

# To Evaluate the Effectiveness of Self Care Interventions on Cyclic Pelvic Pain Management among Adolescent Girls in Selected Nursing Hostels, Nellore, A.P.

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## ABSTRACT

**Background:** Cyclic pelvic pain is a common gynaecological medical condition among adolescent girls. It is usually clustered with other discomforts and appreciably affects adolescents' quality of life, limitation on daily activities such as school absenteeism, sporting events and other social activities. Pain caused due to contraction of the uterus by a local hormone called prostaglandin. Self care interventions such as hot fomentation, ginger tea, diet, life style modifications, exercises and meditation are known to be effective to manage the cyclic pelvic pain.

**Aim:** The aim of the study was to evaluate the effectiveness of ginger tea, hot fomentation and walking in reduction of cyclic pelvic pain among adolescent girls.

**Objectives:** 1. To assess the level of cyclic pelvic pain among adolescent girls. 2. To evaluate the effectiveness of self-care interventions on cyclic pelvic pain management among adolescent girls. 3. To find the association between the effectiveness of self-care interventions on cyclic pelvic pain management among adolescent girls with the selected socio-demographic variables.

**Methods:** A quantitative approach with Experimental Pre test -Post test design, 100 Adolescents were selected by using Probability-simple random sampling technique.

**Results:** Study revealed that, in pretest, 15(30%) had moderate pain and 35(70%) had severe pain. In post-test-I 20(40%) had no pain, 21(42%) had mild pain and 9(18%) had moderate pain, whereas in post-test-II 18(36%) had no pain, 23(46%) had mild pain, and 09(18%) had moderate pain.

**Conclusion:** It is evident that there is expressive reduction in cyclic pelvic pain after providing self-care interventions.

**Key Words:** Self care interventions, Cyclic pelvic pain, Adolescent girls.

## INTRODUCTION

Peri-menstrual cyclic pelvic pain is an acute subjective experience defined by pelvic pain that present in a repeating time frame associated with the menstrual cycle. The prevalence of peri-menstrual cyclic pelvic pain among adolescent girls ranges from 60 to 93%.<sup>[8]</sup> Self care interventions

such as hot fomentation, ginger tea diet, life style modifications, exercises and meditation are known to be effective to manage the cyclic pelvic pain.<sup>[3]</sup>

Ginger has been effective in reducing inflammation and pain and it can help in alleviating the pain associated with menstrual cramps. It also used for nausea

and symptoms that sometimes accompany with menstruation. Use of 2 table spoon of ginger pieces for every cup of water and taking it 2-3 times a day is recommended. [1] Hot fomentation is a traditional method used for pain relief. Hot fomentation for 15-20 minutes may provide comfort and relaxation, dilates the blood vessels of the muscles, and improves the blood circulation. It also stimulates the sensory receptors in the skin, which will have the effect of decreasing transmission of pain signals to the brain. [7]

Exercise can help to relieve menstrual cramps by releasing endorphins, which are natural pain relievers that counteracts against prostaglandins and by increasing the blood circulation. It is the natural way of lowering stress that may aggravates the cyclic pain. Gentle and low pace aerobic exercise such as walking, pelvic tilts or swimming for three to four times a week is known to be effective. [6] The promotion of health falls firmly into the remit of nursing. The Nurse encompasses the principles of health promotion; indeed, every consultation can be seen as a promoting opportunity. [2]

### NEED FOR THE STUDY

Globally the prevalence of cyclic pelvic pain has ranged from 15.8% to 89.5%. In India the prevalence rate of cyclic pelvic pain among adolescent girls is 33.5%. But the true incidence and prevalence are not clearly established in India. In Andhra Pradesh, a cross sectional study conducted among adolescent girls in Kadapa revealed that the prevalence rate of menstrual problems is 65%. [9]

Most adolescence experience dysmenorrhea in the first 3 years after menarche. A study was conducted to assess the effectiveness of mentha spicata paste on dysmenorrhea among adolescent girls. pre experimental one group pretest post test research design and non probability purposive sampling technique was adopted among 60 samples of adolescent girls. Data was collected using numerical pain scale.

