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## Assess the effectiveness of pelvic rocking exercise on dysmenorrhea among adolescent's girls

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### Abstract

Dysmenorrhea is drive from the Greek word 'days' meaning difficult, 'memo' meaning month and 'RRHEA' meaning flow. Many adolescent girls have severe dysmenorrhea in the first three years of menarche. Dysmenorrhea is the most common gynecologic complaints and represents the leading cause of periodic college or school absenteeism. Pelvic rocking exercise helps to relieve back pain by strengthening your stomach muscles and improving blood flow to the uterus. The present study was aim to evaluate the effectiveness of pelvic rocking exercise on dysmenorrhea among school going girls at Kundumedu street Thirumazhsai, Thrivallur. A quantitative approach with quasi experimental research design was adopted for the present study. There is a 40 samples in which pretest conducted before intervention and post-test conducted after intervention. A demographic data and numerical rating pain scale is used in pretest but in p intervention only numerical rating pain scale is used. After intervention the experimental group value of post-test 't' test value is  $t=6.983$  was found to be statistically significant at  $p < 0.001$ . Hence the findings of present study concluded that was significantly improvement in the post test the level of pain in school going girls is reduced after intervention, which clearly infers that the pelvic rocking exercise is effective on dysmenorrhea among school going girls.

**Keywords:** Dysmenorrhea, pelvic rocking exercise, school going girls 10-19 years

### Introduction

An adolescent is somebody who is in between the age 10-19yrs. A teenager is somebody who's kind of permanently there. And so living with them through the various teenage hopes and sorrows and joys was curiously enough a maturing experience forms. The Latin word "adolescere" means "to grow into adulthood" or "to grow into maturity". Developmentally adolescence means, "Achieving an identity. The Indian academy of pediatrics took lead in focusing the attention on adolescence by declaring the year 2000 as the "Year of the Adolescents" and August 1st as the "Teenagers day" Adolescence is defined as the Period from the onset of Puberty to the termination of physical growth and attainment of final adult height and characteristics.

### Adolescence is divided into three phases

#### Early, Middle and Late adolescence

Early adolescence means 10-13 years,

Middle adolescence means 14-16 years and

Late adolescence means 17-19 years of age group. Dysmenorrhea is defined as the difficult menstrual flow or painful menstruation. Pain during or few hours before menstruation is one of the most common gynecologic problems in women

It also define as severe, cramping pain in the lower abdomen that occurs just before or during menses.

### There are two types of dysmenorrhea

#### Primary Dysmenorrhea

#### Secondary dysmenorrhea

Many adolescent girls have severe dysmenorrhea in the first three years of menarche. Dysmenorrhea is the most common gynecologic complaints and represents the leading cause of periodic college or school absenteeism. It is one of the most common health problems among women during their reproductive years. 75% of adolescent girl's experiences menstruation related health problems. Primary dysmenorrhea is defined as painful menses in women with normal pelvic anatomy. It usually begins in during adolescence for the first six months after the attainment of menstruation. The affected women experiences sharp, intermittent spasmodic pain usually concentrated in the supra pubic area.

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Pain may be radiated to the back of the legs and lower part of the back. Systemic symptoms include nausea, vomiting, diarrhea, fatigue, mild fever and headache are fairly common. Pain usually develops within an hour of menstruation and peaks in the first or second days.

Secondary dysmenorrhea is painful menstruation that occurs in the presence of an underlying disorder or pelvic pathology. This is sometimes referred to as psychogenic dysmenorrhea. It is attributed to an unpleasant sexual experience or a lack of information about menstruation and sexuality, combined with negative attitude towards sex. Secondary dysmenorrhea most frequently occurs in women in their late thirty years. Secondary dysmenorrhea is less prevalent than primary dysmenorrhea.

Dysmenorrhea may effect more than 50% of menstruating women, and its reported to prevalence has been highly variable (45-95%). A survey of 113 patient in a family practice setting showed a prevalence of 29-44%, but figure as high as 90% in women aged 18-45 years have been reported. The use of oral contraceptives (OCs) and non-steroidal anti-inflammatory drugs (NSAID), both of which are effective in ameliorating symptoms of Primary Dysmenorrhea, may hinder accurate assessment of prevalence. Exercises have been found to help in relieving the menstrual discomfort through increased vasodilation when subsequently decreases ischemia. Exercise relieves cramps and backaches because it helps to release beta-endorphins, which are internal opioids our own human morphine.

Pelvic rocking exercise helps to relieve back pain by strengthening your stomach muscles and improving blood flow to the uterus. Get down on your hands and knees. Keep your arms straight; Tilt our hips under as you tighten your pelvic muscles, hunching your back slightly. Lie on your back with your feet flat on the floor. Tighten your buttocks and the muscles in your lower abdomen. While pressing the small of your back on to the floor. Hold position 7 seconds and relax 30 seconds repeat 5 time Adolescents comprise nearly one –fifth of the total population. Among total population 47% compromise female.

