



MUSCLE STRETCHING EXERCISES ON PAIN AND DISCOMFORT DURING PRIMARY DYSMENORRHEA

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Abstract: Primary dysmenorrhea or painful menstruation without pelvic pathology is one of the most common complaints in women's medicine. The objectives are identify the prevalence of primary dysmenorrhoea among ANM students, determine the degree of pain and discomfort during primary dysmenorrhoea among ANM students, evaluate the effectiveness of muscle stretching exercise on pain and discomfort during primary dysmenorrhoea. One group pre-test and post-test design was adopted. Sample was 30 B.Sc. Nursing students with primary dysmenorrhoea. Sampling technique was Non probability purposive sampling technique was adopted. Menstrual pain perception level was measured by using numerical pain scale and primary dysmenorrhoea discomfort was assessed by primary dysmenorrhoea discomfort assessing rating scale. Muscle stretching exercise was given to the subjects five days per week about 30 min, under the supervision of investigator. Result of the study had shown significant effect of muscle stretching exercises on pain and discomfort during primary dysmenorrhoea. This is proved by paired "t" test. The paired 't' value for pain and exercise was 16.09 ($p < 0.05$) and the paired "t" value for discomfort during primary dysmenorrhoea and exercise was 14.08 ($p < 0.05$). So, it was statistically proved that muscle stretching exercise was effective to reduce pain and discomfort during primary dysmenorrhoea. So, this study concluded that muscle stretching exercise is very suitable and practicable therapy of non-pharmacological measure for managing pain and discomfort of primary dysmenorrhoea among adolescent girls with primary dysmenorrhea.

KEY WORDS: Primary Dysmenorrhea, Pain, Muscle stretching exercise

INTRODUCTION

Primary dysmenorrhea or painful menstruation without pelvic pathology is one of the most common complaints in women's medicine. More than 50% of women who have menstrual bleeding have a painful menstruation, as 10% of them are so severe that they disrupt 1–3 days of their lives each

month (**Jalili Z, Safizade H**)¹.

The pain begins with the onset of menstrual bleeding and lasts for 72–12 h. Pain is usually in the middle line of the highest severity. Dysmenorrhea pain is often described as cramped and intermittent. Some women have severe back and thigh pain. Abdominal pain is often accompanied by nausea and vomiting, bruising and headache, and an unpleasant general feeling. Pain usually has the highest severity on the 1st day of bleeding and gradually decreases its severity (**Berek J**)².

The recommended treatment methods to reduce the severity of pain in the primary dysmenorrhea include the use of contraceptive pills, calcium channel blockers, skin electrical stimulation. Menstruation is the periodic and cyclic discharge of blood, mucus and cellular debris from the uterus, which is mainly because of periodic progesterone withdrawal after ovulation in non-fertile cycles. It is initiated in response to change in the hormonal production from the ovaries and these ovaries are controlled by the pituitary and hypothalamus. (**Sheth, 2011**)³.

One menstrual cycle is usually lasting about 27- 29 days and this time period is measured from the first day of one period to the first day of next menstruation. The duration of bleeding is about three to five days and estimated blood loss is between 50 and 200ml. The regular cycle of twenty – eight day's seen only in a small proportion of women. A deviation of two or three days from the 28 days rhythm is quite common. The menstrual rhythm depends on the hypothalamus – pituitary ovarian action but the amount of blood loss mainly depends upon the menorrhoea-monthly flow. Dysmenorrhoea literally means painful menstruation. But a more suitable definition for dysmenorrhoea is painful menstruation and it is able to incapacitate day - to -day activities of a woman. (**Dutta, 2010**)⁴.

The primary dysmenorrhoeal pain starts a few hours prior or just with the onset of menstruation. The duration of pain usually lasts for few hours may extend to 24 hours but seldom persists beyond 48 hours. The pain is spasmodic and it is mainly located in the lower abdomen; sometimes radiate to back and medial aspect of thighs. Systemic discomforts like diarrhoea, giddiness, fatigue, nausea, vomiting, and headache may be present and it may be associated with vasomotor changes like pallor, cold sweats or occasional fainting. Rarely syncope and collapse in severe cases may be associated (**Campbell & Monga, 2006**)⁵.

Various remedial exercises were advocated for dysmenorrhoea like floor polishing movements, bending, twisting, swaying, and rowing movements and other similar routines. These must be done for at least 15 minutes daily between the periods. These can be done in addition to or instead of various games. Muscle stretching exercises mean moving the muscles in the different directions from which it normally contracts or work. Stretching can help to gain muscle strength and tone. It also prevents injuries and relieves stress. Various types of muscle stretching exercises were advocated to reduce dysmenorrhoea. It was also seen that among athletes the incidence of dysmenorrhoea was lower probably due to anovulatory cycles. (**Taylor, 2011**)⁶.

Physical exercises and primary dysmenorrhea are interrelated with each other, exercise can decrease

the symptoms related to the primary dysmenorrhea like pain, stress, mood changes and finally exercise improve health status also. Behavioural interventions such as exercise may not reduce primary dysmenorrhea, but also decrease the need for pharmacological methods to control menstrual cramps and other associated symptoms. Exercise today is an important part of normal life of many women. It is proved thing that exercise can make many health benefits for women who exercise regularly. Like exercise improves cardiovascular status, increase bone mineral content, decrease stress and premenstrual syndrome.