Intervention was given per each sample for 4 days before. The results indicated that the pretest mean of pain was 0.1198 and standard deviation was 7.1749. Whereas the post test mean was 0.0644 and standard deviation 0.3769. The study revealed that menthe spicata paste has great benefit to these adolescent girls as it reduced the severity of pain. [5]

A cross-sectional study was conducted to describe both non-pharmacologic and pharmacologic treatments used by adolescents with cyclic pelvic pain. The interview data collected from 76 adolescent girls at enrolment in a clinical trial prior to any intervention, included information on demographics, dysmenorrhea duration and severity and self treatment. Results shows that the adolescents mean age was 16.8 years (SD=2). Cyclic pelvic pain was moderate in 42%, severe in 58%, associated with nausea in 55%, and vomiting in 24%. Of those attending school (n=66), 46% reported missing one or more days monthly due to cyclic pelvic pain. All used non-pharmacological remedies such as sleeping and heat application. [4]

### PROBLEM STATEMENT

A study to assess the effectiveness of self care interventions on cyclic pelvic pain management among adolescent girls in selected nursing hostels, Nellore.

### OBJECTIVES

1. To assess the level of cyclic pelvic pain among adolescent girls.
2. To evaluate the effectiveness of self-care interventions on cyclic pelvic pain management among adolescent girls.
3. To find the association between the effectiveness of self-care interventions on cyclic pelvic pain management among adolescent girls with the selected socio-demographic variables.

### HYPOTHESES:

#### *Null hypothesis:*

**H<sub>0</sub>1:** There will not be a statistically significant difference in cyclic pelvic pain after providing self-care interventions among adolescent girls.

**H<sub>0</sub>2:** There will not be a statistically significant association between the effectiveness of self-care interventions on cyclic pelvic pain with their selected socio-demographic variables.

### DELIMITATIONS

The study is delimited to:

- Adolescent girls residing in selected hostel.
- Sample size is 100.
- Data collection period is 6 weeks.

### MATERIALS AND METHODS

**Research approach:** The quantitative research approach.

**Research design:** Experimental pre test - post test design.

**Setting:** The study was conducted in Narayana Nursing hostels, Nellore.

**Sample:** Adolescent girls with cyclic pelvic pain and who fulfilled the inclusion criteria were selected for the study.

**Sampling technique:** Probability simple random sampling technique.

**Sample size:** The sample size of the study was 100 adolescent girls.

Criteria for sample selection

#### Inclusion criteria

##### Adolescent girls:

- Belongs to the age group of 17-19 years.
- Who had moderate to severe cyclic pelvic pain.
- Who were willing to participate in the study.

##### Exclusion criteria

- Who had very slight to mild cyclic pelvic pain.
- Who were taking Ayurvedic and herbal treatment.
- Who had cyclic pelvic pain related with other gynaecological disorders.

#### Description of tool

The tool is divided into two parts.

##### Part-I: Demographic variables:

Age, educational qualification, age at menarche, pattern of cycle, duration of cycle, duration of menstruation, amount of menstrual flow, onset of pain, duration of

pain, family history of cyclic pelvic pain and family history of reproductive illness.

##### Part-II: Deals with the Numerical Pain Rating Scale to assess the severity of cyclic pelvic pain.

##### SCORE INTERPRETATION

| S. No | Level of Pain | Score |
|-------|---------------|-------|
| 1.    | No pain       | 0     |
| 2.    | Mild pain     | 1-3   |
| 3.    | Moderate pain | 4-6   |
| 4.    | Severe pain   | 7-10  |

### INTERVENTION PROTOCOL

#### I. GINGER TEA:

*Ginger tea preparation:*

- Slice pieces of ginger after peeling the skin off, and then cut the slices into small pieces.
- Use two tablespoons (500mg) of ginger pieces for every cup (100ml) of water. Add the ginger to the water, bring it to a boil and then turn the heat down and simmer it for 15 minutes.
- Strain the ginger from the water, sweeten with 1 tablespoon (5 grams) of honey and drink the tea.
- Taking it 2 times a day at 3 hours interval is beneficial.