Dysmenorrhea may effect more than 50% of menstruating women, and its reported to prevalence has been highly variable (45-95%). A survey of 113 patient in a family practice setting showed a prevalence of 29-44%, but figure as high as 90% in women aged 18-45 years have been reported. The use of oral contraceptives (OCs) and non-steroidal anti-inflammatory drugs (NSAID), both of which are effective in ameliorating symptoms of Primary Dysmenorrhea, may hinder accurate assessment of prevalence. Shaimaa Mohammed Goda *et al.* (2020) conducted a study on Effect of Stretching Exercise on

Primary Dysmenorrhea among Secondary Girl Students at Assiut City which showed that “The prevalence of dysmenorrhea among studied students was more than three quarters. More than two thirds of studied student had poor level of knowledge regarding menstruation and dysmenorrhea in pretest while after implementation the education program their knowledge was improved. There was statistically significant difference between student's knowledge in pre-test and post-test. Also, stretching exercise was more effective in reducing pain of dysmenorrhea”.

Purpose of the study 1) to assess the pre-test before intervention among adolescent girls. 2) to assess the effectiveness of pelvic rocking exercise on dysmenorrhea among adolescent girls. 3) associate the pre-test level of dysmenorrhea with selected demographic variable among adolescent girls.

### Methods and Material

The quantitative approach with quasi experimental research design was used in this study. The population of the study included all the school going girls above 10 years at Kundumedu Street, Thirumazhsai, Thrivallur. These criteria included the girls who all are suffering from Dysmenorrhea in pre-test demographic data and numerical rating pain scale are used to assess the pain and take those cases which have more than 0 pain rating scale.. After attending the orientation session and fulfilling written information decided to give intervention. The sample size is 40 which all have undergone pre-test and post-test In intervention there is pelvic rocking exercise and. instead of consuming Analgesia or any other NASD pelvic rocking consider way of relieving pain.

### Results and Discussion

#### Description of the demographic variables

The analysis of the demographic variables revealed that most of the girls with dysmenorrhea age between 17-19 yrs in the group, 14(35%) age of above 10 years 19(47%), menstrual cycle were 28 days 18(45%), duration of flow were 5 days and above 19(47.5%) types of family were nuclear family 21(52.5%) dietary patterns were both 22(55%), and religion Hindu were 20(50%).

The table 1 shows that most of the adolescent girls, 14(35%) were aged between 17 – 19 years, 19(47.5%) were aged above 10 yrs at the time of menarche, 18(45%) had 28 days of menstrual cycle, 19(47.5%) had duration of flow for 5 and above days, 21(52.5%) belonged to nuclear family, 22(55%) were both vegetarian and non-vegetarian and 20(50%) were Hindus.

**Table 1:** Frequency distribution of the demographical data

Demographic Variables	No.	%
<b>Age</b>		
10 – 13 years	13	32.5
14 – 16 years	13	32.5
17 – 19 years	14	35.0
<b>Age at menarche</b>		
Above 10 yrs	19	47.5
10 – 13 yrs	14	35.0
14 – 17 yrs	7	17.5
<b>Menstrual cycle (in days)</b>		
28 days	18	45.0

30 days	9	22.5
Above 30 days	13	32.5
<b>Duration of flow (in days)</b>		
2 days	6	15.0
3 days	15	37.5
5 and above	19	47.5
<b>Type of family</b>		
Joint family	15	37.5
Nuclear family	21	52.5
Others	4	10.0
<b>Dietary pattern</b>		
Vegetarian	4	10.0
Non-vegetarian	14	35.0
Both	22	55.0
<b>Religion</b>		
Christian	10	25.0
Muslim	10	25.0
Hindu	20	50.0

The study shows that in the pre-test, 23(57.5%) had moderate pain, 8(20%) had mild and severe pain respectively and only 1(2.5%) had no pain. Whereas in the post test, 26(65%) had mild pain, 8(20%) had moderate pain and 6(15%) had no pain.

Table 2 depicts that in the pre-test mean score of pain was 4.95 with standard deviation 2.02 and the post-test mean score of pain was 2.48 with standard deviation 1.50. The calculated paired 't' test value of  $t = 6.983$  was found to be statistically significant at  $p < 0.001$

This clearly infers that pelvic rocking administered to adolescent girls with dysmenorrhoea was found to be effective in reduction of pain among the adolescent girls in the post test.

