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A Study to Assess the Effectiveness of Hot Application on Abdominal Pain in Dysmenorrhea among Adolescent Girls in selected College Latur

Nasreen Nawaz
Vice Principal, JSPM Maharashtra College of Nursing MIDC Latur, Maharashtra, India

Corresponding Author: **Nasreen Nawaz**

Abstract

Objectives:

- To assess the pain level among the adolescent girls with dysmenorrhea.
- To evaluate the effectiveness of the hot application in management of abdominal pain in dysmenorrhea among adolescent girls.
- To find the association between the level of pain with the demographic variables of dysmenorrhea adolescent girls.

Material and Methods

The research approach adopted in this study is evaluative approach. As one group pre-test, post-test design was chosen for the study. The sample were selected conveniently to suit the study.sample size was 50.

Results

This section presents the analysis and interpretation of data collected from selected college in Latur. The present study was designed to explore the level of stress experienced by the students in selected college in Latur city. Data collected in this study were tabulated, analyzed and interpreted by using descriptive and inferential statistics. The findings are presented under following sections.

Keywords: Adolescence, Dysmenorrhea, Menstruation

Introduction

Adolescence is a stage of developmental transition, a bridge between childhood and adulthood. It is a time of moving from the immaturity of childhood into the maturity of adulthood. Period of life from puberty to adulthood characterized by marked physiological changes, development of sexual feelings, efforts toward the construction of identity, and a progression from concrete to abstract though it involves progress from appearance of secondary sex characteristics to sexual and reproductive maturity. It is the stage of development of adult mental processes, adult identity and transition from total socio-economic dependence to relative independence.

Adolescents are a source of energy, creativity, initiative of dynamism and social renewal. They learn fast and adapt readily. Given the chance to go to school and find work, they will contribute hugely to economic development and social progress. The action program of the international conference on population and development recognized that adolescents have a special need for information on reproductive need, services and those services must respect the adolescent's privacy.

Reproductive health of women is considered as important and one that has wide spread implication on health, well-being and development of the entire population. Women who fall in the reproductive age group, especially adolescent girls' are being neglected in reality. There is a consensus among healthcare providers and researchers' that reproductive age group is a period of marked physical, social and cognitive changes (Dawn, 1994). Hence it is vital that the adolescent's needs to be addressed to direct them towards productivity.

More than one billion girls around the world are in their second decade of life. About 85 percent of these young people live in developing countries. Young people face enormous challenges to learn from relationships. To become active and productive adults, they need social and practical skills. Elders, parents, decision makers and the world at large have a moral and legal obligation to ensure the rights of adolescents. Help them to develop their strengths in a supportive and safe environment (WHO, 2006).

Review of Literature

A cross sectional study was carried on adolescents school girls of rural area, Dakshina Kannada, India, 2021 by Pramodha M.S., Shashirekha H.D. The aim of the study was to assess the knowledge, attitude and practice of menstrual hygiene among adolescents' school girls. 130 adolescents girls were the sample size of the study and data was collected by using pre-designed

questionnaire after obtaining informed consent. The result shows that physiological phenomenon of menstruation was known by 65% of students and 71% of participants, still believed in taboos and myths associated with menses and 30% were shy about carrying sanitary products to school. The study concluded that to overcome the taboos associated with menstruation, schools require group discussion, media campaigns, sex education.

A study was carried out among adolescent girls in Tirupathi, Andhra Pradesh in India, 2021 by Prof. I.V. Lalitha Kumari. The aim of the study was to assess the knowledge, attitude and practices and effectiveness of teaching program on menstrual hygiene among adolescents girls. 80 school going adolescents girls were taken as a sample and data was collected by using self-structured questionnaire. The result shows that 43.75% participants had good attitude where as 31.25% had better attitude and 25% had best attitude in pre test. But in post test 62.5% study participants had best attitude, 25% had better attitude and 12.2% had good attitude towards Menstrual hygiene. This study revealed that it was effective to increase the knowledge, practice and attitude of the school Children on menstrual hygiene because of the structured teaching program administered by the researcher.

