

Effectiveness of Pelvic Rocking Exercise on Dysmenorrhea among Adolescent Girls at Selected Girls Higher Secondary Schools Bagalkot

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Abstract

Original Research Article

Background: Dysmenorrhea is the most common gynecologic complaint among adolescent females. Dysmenorrhea in adolescents is usually primary, and is associated with normal ovulatory cycles and with no pelvic pathology. The adolescent care provider's role is to explain the pathophysiology of dysmenorrhea to every adolescent female, address any concern that the patient has about her menstrual period, and review effective treatment options for dysmenorrhea with the patient. **Methods:** This was true experimental study with 60 subjects 30 in experimental group and 30 in control group selected through simple random sampling technique. Data was collected by using numerical pain scale. Data was analyzed by using descriptive and inferential statistics in terms of mean percentage by distribution, paired "t" test and chi square test for association. **Results:** In the experimental group, 15(50%) had severe dysmenorrhea, 15(50%) had moderate, none of the adolescent girls had mild dysmenorrhea in the pre-test where as in the post test, 18(60%) had mild dysmenorrhea, 12(40%) had moderate dysmenorrhea. In control group, 20(67%) had moderate dysmenorrhea, 7(23%) had severe, 3(10%) had mild dysmenorrhea in the pre-test where as in the post test, 13(43%) had mild dysmenorrhea, 10(34%) had moderate dysmenorrhea and 7(23%) had severe dysmenorrhea. However after intervention of pelvic rocking exercise in experimental group the post-test mean score dysmenorrhea was 3.1 ± 1.193 and the post-test mean score of control group was 4.633 ± 2.4830 . The calculated paired 't' test value of $t = (-2.99741)$ which was found to be statistically significant at $p < 0.05$. This clearly infers that pelvic rocking exercise on dysmenorrhea administered among adolescent girls was found to be effective in reducing the level of dysmenorrhea in the post-test among the adolescent girls in experimental by comparing with control group. **Conclusion:** The study proved that the effectiveness of pelvic rocking exercise on dysmenorrhea among adolescent girls at selected girls higher secondary schools of Bagalkot was scientific, logical and cost-effective strategy.

Keywords: Primigravida Mothers, Stress Level, Anxiety Level, Effectiveness, Tailored Nursing Intervention, Socio-Demographic Variables.

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INTRODUCTION

According to World health organization (WHO) adolescent age group lies between 10 to 19 years. Adolescence is a transitional phase through which a child becomes an adult. It is characterized by rapid growth and development of body physiologically, psychologically and socially. Worldwide about more than 1.2 billion are adolescents, this indicates that roughly one in every six persons is an adolescent. In India 240 million are in the age group of 10–19 years, accounting for 21.4 percent of the country's population Adolescent's problems constitute a bulk of morbidities which are generally unrecognized and uncared for, furthering the disease

burden. The different problems of adolescence girls are infections, nutritional deficiency disorders (stunting, wasting), iron deficiency anemia, iodine deficiency disorders, childhood obesity, menstrual disorders, skin, dental and eye problems, RTIs/STIs/HIV/AIDS have appeared as serious problems. Morbidity among adolescent school girls have been studied in different surveys, which indicate that the majority of health problems in adolescent girls are preventable [1].

Adolescence is a time of intense physical, mental, social, and emotional growth and development. Problems in development and hormone equilibrium are discussed, posing as short and tall adolescents, menstrual

disorders, obesity and acne. Adolescents are reputed to be surly, uncommunicative, moody, argumentative and flippant-even all at once! Such habits can be common for teenagers when seen from time to time, because becoming a teen is difficult. Factors that impact teenage development involve growth of the physical, cognitive, mental, social, and behavioral facets. Environmental causes of teenage mental illness are usually a product of stress at its heart. Social stress, loneliness, or drug misuse are important causes of stress in adolescences. Some that causes of stress include: depression-manipulation of the personality, psychological or physical. The most common conditions in teenage mental wellbeing include fear, depression, deficits in concentration and hyperactivity. Concern for development and maturity revolves around a conviction that their own personal issues, thoughts and perceptions are special [2].

