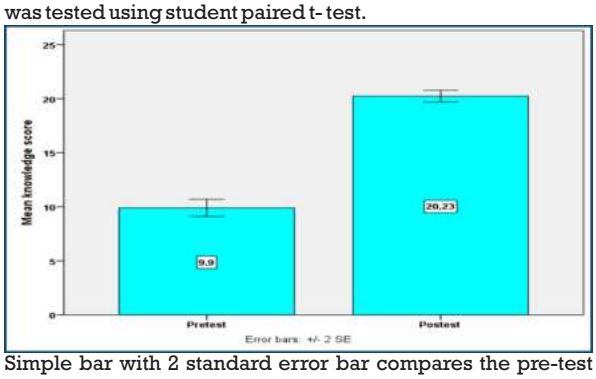


Table 2: Comparison of Pre-test and Post-test Mean Knowledge Score

knowledge score				Mean difference	student paired t-test
Pretest		posttest			
mean	SD	mean	SD		
9.90	3.08	20.23	2.09	10.33	t=23.18 p=0.001*** (s)

Table 2 depicts that there is a significant difference between pre-test and post-test knowledge score. Overall Pre-test mean score is 9.90 score and post-test mean score is 20.23, so, Pre-test and post-test difference of knowledge is 10.33 score. This difference is large and statistically significant difference. It was tested using student paired t- test.

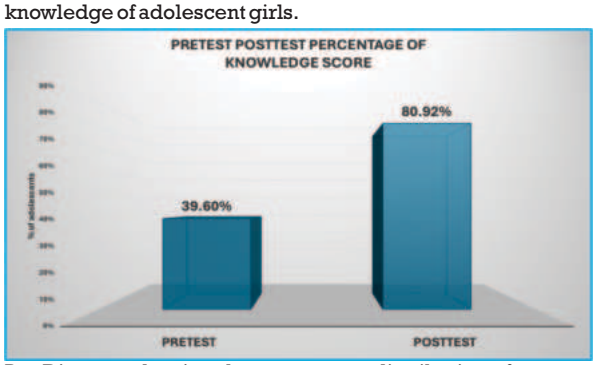


Simple bar with 2 standard error bar compares the pre-test and post-test knowledge score

Table 3: Percentage of Knowledge Gain Score

		Max score	Mean score	% of mean score	mean knowledge score with 95% confidence interval	Percentage of knowledge score with 95% confidence interval
Knowledge	Pre test	25	9.90	39.60 %	10.33(9.44-11.22)	41.32% (37.76%-44.88%)
	Post test	25	20.23	80.92 %		

Table 3 demonstrated that Before intervention adolescents had 39.60% knowledge score and after intervention adolescents had 80.92% knowledge score, so the knowledge gain difference is 41.32%, this difference showed the effectiveness of self-learning booklet for improving the knowledge of adolescent girls.



Bar Diagram showing the percentage distribution of pre-test and post-test knowledge regarding comprehensive Nursing Intervention on dysmenorrhea among Adolescent Girls

Table 4: Association between Post-test level of Knowledge Score and adolescent girls Demographic Variable

Demographic variables		Post-test level of knowledge score				n	Chi square test
		Moderate		Adequate			
		N	%	n	%		
Age	13 -14 years	12	37.50%	20	62.50%	32	$\chi2$=8.14 p=0.02* (S)DF=2
	15-16 years	2	11.11%	16	88.88%	18	
	17 years	0	0.00%	10	100.00%	10	
Class	9th std	10	45.45%	12	54.55%	22	$\chi2$=10.36 p=0.02* (S)DF=3
	10th std	2	13.33%	13	86.67%	15	
	11th std	2	15.38%	11	84.62%	13	
	12th std	0	0.00%	10	100.00%	10	
Type of Family	Nuclear family	10	22.22%	35	77.78%	45	2=0.12 p=0.72 (NS)DF=1
	Joint family	4	26.67%	11	73.33%	15	
Family history of dysmenorrhea	Yes	12	27.91%	31	72.09%	43	2=1.77 p=0.18 (NS)DF=1
	No	2	11.76%	15	88.24%	17	
Occupation of parents	Health professional worker	12	30.77%	27	69.23%	39	2=3.44 p=0.06 (NS)DF=1
	Non-Health professional worker	2	9.52%	19	90.48%	21	
Education of parents	No formal education	1	25.00%	3	75.00%	4	$\chi2$=0.05 p=0.99 (NS)DF=3
	Primary education	2	22.22%	7	77.78%	9	
	Secondary education	1	20.00%	4	80.00%	5	
	Higher secondary education	10	23.81%	32	76.19%	42	
	Graduate and above	0	0.00%	0	0.00%	0	
Living area	Rural	8	16.67%	40	83.33%	48	$\chi2$=5.99 p=0.01** (S)DF=1
	Urban	6	50.00%	6	50.00%	12	

p>0.05 not significant NS= not significant DF= Degrees of Freedom

Table 4 represented that there is significant association between the post-test level of knowledge score and adolescents demographic variable (age in year, class standard and living area) had more adequate knowledge score than others. It was tested using chi square test.

Table 5 : Association between Post-test level of knowledge Score and Adolescent girls Menstrual Variable

Menstrual variables		Post-test level of knowledge score				n	Chi square test
		Moderate		Adequate			
		n	%	n	%		
Age at menarche	10 - 12 Years	9	23.08 %	30	76.92 %	39	$\chi2$=7.18 p=0.02* (S)DF=2
	13 - 14 Years	3	15.79 %	16	84.21 %	19	
	15 - 16 Years	2	100.00 %	0	0.00 %	2	
Duration of menstrual cycle	20 days cycle	0	0.00%	0	0.00 %	0	$\chi2$=0.37 p=0.83 (NS)DF=3
	24 days cycle	4	20.00 %	16	80.00 %	20	
	28 days cycle	7	23.33 %	23	76.67 %	30	
	>28 days cycle	3	30.00 %	7	70.00 %	10	
	Irregular cycle	0	0.00%	0	0.00 %	0	
Previous remedies for menstruation	Nothing	6	40.00 %	9	60.00 %	15	$\chi2$=7.14 p=0.07(NS)DF=3
	Rest	3	12.00 %	22	88.00 %	25	

	Herbal	2	14.29 %	12	85.71 %	14	
	Medi cation	3	50.00 %	3	50.00 %	6	

p>0.05 not significant NS= not significant DF= Degrees of Freedom
p≤0.01 highly significant p≤0.05 significant

Table 5 showed that there is significant association between the post-test level of knowledge score and adolescents menstrual variable (age at menarche) had more adequate knowledge score than others. It was tested using chi square test.

Recommendations

- The same study can be conducted on a larger sample size in order to generalize the results.
- A comparative study can be conducted between state and CBSE board of school students.
- The study can be explored in various settings with similar facilities.
- The study can be conducted by using video assisted program on comprehensive Nursing intervention on Dysmenorrhea.

CONCLUSION

Many adolescent girls commonly suffer from dysmenorrhea, often resorting to self-care practices without seeking professional advice. An effective educational intervention, such as a self-learning booklet, could provide valuable information on non-pharmacological management strategies or comprehensive nursing interventions. These may include techniques like using rice heat pads, hydrotherapy, acupressure, and turmeric therapy, which have the potential to alleviate the adverse effects of dysmenorrhea on adolescent girls."

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