Material and Methods

The research approach adopted in this study is Evaluative approach. A one group Pre test Post Test Research design was chosen for the study. The sample were selected conveniently to suit the study sample size was 50.

Results

The data was analyzed by using inferential and descriptive statistics on the basis of objectives.

Section I

Distribution of demographic profiles of dysmenorrhea adolescent girls

Table 1: Frequency and percentage distribution of Adolescent girls according to their age, Religion, Body build, History of Menarche etc., N = 50

S. No	Demographic Variables	Number	Percentage
1.	Age in years		
	(a) 12 years	01	02 %
	(b) 13 years	30	30 %
	(c) 14 years	18	36 %
	(d) 15 years	01	02 %
2.	Religion		
	(a) Hindu	32	64 %
	(b) Muslim	17	34 %
	(c) Christian	01	02 %
3.	Body built		
	(a) Thin	9	18%
	(b) Moderate	34	68%
	(c) Obese	7	14%
4.	Onset of Menarche		
	(a) 12years	1	2%
	(b) 13years	30	60%
	(c) 14years	18	36%
	(d) 15years	1	2%
5	History of Menstrual cycle		
	(a) Regular	38	76%
	(b) Irregular	12	24%
6.	Number of days of Menstrual flow		
	(a) 1 to 3days	15	30%
	(b) 3 to 5days	20	40%
	(c) Above 5 days	15	30%
7.	Period cramps pain		
	(a) 1 to 2 days	21	42%
	(b) 2 to 3days	25	50%
	(c) 4to 5 days	4	8%
8.	Duration of pain		
	(a) First 24hours of menstruation	13	26%
	(b) 24hours to 48hours of menstruation	21	42%
	(c) More than 48hours	16	32%
9	Management of Dysmenorrhea		
	(a) Pharmacological management	10	20%
	(b) Non-pharmacological management	0	0 %
	(c) None	40	80%
10.	Can menstrual pain treated?		
	(a) yes	09	18%
	(b) No	41	82%

Age:

The data presented in the Table 1 and Fig 1 shows that, the age of Adolescent girls Majority of girls 30 (60%) belonged to age group of 13 years followed by 18 (36%) belonged to 14 years and least that is 1 (2 %) belonged to 12 years and 15 years.

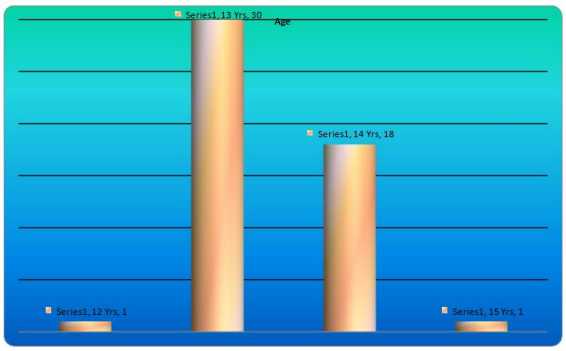


Fig 1: Frequency and percentage distribution of subjects according to their age

Religion:

The data presented in the Table 1 and Fig 2 reveals, Majority of the samples 32 (64%) belonged to Hindu, followed by 17 (34 %) belonged to Muslim and least i.e., 1 (2%) belonged to Christian.

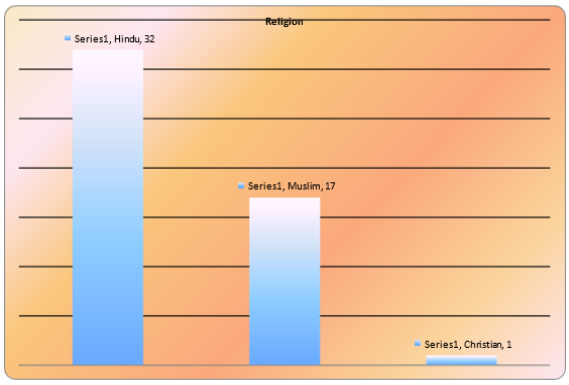


Fig 2: Frequency and percentage distribution of samples according to their Religion

Body Built:

The data presented in Table 1 and Fig 3 reveals that, Majority of the samples 34 (68%) had moderate body built followed by 9 (18%) had thin body built and least samples had 7 (14%) had obese body built.