Dysmenorrhea is the most common gynecologic complaint among adolescent females. Dysmenorrhea in adolescents is usually primary, and is associated with normal ovulatory cycles and with no pelvic pathology. In approximately 10% of adolescents with severe dysmenorrhea symptoms, pelvic abnormalities such as endometriosis or uterine anomalies may be found. Potent prostaglandins and leukotrienes play an important role in generating the symptoms of dysmenorrhea. The adolescent care provider's role is to explain the pathophysiology of dysmenorrhea to every adolescent female, address any concern that the patient has about her menstrual period, and review effective treatment options for dysmenorrhea with the patient [3].

MATERIALS AND METHODS

Research approach quantitative research approach. the present study is a Quis experimental research design. A purposive sample of 60 adolescent girls were selected from selected from. BVVS higher secondary schools Bagalkot. Written consent was taken from participants for the study. Socio demographic variables, for the present study the data was collected by standardized items of Numerical pain scale. The data was analyzed by using descriptive and inferential statistical in terms of mean, standard deviation, paired t test, independent t test & chi square.

Study Design:

The study design adopted for this study was Quis experimental research design. Here experimental group and control group of adolescent girls were selected from randomization.

Setting of the Study:

The present study was conducted at. BVVS higher secondary schools Bagalkot. The study setting was selected according to the availability of adolescent girls from BVVS higher secondary schools Bagalkot.

Participants:

In the present study participants were. The sample consisted of 60 adolescent girls who met inclusion criteria, segregated 30 in each experimental and control group respectively.

Instruments: The study was conducted using a Self-Structured Questionnaires with items related to socio demographic and Numerical pain scale.

DESCRIPTION OF DATA COLLECTION INSTRUMENTS

Part I: Consists of socio demographic data of adolescent girls

Part II: Numerica rating scale for the assessment of severity of Dysmenorrhea.

Data Collection Procedures:

The main study was conducted between 12-05-2025 to 02-06-2025 in BVVS higher secondary schools Bagalkot, Karnataka, India. A prior formal permission was obtained from the concerned authority and consent was obtained from the subjects. The pretest was conducted by using the socio demographic data and Numeric rating scale was used to assess the level of Dysmenorrhea among adolescent girls. Then the pelvic rocking exercise was administered to the adolescent girls. It took 45 minutes to complete the intervention which was found feasible. A post test was conducted by using same tool after seven days. The study was found to be feasible suggesting no need of modifications for main study.

Variables under study:

Independent variable: An independent variable is pelvic rocking exercise

Dependent variable: Dysmenorrhea among adolescent girls

Socio Demographic Variable:

Socio Demographic variables are characteristics or attributes of subjects. In this study the socio-demographic variables are Age, religion, class, duration of treatment, regularity of menstruation, duration of menstruation, nature flow of menstruation, length of cycle, when do you mainly have dysmenorrhea? Have you taken any measures to control pain.

Setting of the Atudy:

Setting refers to physical location and condition in which data was collected. The present study was conducted at BVVS higher secondary schools Bagalkot.

Ethical Approval:

A certificate of ethical permission was obtained from ethical committee of the institution and written consent was taken from each participant.

RESULTS

Part 1: Description of sociodemographic characteristics of dysmenorrhea among adolescent girls

Part 2: Assessment of pretest level of dysmenorrhea of both experimental and control group

Section A: assessment of level of dysmenorrhea among adolescent girls

Section B: Assessment mean, standard deviation and mean percentile of level of dysmenorrhea of both experimental and control group.

Part 3: Evaluation of the effectiveness of pelvic rocking exercise on dysmenorrhea among adolescent girls.

Section A: Comparison of pre and post test scores of levels of dysmenorrhea among adolescent girls of group of both experimental and control group.

Section B: Effectiveness of pelvic rocking exercise on level of dysmenorrhea among adolescent girls

Part 4: Testing of hypothesis

Section A: Comparison of pre and posttest level of dysmenorrhea among adolescent girls of group of both experimental and control group.

Section B: Comparison of post-test level of dysmenorrhea among adolescent girls of group of both experimental and control group.