*Mechanism of action:*

Ginger acts as an inhibitor on Cyclooxygenase (COX) and lipoygenase, resulting in inhibition of prostaglandin synthesis. Ginger is therefore worthy of consideration as an analgesic in cyclic pelvic pain.

#### II. HOT FOMENTATION:

- Hot fomentation is a traditional method used for pain relief.
- Hot fomentation with hot water (103<sup>0</sup>-104<sup>0</sup>F) bag for 15-20 minutes over lower abdomen at the time of onset of pain may provide comfort and relaxation, dilates the blood vessels of the muscles, and improves the blood circulation.
- It stimulates the sensory receptors in the skin, which will have the effect of decreasing transmission of pain signals to the brain.

#### III. EXERCISE:

- Exercise can help to relieve menstrual cramps by releasing beta-endorphins,

which are internal opioids, one's own "human morphine", that counteracts against prostaglandins and by increasing the blood circulation.

- It is the natural way of lowering stress that may aggravates the cyclic pain.
- Walking is an effective exercise to reduce cyclic pelvic pain.
- Walking for 30 minutes every day in the morning increases the endorphin level which provides relief.

## RESULTS & DISCUSSION

Table-1: Frequency and percentage distribution of severe cyclic pelvic pain among adolescent girls in experimental and control group. (N=100)

| S.No | Cyclic pelvic pain | Experimental group (n=50) |            | Control group (n=50) |            |
|------|--------------------|---------------------------|------------|----------------------|------------|
|      |                    | f                         | %          | f                    | %          |
| 1.   | Moderate pain      | 15                        | 30         | 18                   | 36         |
| 2.   | Severe pain        | 35                        | 70         | 32                   | 64         |
|      | <b>Total</b>       | <b>50</b>                 | <b>100</b> | <b>50</b>            | <b>100</b> |

Table-1 reveals that, In pre-test 15(30%) had moderate pain and 35(70%) had severe pain whereas in control group 18(36%) had moderate pain and 32(64%) had severe pain.

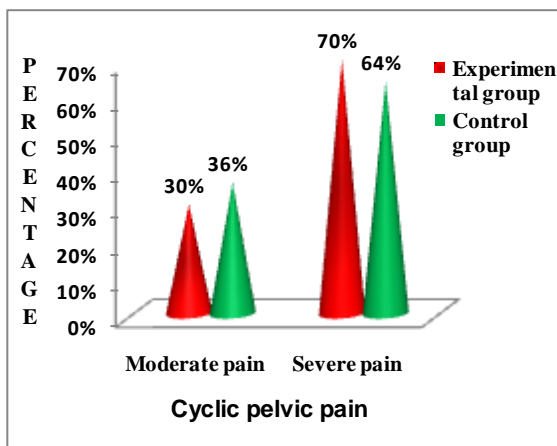


Fig-1: Frequency and percentage distribution of cyclic pelvic pain among adolescent girls in experimental and control group.

Table-2: Comparison of pretest and post test-I& II score on cyclic pelvic pain among adolescent girls in experimental group. (N=50)

| S.No | Cyclic pelvic pain | Experimental group |            |             |            |              |            |
|------|--------------------|--------------------|------------|-------------|------------|--------------|------------|
|      |                    | Pre test           |            | Post test-I |            | Post test-II |            |
|      |                    | f                  | %          | f           | %          | f            | %          |
| 1    | No pain            | -                  | -          | 20          | 40         | 18           | 36         |
| 2    | Mild pain          | -                  | -          | 21          | 42         | 23           | 46         |
| 3    | Moderate pain      | 15                 | 30         | 9           | 18         | 9            | 18         |
| 4    | Severe pain        | 35                 | 70         | -           | -          | -            | -          |
|      | <b>Total</b>       | <b>50</b>          | <b>100</b> | <b>50</b>   | <b>100</b> | <b>50</b>    | <b>100</b> |