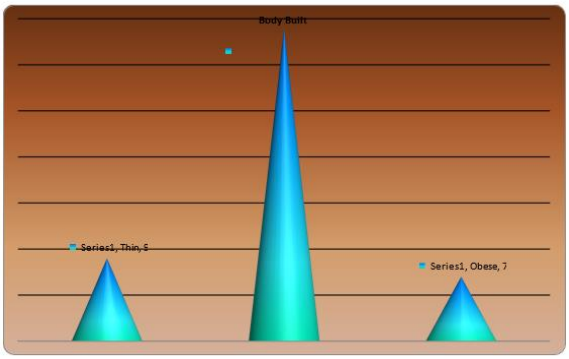


Fig 3: Frequency and percentage distribution of samples according to their Body Built

Onset of Menarche:

The data presented in Table 1 and Fig 4 reveals, Majority of samples 30 (60%) had their menarche at the age of 13 years followed by 18 (36%) had their menarche at the age of 14 years and least that is 1 (2%) had their menarche at 12 and 15 years respectively.

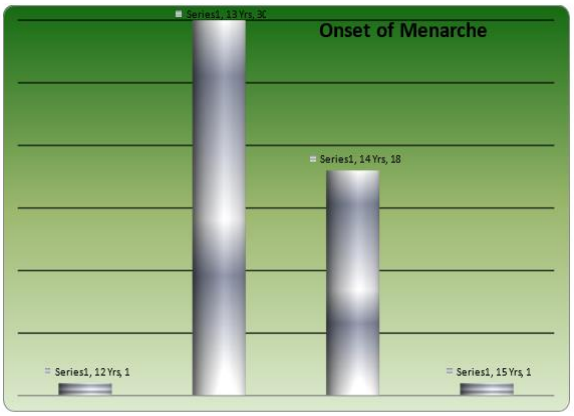


Fig 4: Frequency and percentage distribution of samples according to their Onset of Menarche

History of Menses cycle:

The data presented in Table 1 and Fig 5 reveals, Majority of samples 38 (76%) had regular history of Menses cycle followed by 12 (24%) samples had irregular Menses cycle.

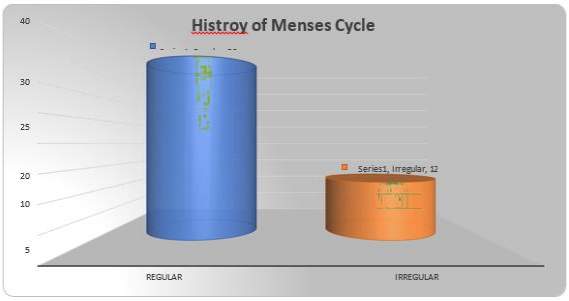


Fig 5: Frequency and percentage distribution of samples according to their Onset of Menarche

Number of days of Menses flow:

The data presented in Table 1 and Fig 6, Majority samples 20 (40%) had 3 to 5 days menses flow followed by 15 (30%) had Menses flow for 1 to 3 days and above 5 days respectively.