Part 5: Association between pretest scores of levels of dysmenorrhea among adolescent girls of group of both experimental and control group with their selected sociodemographic variables.

DISCUSSION

Section-I: Description of Socio-Demographic Characteristics of Sample

Present study shows that Percentage wise distribution of adolescent girls according to their age that majority of the samples in the experimental group 33(44%) and 11(37%) in the control group were in the age group of 14-15 years and 11(37%) in the control group were in the age group of 15-16 years, followed by 10(33%) in experimental group and 8(26%) in control group were in the age of group 16-17 years

Percentage wise distribution of according to their religion reveals that majority 21(70%) of experimental group belongs to Hindu, 5(17%) to Muslim, 4(13%) to Christian and none of the adolescent girls belongs to others in experimental group, whereas 27(90%) belongs to Hindu, 2(7%) to Christia, 1(3%) to

Muslim and none of the adolescent girls belongs to others in control group.

Percentage wise distribution of according to their class reveals that, majority of adolescent girls in the experimental group 15(50%) were 9th std and 13(43%) were in 10th std in the control group. 9(30%) were 10th std in experimental group, followed by 9(30%) were 10th std in control group and least number of adolescent girls in the experimental group 6(20%) were in 8th std and 8(27%) were in 9th std in control group.

Percentage wise distribution of according to their regularity of menstruation reveals that in the experimental group 20(67%) and 26(87%) in the control group had regular menstruation, followed by in the experimental group 10(33%) and 4(13%) in control group had irregular menstruation.

Percentage wise distribution of according to their duration of menstruation reveals majority 17(57%) were between 4-5 days in the experimental group, 16(53%) were between 4-5days in control group 11(37%) were between 3-4 days in the experimental group, 9(30%) were 5 days and above in control group, 2(6%) were 5 days and above in experimental group 2(7%) were between 1-2 days in control group. None of the adolescence girls were between 1-2 days in experimental group.

Percentage wise distribution of according to their nature of flow of menstruation reveals that majority of the adolescent girls 19(63%) and 24(80%) had medium flow of menstruation in experimental and control group, 7(23%), 4(13%) had high flow of menstruation in experimental and control group, 4(14%) and 2(7%) had low flow of menstruation in experimental and control group.

Percentage wise distribution of according to their length of cycle in days reveals that majority of the adolescence girls 17(57%) and 18(60%) had between 26-30 length of cycle in the experimental group and control group whereas 8(27%) had 20-25 length of cycle in the experimental group 9(30%) and 5(16%) had 31-35 length of cycle in the experimental group and control group None of the adolescence girls had >36 length of cycle in the experimental group, 1(3%) had >36 length of cycle in the control group.

Percentage wise distribution of according to their when do you mainly have dysmenorrhea reveals that majority of the adolescence girls 12(40%) had dysmenorrhea on 2nd day in experimental group and 14(47%) had dysmenorrhea on 1st day in control group whereas 11(37%) had dysmenorrhea on 1st day in experimental group, 7(23%) had dysmenorrhea on before onset of menstruation and 2nd day in control group, whereas 6(20%) had dysmenorrhea on before onset of menstruation in experimental group, 1(3%) and

2(7%) had pain throughout the period in both experimental group and control group.

Percentage wise distribution of according to their have you taken any measures to control pain in reveals that majority of adolescence girls 21(70%) and 23(77%) in the experimental group and control group had not taken any measures to control pain and 9(30%) and 7(23%) have taken measures to control pain in the experimental group and control group.

Section-II: To assess the level of dysmenorrhea among adolescent girls at selected higher secondary schools, Bagalkot.

By using numerical scale, the level of dysmenorrhea shows that in the experimental group, 15(50%) had severe dysmenorrhea, 15(50%) had moderate, none of the adolescent girls had mild dysmenorrhea in the pre-test where as in the post test, 18(60%) had mild dysmenorrhea, 12(40%) had moderate dysmenorrhea. In control group, 20(67%) had moderate dysmenorrhea, 7(23%) had severe, 3(10%) had mild dysmenorrhea in the pre-test where as in the post test, 13(43%) had mild dysmenorrhea, 10(34%) had moderate dysmenorrhea and 7(23%) had severe dysmenorrhea.

