



A STUDY TO ASSESS THE EFFECTIVENESS OF MUSCLE STRETCHING EXERCISES ON PAIN AND DISCOMFORT DURING PRIMARY DYSMENORRHOEA AMONG B.SC NURSING STUDENTS IN KMCH COLLEGE OF NURSING, COIMBATORE.

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ABSTRACT

A study to assess the effectiveness of muscle stretching exercises on pain and discomfort during primary dysmenorrhoea among B.Sc Nursing students in KMCH College of Nursing, Coimbatore. Objectives of the study were as follows, identify the prevalence of primary dysmenorrhoea among B.Sc Nursing students, One group pretest and post test design was adopted. Setting of the study was KMCH College of Nursing, Coimbatore. Sample was 50 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 dysmenorrhoea.

INTRODUCTION:

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 no 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).

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. (Tylor, 2011).

NEED FOR THE STUDY

Dysmenorrhoea is one of the commonest gynaecological problem about 60 percentages of girls and women are suffering from dysmenorrhoea. Primary dysmenorrhoea is a painful menstruation that occurs in the absence of any significant pelvic pathology. It usually develops after first two years of the menarche. The pain is often severe, cramping and crippling so it causes a major disruption of social activities.

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. (Uzama, 2013).

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of muscle stretching exercises on pain and discomfort during primary dysmenorrhoea among B.Sc Nursing students in KMCH college of nursing, Coimbatore.

OBJECTIVES OF THE STUDY

1. To identify the prevalence of primary dysmenorrhoea among B.Sc Nursing students.
2. To assess the degree of pain and discomforts during primary dysmenorrhoea among B.Sc Nursing students.
3. To evaluate the effectiveness of muscle stretching exercise on pain and discomforts during primary dysmenorrhoea.
4. To associate the level of pain and discomforts during primary dysmenorrhoea with selected demographic variables.

OPERATIONAL DEFINITIONS

Muscle stretching exercises :It refers the exercises to the abdominal, pelvic, and groin regions which

results in increasing blood supply to relieve the pain and discomfort from primary dysmenorrhoea.

Primary dysmenorrhoea :Primary dysmenorrhoea is a painful menstrual cramp without any evident pathology such as PCOD, endometriosis, fibroid uterus. It starts at the onset of menses and lasting about one to three days.

Pain :Pain is spasmodic, cramp like feeling it occurs in the lower region of the abdomen that is just below the umbilicus and this pain will radiate to the back and thigh during menstruation as measured by numerical pain intensity scale.

Discomfort :Refers to the symptoms like fatigue, irritability, headache, giddiness, diarrhoea, nausea, vomiting, and frequency of micturation as measured by primary dysmenorrhoea discomfort rating scale.

HYPOTHESES

H1: There will be significant reduction in the severity of pain during primary dysmenorrhoea after muscle stretching exercises.

H2: There will be significant reduction in discomforts that occurs during primary dysmenorrhoea after muscle stretching exercises.

H3: There will be significant association between pain and discomfort of primary dysmenorrhoea with selected demographic variables.

ASSUMPTIONS

Pain is subjective to every individual.

RESEARCH METHODOLOGY

The present study evaluate the effectiveness of muscle stretching exercises on pain and discomfort during primary dysmenorrhoea among B.Sc Nursing students in KMCH college of nursing, Coimbatore.

RESEARCH DESIGN :The Pre – Experimental research design, one group pretest and post test design was adopted for this study.

VARIABLES UNDER THE STUDY

Independent variable: Independent variable was muscle stretching exercises.

Dependent variable: Dependent variable was pain and discomfort during the primary dysmenorrhoea.

SETTING OF THE STUDY This study was conducted in KMCH College of Nursing, Coimbatore for B.Sc Nursing students. The student strength in B.Sc Nursing during primary dysmenorrhoea screening test was:

First year B.Sc Nursing - 91

Second year B.Sc Nursing - 92

Third year B.Sc Nursing - 81

Fourth year B.Sc Nursing - 87

Therefore total B.Sc Nursing students during the time primary dysmenorrhoea screening test was - 351

POPULATION

All B.Sc Nursing students in KMCH College of nursing, Coimbatore who were screened to have

primary dysmenorrhoea.

Sample Size The total sample size was 50

Sampling Technique Non probability purposive sampling technique was adopted for the selection of sample.

CRITERIA FOR SELECTION OF THE SUBJECTS

Inclusion criteria

- Students with primary dysmenorrhoea and normal, regular menstrual cycle.
- Those who experienced primary dysmenorrhoea for the last three months with every menstruation.
- Those who was willing to participate in the study.