The table 3 shows that the demographic variable type of family had shown statistically significant association with pre-test level of dysmenorrhea among adolescent girls at  $p < 0.05$  level and the other demographic variables had not shown statistically significant association with pre-test level of dysmenorrhoea among adolescent girl.

**Table 2: Mean and standard deviation**

Pain	Mean	S.D	Paired 't' test Value
Pretest	4.95	2.02	$t = 6.983$ $p = 0.000$ $S^{***}$
Post Test	2.48	1.50	

\*\*\* $p < 0.001$ , S – Significant

**Table 3:** Association between post-test level of dysmenorrhoea among adolescent girls with selected demographic variables

Demographic Variables	No pain		Mild		Moderate		Severe		Chi-Square Value
	No.	%	No.	%	No.	%	No.	%	
<b>Type of family</b>									$\chi^2 = 14.923$ d.f=6 $p = 0.021$ $S^*$
Joint family	0	0	4	10.0	8	20.0	3	7.5	
Nuclear family	0	0	3	7.5	15	37.5	3	7.5	
Others	1	2.5	1	2.5	0	0	2	5.0	

The discussion of the study based on objectives and the findings of the study were as follows

#### **The first objective was to assess the pre-test and post-test level of dysmenorrhoea among adolescent girls**

The findings of the analysis revealed that in the pre-test, 23(57.5%) had moderate pain, 8(20%) had mild and severe pain respectively and only 1(2.5%) had no pain.

Whereas in the post test after the intervention of pelvic rocking exercise, 26(65%) had mild pain, 8(20%) had moderate pain and 6(15%) had no pain.

#### **The second objective was to assess the effectiveness of pelvic rocking exercise on dysmenorrhoea among adolescent girls**

The findings of the analysis revealed that in the pre-test mean score of pain was 4.95 with standard deviation 2.02 and the post-test mean score of pain was 2.48 with standard deviation 1.50. The calculated paired 't' test value of  $t =$

6.983 was found to be statistically significant at  $p < 0.001$  level. This clearly infers that pelvic rocking administered to adolescent girls with dysmenorrhoea was found to be effective in reduction of pain among the adolescent girls in the post test.

These findings are found to be consistent with the study findings of Nizy John, Rajitha SR (2019) [9] conducted a study to assess the pre-test and post-test level of dysmenorrhoea among adolescent girls in experimental and control group, to find out the effectiveness of pelvic rocking exercise on dysmenorrhoea among adolescent girls and to associate the pre-test level of dysmenorrhoea with selected demographic and clinical variables in experimental and control group. A quasi experimental with pre-test post-test control group design was used in this study. The study was conducted in selected arts and science colleges at Kanyakumari District. The samples consisted of 60 adolescent girls. Among them, 30 samples were allotted to the experimental group and 30 samples were allotted to the

control group and selected by purposive sampling technique on the basis of inclusion criteria. The tools used for data collection were Demographic Variables, Clinical Variables and Numerical Pain Rating Scale. The study revealed that, the pre-test mean score of dysmenorrhoea was 75.67+13.085 and the post-test mean score was 45.33+27.17. The mean difference was 30.34 and the paired 't' value was 5.511. The obtained 't' value was higher than the table value in experimental group. Hence, it was highly significant at 0.05 level. In control group, the pre-test mean score of dysmenorrhoea was 75.33+14.079 and the post-test mean score was 70.33+17.221. The mean difference was 5 and the paired 't' value was 1.231. The obtained 't' value was lower than the table value. Hence, it was not significant at 0.05 level. The study concluded that, pelvic rocking exercise was effective in reduction of dysmenorrhoea among adolescent girls.

Hence the H1 stated earlier that "There will be a significant difference between pre-test and post-test level of dysmenorrhoea among adolescent girls" was accepted.

### **The third objective of the study was to associate pre-test level of dysmenorrhoea among adolescent girls with selected demographic variables**

The findings of the analysis revealed that the demographic variable type of family had shown statistically significant association with pre-test level of pain among adolescent girls with dysmenorrhoea at  $p < 0.05$  level and the other demographic variables had not shown statistically significant association with pre-test level of pain among adolescent girls with dysmenorrhoea.

Hence the H2 stated earlier that "There will be a significant association between pre-test level of dysmenorrhoea among adolescent girls with their selected demographic variables" was accepted for the demographic variable type of family and not accepted for all other demographic variables.

### **Conclusion**

The analysis revealed the Pelvic Rocking Exercise is a physical exercise that can be used to reduce dysmenorrhoea by strengthening the abdominal muscles and smoothing the blood circulation. The present study concluded that, pelvic rocking exercise helps to reduce the level of dysmenorrhoea among adolescent girls. The overall experience of conducting the study is a novel experience for the researcher in the field of nursing research.

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