“A study to assess the effectiveness of muscle stretching exercises on pain and discomfort during primary dysmenorrhoea among ANM students in civil hospital,

OBJECTIVES OF THE STUDY

1. To identify the prevalence of primary dysmenorrhoea ANM students in civil hospital,
2. To assess the degree of pain and discomforts during primary dysmenorrhoea among ANM students in civil hospital,
3. To evaluate the effectiveness of muscle stretching exercise on pain and discomforts during primary dysmenorrhoea.

METHODOLOGY

The sample size was 30 students aged in 16-23 years. The sample were divided by simple randomization into experimental group and control group. The data collection tool was requested to perform the active muscle stretching exercises for 8 weeks at home. This study concluded that muscle stretching exercise are effective in reducing pain intensity, pain duration of girls with primary dysmenorrhoea ($P < 0.001$).

DEVELOPMENT AND DESCRIPTION OF TOOL

The data collection tool was primary dysmenorrhoea screening questionnaire to screen out the subjects with primary dysmenorrhoea from population, baseline data collecting questionnaire for identifying the demographic characteristics of subject, primary dysmenorrhoea discomfort assessing rating scale and standardized numerical pain scale for assessing pain during menstruation.

The tool consisted of

TOOL I: Baseline Data Collecting Questionnaire

TOOL II: Primary dysmenorrhoea screening questionnaire

TOOL III: Part 1

Rating scale for assessing the discomforts during primary dysmenorrhoea.

Part 2

Numerical Pain scale for measuring the pain during primary dysmenorrhoea.

(Jensen & Mcfarland 1993)¹¹

TOOL I

To assess the baseline characteristics of subjects consisted of 7 items seeking information about background of subjects. (Age in years, age at menarche, height, weight, BMI, and LMP.)

TOOL II

Primary dysmenorrhoea screening questionnaire: To screen out the students with primary dysmenorrhoea from total population and this questionnaire consisted of 10 items seeking information about primary dysmenorrhoea. The alternative gave as normal, mild, moderate, and severe and these responses were scored by 0, 1, 2, and 3.

Final scoring of primary dysmenorrhoea screening questionnaire:

Part 1

Rating scale helps to detect discomforts of primary dysmenorrhoea. The tool consisted of 36 items. The alternative gave as frequently, one to three times, never and these responses were scored by 3, 2, and 1. Each answer scored based on alternative responses as 3, 2, 1 and the total score was 108.

Part 2

Numerical pain scale: The scale consisted of ranked choices that are no pain, mild pain, moderate pain, severe pain very severe pain and worst possible pain. The pain scale is

divided into 10 parts. Each choice was assigned by a corresponding number. The scale was a standardized scale. **(Jensen & Mcfarland 1993)¹¹**

Reliability of the tool:

Split-half reliability was used to check the reliability of primary dysmenorrhea discomfort rating scale and score (correlation co-efficient, $r = 0.72$) shown that the primary dysmenorrhoea discomfort rating scale is reliable in assessing discomfort during menstruation.

RESULTS

Table 1

Comparison of mean pain and discomfort during primary dysmenorrhoea scores before and after muscle stretching exercise.

Area	Pre - Test		Post -Test		‘ t’ value
	Mean	SD	Mean	SD	
Pain	5.72	1.6	2.18	1.79	16.09
Discomfort	67.74	10.11	45.54	8	14.08

*t(49)=2.021, P<0.05

DISCUSSION

The major findings of the study were analyzed statistically and discussed below based on objectives:

1. The total incidence rate of primary dysmenorrhoea among B.Sc Nursing students were 61.25(per cent).It shows the students had dreadful pain and discomfort during primary dysmenorrhoea.
2. According to the pre-test primary dysmenorrhoea pain score more than half (60percent) of students had the pain score 6 and above 6. But in the post-test primary dysmenorrhoea pain score only 24 per cent of students had the pain score 4 and above 4
3. According to the pre-test primary dysmenorrhoea discomfort score more than half (78 per cent) of students had the discomfort score 61 and above 61. But in the post-test primary dysmenorrhoea discomfort score only 30 per cent of students had the pain score 49and above 49.

CONCLUSION

The following conclusion is made on the light of above findings that most of the students suffer moderate to severe pain and discomfort during menstruation. Muscle stretching exercises are the effective, simple, non- medicinal measure to reduce the pain and discomfort during primary dysmenorrhoea. This research can make an awareness regarding how to manage primary dysmenorrhoea pain and discomfort among students,

College lectures and parents. Muscle stretching exercises are the effective, safe, less time consuming form of therapy for students with primary dysmenorrhoea. It can be implemented into clinical practice and health education in order to increase the quality of life for students with primary dysmenorrhoea

IMPLICATIONS:

The world around us is growing very fastly. Society has tremendous technological advancement in day to day life practice to managing pain that arise from unsound body mechanism. Although the natural methods of pain control is acceptable and accessible to everyone in this world because the natural methods does not have any side effect. Therefore the health care providers have the responsibility for providing support and comfort to female

adolescents during menstruation.

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