Exclusion criteria

- Those who had the habit doing regular exercise.
- Those who had spinal problems.
- Those who were diagnosed for having secondary dysmenorrhoea.
- Those who were undergoing treatment for secondary dysmenorrhoea.
- Those who were taking medications during primary dysmenorrhoea.

The data collection tool were 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.

RESULTS

Major findings of the study

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 (60 per cent) 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 primarydysmenorrhoea discomfort score only 30 per cent of students had the pain score 49 and above 49.

4. Mean difference of pre-test post-test primary dysmenorrhoea pain score was 3.54. Mean difference of pre-test post-test primary dysmenorrhoea discomfort score was 22.2.
5. Mean score of pre-test primary dysmenorrhoea pain was 5.72, mean score of post-test primary dysmenorrhoea pain was 2.18. It shows the subjects had a significant reduction in their pain after muscle stretching exercise intervention. ($P < 0.05$, $t = 16.09$)
6. Mean score of pre-test primary dysmenorrhoea discomfort was 67.74, mean score of post-test primary dysmenorrhoea discomfort was 45.54. It shows the subjects had a significant reduction in their discomfort after muscle stretching exercise intervention. ($P < 0.05$, $t = 14.08$)
7. There was no association between pre-test post-test primary dysmenorrhoea pain and discomfort scores with selected demographic variables.

DISCUSSION

“Dysmenorrhoea” is derived from a Greek word and the meaning of this Greek word is difficult menstrual flow. The two divisions of dysmenorrhoea are primary and secondary. Primary dysmenorrhoea is defined as recurrent, crampy pain occurring with menstruation in the absence of significant pelvic pathology. Primary dysmenorrhoea is caused by myometrial activity resulting in uterine ischemia causing pain. The first objective of the study was to identify the Prevalence of primary dysmenorrhoea among B.Sc Nursing students. The prevalence rate of primary dysmenorrhoea among B.Sc Nursing students was 61.25 per cent. The prevalence rate of primary dysmenorrhoea was high in third year B.Sc Nursing students (72.84 per cent). Shah et al., (2013) conducted a cross sectional study at nursing college, situated in campus of largest tertiary care hospital in central and south Gujarat, to find out the prevalence of primary dysmenorrhoea in young females. The sample size was 116. Out of 116 students, 52 (45 per cent) had primary dysmenorrhoea and the peak incidence in between 19 to 21. So the prevalence primary dysmenorrhoea is high in young female population. Such high prevalence makes dysmenorrhoea a significant public health problem among young students that demands some attention from policy makers also. Nag reported (1982) the incidence rate of primary dysmenorrhoea in India is 60 (per cent). But the true incidence and prevalence of primary dysmenorrhoea are not clearly established in India. The second objective of the study was to assess the degree of pain and discomfort during primary dysmenorrhoea among B.Sc Nursing students. The degree of pain during primary dysmenorrhoea was measured by numerical pain scale. The investigator found that out of 50 students about 20 (40 per cent) students the degree of pain was 5 and below 5, next 20 (40 per cent) of students the degree of pain was from 6 to 7 and the last 10 (20 per cent) students the degree of pain was 8 and above 8 that means up to 10. The degree of discomfort during primary dysmenorrhoea was measured by primary dysmenorrhoea discomfort rating scale. The investigator found that out of 50 students about 11 (22 per cent) students the degree of discomfort was 60 and below 60, 17 (34 per cent) students the degree of discomfort was from 61 to 70 and 22 (44 per cent) students the degree of discomfort was 71 and above 71 that means up to 108.

The third objective of the study was to evaluate the effectiveness of muscle stretching exercise on pain during primary dysmenorrhoea. The mean pre-test primary dysmenorrhoea pain score was 5.72 and post test primary dysmenorrhoea pain was 2.18 and the computed value of ‘t’ was 16.09. So the calculated ‘t’ value was more than table ‘t’ value (2.021) at 49 degree of freedom, therefore the calculated ‘t’ value was significant at 0.05 level. It was statistically proved that muscle stretching

exercise was effective to reduce pain during primary dysmenorrhoea. The fourth objective of the study was to associate the level of pain during primary dysmenorrhoea with selected demographic variables.

The chi-square test showed that there was no significant association between the pre-test post test primary dysmenorrhoea pain and discomfort scores with selected demographic variables such as age, year of study, age at menarche, and Body Mass Index. Weissman et al., (2004) conducted a study to explain the prevalence, course, severity, and predictive factors of primary dysmenorrhoea in women of all reproductive ages.

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 Nursing 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.

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