In this similar study was conducted by Banashri Saikia (2014), Bhavani B B it depicts that none of girls had no and mild dysmenorrhea 42(70%) had moderate dysmenorrhea, 18(30%) had severe dysmenorrhea in pre-test intervention, whereas in post-test intervention 40(66.67%) had no pain, 16(26.66%) had mild pain, 4(6.67%) had moderate pain and none of the girls had severe dysmenorrhea.

Section-III: To evaluate the effectiveness of pelvic rocking exercise on dysmenorrhea among adolescent girls in both experimental and control groups.

Effectiveness of pelvic rocking exercise in experimental group shows that the pretest mean score dysmenorrhea was 6.93 ± 1.611 and the post-test mean score was 3.1 ± 1.193 . The calculated paired 't' test value of $t = 10.29$ which was found to be statistically significant at $p < 0.0001$. This clearly infers that pelvic rocking exercise on dysmenorrhea administered among adolescent girls was found to be effective in reducing the level of dysmenorrhea in the post-test among the adolescent girls in experimental group.

Hence, **H2** is accepted that there is a significant difference between mean pre-test and post-test level of dysmenorrhea of adolescent girls in experimental group.

The similar study was conducted by Laila khartoon (2021) it depicts that in experimental group pretest mean score is 4.95 ± 2.02 and post-test mean score is 2.48 ± 1.50 .

Effectiveness of pelvic rocking exercise in control group shows that the pretest mean score dysmenorrhea was 5.5 ± 2.0615 and the post-test mean score was 4.633 ± 2.4830 . The calculated paired 't' test value of $t = 10.29$ which was found to be statistically significant at $p < 0.05$. This clearly infers that pelvic rocking exercise on dysmenorrhea administered among adolescent girls was found to be effective in reducing the level of dysmenorrhea in the post-test among the adolescent girls in control group.

Hence, **H2** is rejected that there is a no significant difference between mean pre-test and post-test level of dysmenorrhea of adolescent girls in control group.

Effectiveness of pelvic rocking exercise on post-test levels of dysmenorrhea shows that in experimental group the post-test mean score dysmenorrhea was 3.1 ± 1.193 and the post-test mean score of control group was 4.633 ± 2.4830 . The calculated paired 't' test value of $t = (-2.99741)$ which was found to be statistically significant at $p < 0.05$. This clearly infers that pelvic rocking exercise on dysmenorrhea administered among adolescent girls was found to be effective in reducing the level of dysmenorrhea in the post-test among the adolescent girls in experimental and control group.

Hence, **H2** is accepted that there is a significant difference between mean post-test level of dysmenorrhea of adolescent girls in experimental group and control group.

Section-IV: To find out the association between post-test level of dysmenorrhoea among adolescent girls with their selected socio-demographic variables in both experimental and control group.

In the experimental group the demographic variables did not show statistically significant association with pretest level of dysmenorrhea among adolescent girls at $p < 0.05$.

Hence, the **H3** is rejected for all socio demographic variables were not significantly associated with pretest level of dysmenorrhea among adolescent girls at $p < 0.05$ in experimental group.

In the control group the demographic variables family income per month ($\chi^2 = 8.511$, $p = 0.0365$) and duration of menstruation ($\chi^2 = 21.11$, $p = 0.0001$) and length of cycle ($\chi^2 = 10.59$, $p = 0.0142$) had shown statistically significant association with pretest level of dysmenorrhea among adolescent girls at $p < 0.05$. The other demographic variables did not show statistically significant association with pretest level of dysmenorrhea among adolescent girls in experimental group.

Hence, the H3 is accepted for the demographic variable that was family income per month, duration of menstruation, length of cycle was significantly associated with level of dysmenorrhea among adolescent girls at $p < 0.05$ in control group.

Limitations:

The study limited to the sample of 60 adolescents' girls in BVVS higher secondary schools Bagalkot, assessing dysmenorrhea.

CONCLUSION

The study proved that the effectiveness of pelvic rocking exercise on dysmenorrhea among adolescent girls at selected girls higher secondary schools of Bagalkot was scientific, logical and cost-effective strategy.

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