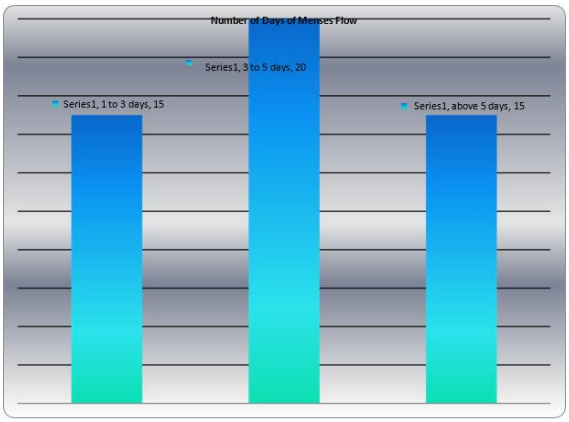


Fig 6: Frequency and percentage distribution of samples according to their Number of Days of Menses flow

Duration of Pain:

The data presented in Table 1 and Fig 7 reveals, Majority samples 21 (42%) had pain lasting between 24 to 48 hrs duration followed by 16 (32%) had pain lasting more than 48 hours duration and least 13 (26%) had pain lasting within first 24 hours of Menses.

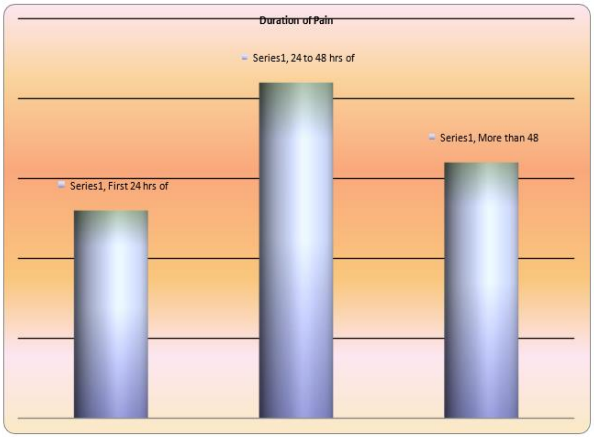


Fig 7: Frequency and percentage distribution of samples according to their Duration of Pain

Duration of Periods of Cramps Pain:

The data presented in Table 1 and Fig 8 reveals, Majority of samples 25 (50%) had cramps pain lasting for 2 to 3 days followed by 21 (42%) had cramps pain lasting for 1 to 2 days least 4 (08%) had cramps pain lasting for 4 to 5 days.

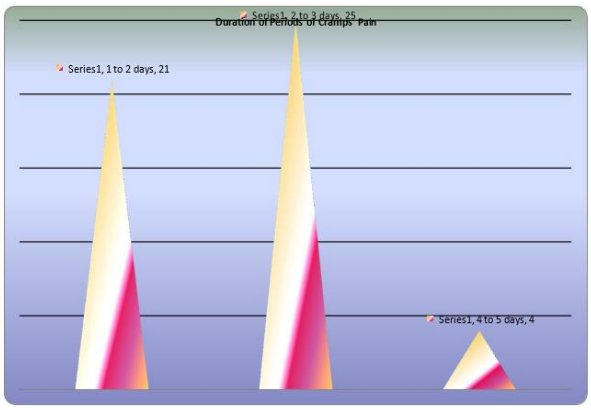


Fig 8: Frequency and percentage distribution of samples according to their Duration of Periods of Cramps Pain

Can Menses cramps controlled with Medication:

The data presented in Table 1 and Fig 9 reveals, Majority of samples 41 (82%) expressed their menses related cramps pain can`t be relieved by Medication and 9 (18%) samples expressed their Menses related cramps pain can be relieved by Medication.

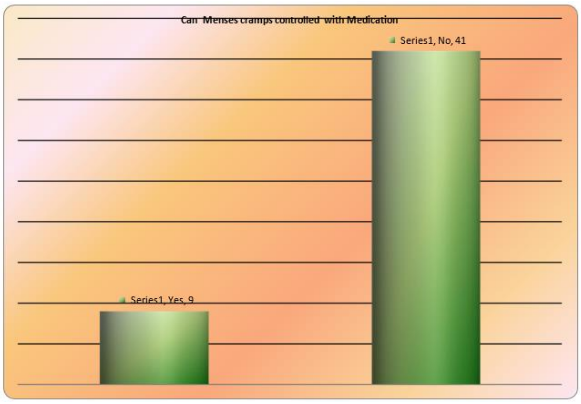


Fig 9: Frequency and percentage distribution of samples according to their

Menses related cramps pain controlled with Medication.