Table-2 reveals that, during pre-test, 15(30%) had moderate pain and 35(70%) had severe pain. In post-test-I, 20(40%) had no pain, 21(42%) had mild pain and 9(18%) had moderate pain, whereas in post-test-II, 18(36%) had no pain, 23(46%) had mild pain, and 9(18%) had moderate pain. It is evident that there is expressive reduction in cyclic pelvic pain after providing self-care interventions. Hence the null hypothesis ( $H_0$ ) is rejected.

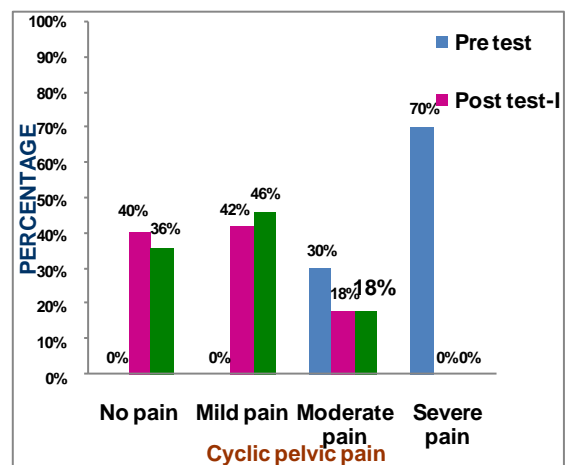


Fig-2: Comparison of pretest and post test-I& II score on cyclic pelvic pain among adolescent girls in experimental group.

Table-3: Comparison of mean and standard deviation of post test scores of cyclic pelvic pain among adolescent girls in experimental and control group. (N=100)

| Criteria     | Experimental group |       | Control group |       | Independent "t" test                       |
|--------------|--------------------|-------|---------------|-------|--|
|              | Mean               | S.D   | Mean          | S.D   |  |
| Post-test-I  | 1.80               | 1.841 | 6.22          | 2.270 | C=5.117<br>T=3.55<br>df=49<br>P<0.05<br>S* |
| Post-test-II | 1.76               | 1.802 | 6.96          | 1.795 | C=4.23<br>T=3.55<br>df=49<br>P<0.05<br>S*  |

Table-3 reveals that in experimental group the post test-I, mean is 1.80 with standard deviation of 1.841. whereas in control group the post-test-I, mean is 6.22 with the standard deviation of 2.270. The calculated value is 5.117 and the table value is 3.55. It is evident that ginger tea and hot fomentation are found to be effective in

reducing cyclic pelvic pain among adolescent girls.

In experimental group the post test-II, mean is 1.76 with the standard deviation of 1.802 whereas in control group, mean is 6.96 with the standard deviation of 1.795. The calculated value is 4.23 and the table value is 3.55. It discerns that the calculated value is greater than the table value at  $p < 0.05$  level of significance. It is evident that exercise has significantly reduced the severity of cyclic pelvic pain. Hence the null hypothesis ( $H_{01}$ ) is rejected.

Association between the cyclic pelvic pain during Post-test-I among adolescent girls in control group with their selected socio demographic variables:

There was a significant association found between cyclic pelvic pain among adolescent girls with their educational status and duration of menstruation.

#### MAJOR FINDINGS OF THE STUDY

- This study has proved the effectiveness of self care interventions on cyclic pelvic pain among adolescent girls.
- There is a statistically significant association between cyclic pelvic pain among adolescent girls with education, duration of menstruation and family history of cyclic pelvic pain.

#### CONCLUSION

This study concluded that there is expressive reduction in cyclic pelvic pain after providing self-care interventions.

#### RECOMMENDATIONS

1. Similar study can be initiated in other colleges in various districts and states.
2. Similar study can be conducted on other reproductive age groups.
3. Similar study can be conducted with other non-pharmacologic measures to reduce cyclic pelvic pain.

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