Management of Dysmenorrhea:

The data presented in Table 1 and Fig 10 reveals, Majority of the samples 40 (80%) didn't avail any remedies to relive Dysmenorrhea followed by 10 (20%) sought Pharmacological management to relive Dysmenorrhea while, no samples opted Non-Pharmacological remedies to relive Dysmenorrhea.

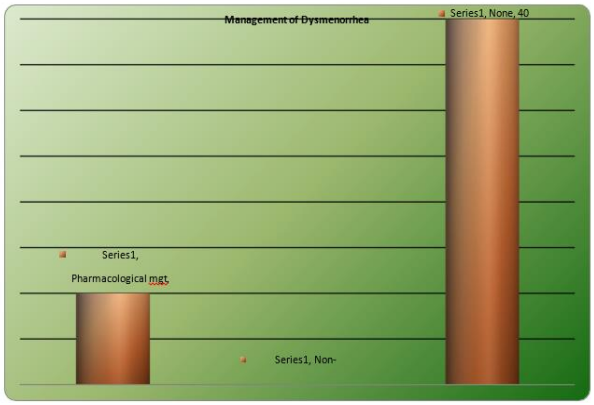


Fig 10: Frequency and percentage distribution of samples according to the Management of Dysmenorrhea

Section II: Description of mean pain scores of Adolescent girls with Dysmenorrhea

a. Description of mean pain scores as perceived by Adolescent girls with Dysmenorrhea

The mean pain scores of Adolescent girls was tabulated to a master sheet. Mean, standard deviation, median and range of pain levels were computed. The findings were presented in the Table 2.

Table 2: Mean, Standard Deviation, Median, and Range of pain levels among Adolescents girls, N =50

Group	Pre-Test				Post-Test			
Variable	Mean	SD	Median	Range	Mean	SD	Median	Range
Pain Levels Experienced by Adolescent Girls with Dysmenorrhea	7.14	1.3486	7.00	06 -10	4.2400	1.0499	4.00	02 -06

Table 3: Frequency, percentage distribution of Adolescent Girls according to levels of Pain Experienced, N =50

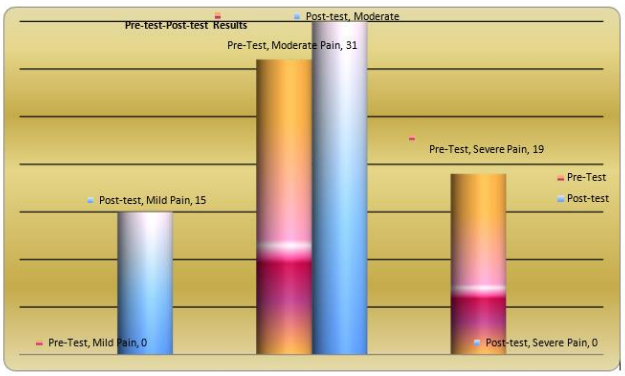
Group	Pre-Test			Post-Test		
Arbitrary Levels of Pain Experienced	Mild	Moderate	Severe	Mild	Moderate	Severe
Pain Levels Experienced by Adolescent Girls with Dysmenorrhea	0	31	19	15	35	0

The data presented in Table 2 shows the levels of pain scores of Adolescent Girls with Dysmenorrhea, the Pre-test levels of pain scores ranged from 06 to 10 and at Post-test the pain scores ranged from 02 to 06. The mean pain score is 07.14 with standard deviation ±1.3486 at Pre-test and 04.2400 with standard deviation ±1.04 at Post-test. The median score was 7 during Pre-test and was 4 at Post-test level.

b. Comparison of the pre-test and post-test Pain scores according to their levels of pain experienced by Adolescent girls with Dysmenorrhea

In order to compare the levels of Pain experienced by Adolescent girls with Dysmenorrhea, Table 3 is prepared from the master data sheet where samples were classified as mild, moderate and severe stress as per the total obtained Pain scores.

The data presented in the Table - 03 shows that the level of Pain experienced by Adolescent Girls with Dysmenorrhea during Pre-test and Post-Test after Hot application, During Pre-test 31 samples reported to have moderate pain and 19 had severe pain, hot application was offered to the samples. In Post-test it was observed that 35 samples reported to have moderate pain and 15 reported to have mild and no samples reported to have severe pain.



c. Comparison of mean pain scores of Adolescent girls before and after Hot application using Paired `t` - test

In order to find the significant difference between mean pain scores of Adolescent girls with Dysmenorrhea, Paired- 't' test was computed. The data is presented in Table 4.

To test the statistical significance following null hypothesis was stated:

H_{01}: There will be no significant difference in the mean perceived stress scores of residential students of paid and free hostels

Table 4: Mean, mean difference, Standard deviation, Standard deviation difference, SEMD, and Paired-'t' test for Pain scores between Pre-Test and Post-Test (Paired Samples Test), N= 50

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre-test – post- test	2.90000	1.82108	.25754	2.38246	3.41754	11.260	49	.000

't'(49)=1.6766p>0.05

The data presented in the Table 4 shows that the mean difference between levels of Pain scores of Pre-test and Post- test Adolescent Girls is 2.90. To find the significance of difference in mean pain scores before and after Hot application among Adolescent girls with Dysmenorrhea, Paired 't' test was computed and obtained value is 't'(49) = 11.260 p>0.05 is found to be significant. Hence the results did not support null hypothesis H01and research hypothesis is accepted. It is inferred that Hot application therapy was successful in reducing significant pain among Adolescent girls with Dysmenorrhea.

Section III: Association of the levels of Pain scores of Adolescent girls with their selected Demographic variables viz, Age, Religion, Body build etc.

To find out the association between the levels of pain with selected personal variables, age, Religion, Body built etc among Adolescent girls with Dysmenorrhea the following null hypotheses was stated.

H_{02}: There will no be significant association between the level of pain and selected personal variables, viz age, Religion, Body built etc. The data is presented in Table 5

Table 5: Chi- square value of Adolescent girls with Dysmenorrhea with their selected personal variables viz. age, religion etc, N=50

Demographic Variables	Hostel students		Chi- square value	df	Level of significan ce
	Moderate	Severe			
Age					
16 yrs	10	02	4.28	3	NS
17 yrs	10	07			
18 yrs	08	09			
19 yrs	03	01			
Religion					
Hindu	17	15	3.13	2	NS
Muslim	13	04	0		
Christian	01	01			
Body Built					
Thin	07	02	1.75	2	NS
Moderate	10	16	9		
Obese	05	02			
Onset of Menarche					
12 yrs	0	01	2.83	3	NS
13 Yrs	20	10	9		

14 Yrs 15 Yrs	10 01	08 0			
History of Menses Regular Irregular	24 07	14 05	0.90	1	NS
Number of Days of Menses flow 1 to 3 Days 4 to 5 Days Above 5 Days	11 12 08	04 08 07	1.33 0	2	NS
Duration of Pain First 24 hrs of Menses 24 hrs to 48 hrs of Menses More than 48 hrs	07 14 10	06 07 06	0.56 3	2	NS
Duration of Periods Cramps pain 1 to 2 days 2 to 3 days 4 to 5 days	14 16 01	07 09 03	2.56 1	2	NS
Can Menses cramps controlled by Medication Yes No	06 25	03 16	0.10 1	1	NS
Management of Dysmenorrhea Pharmacological Management None	03 28	07 12	2.433	1	NS

$\chi 2(3) = 7.89$ (4), P = 0.05 NS = Not Significant S= Significant

Data presented Table 5 shows that the obtained chi- square value is not significant for any of the personal demographic variables and level of pain at 0.05 level. Therefore, the findings don't support the null hypothesis H02, inferring no significant association between levels of pain and selected personal variables.

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