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# A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE OF MUSCLESTRETCHING EXERCISES, PAIN AND DISCOMFORT DURING DYSMENORRHOEA DISCOMFORT AMONG BA STUDENTS IN SELECTED COLLEGE OF EDUCATIONS, IN AMRITSAR PUNJAB

**Durba Ganguli [1], Kamna Sharma[2], Bhupinder Kaur[3]**

1. Assistant Professor, Faculty of Nursing, Desh Bhagat University, Mandi Gobindgarh
2. Nursing Tutor, Faculty of Nursing Desh Bhagat University, Mandi Gobindgarh
3. Nursing Tutors, Faculty of Nursing Desh Bhagat University, Mandi Gobindgarh

**Abstract:** Dysmenorrhea or painful menstruation without pelvic pathology is one of the mostcommoncomplaintsinwomen'smedicine.Theobjectivesareidentifytheprevalenceofdysmenorrhoea among BA students, determine the degree of pain and discomfort during dysmenorrhoea among BA students, evaluate the effectiveness of muscle stretching exercise on pain and discomfort during dysmenorrhoea. One group pre-test and post-test design was adopted Samplewas30 BA students with dysmenorrhoea. Sampling technique was Non-probability purposive sampling technique was adopted. Menstrual pain perception level was measured by using numerical pain scale and dysmenorrhoea discomfort was assessed by dysmenorrhoea discomfort assessing rating scale. Muscle stretching exercise was given to the subjects five days per week about 30min, under the supervision of investigator. Result of the study had shown significant effect of muscle stretching exerciseson pain and discomfort during dysmenorrhoea. This is proved by paired"t" test. The paired 't'valueforpainandexercisewas16.09($p<0.05$)andthepaired"t"valuefordiscomfortduringdysmenorrhoea and exercise was14.08 ($p<0.05$). So, it was statistically proved that muscle stretchingexercisewaseffectivetoreducepainanddiscomfortduringdysmenorrhoea.So,thisstudyconcluded that muscle stretching exercise is very suitable and practicable therapy of non-pharmacological measure
formanagingpainanddiscomfortofprimarydysmenorrhoeaamongadolescentgirlswithdysmenorrhea.

**KEYWORDS**:Dysmenorrhea,Pain, Musclestretchingexercise

## INTRODUCTION

Dysmenorrhea or painful menstruationwithout pelvic pathology is one of the mostcommoncomplaints 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].

Thepainbeginswiththeonsetofmenstrualbleedingandlastsfor72–12h.Pain is usually in the middle ine of the highest severity. Dysmenorrhea pain is often described as cramped and intermittent. Some womenhave severe back and thigh pain. Abdominal pain is often accompanied by nausea and vomiting, bruisingand 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].

There commended treatment methods to reduce the severity of pain in the primary dysmenorrheal 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 no fertile cycles. It is initiated in response to change in thehormonal 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 dayof 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.Theregularcycleoftwenty–eightday'sseenonlyinasmallproportion of women. A deviation of two or three days from the 28 days rhythm is quite common. Themenstrual rhythm depends on the hypothalamus – pituitary ovarian action but the amount of blood loss mainly depends upon the menorrhea-monthly flow Dysmenorrhoea literally means painful menstruation. Buta more suitable definition for dysmenorrhoea is painful menstruation and it is able to incapacitate day - to –day activities of a woman.**(Dutta, 2010)**[4]**.**

Thedysmenorrhoealpainstartsafewhourspriororjustwiththeonsetofmenstruation.Thedurationof pain usually lasts for few hours may extend to 24 hours but seldom persists beyond 48 hours. The pain isspasmodic and it mainly located in the lower abdomen; sometimes radiate to back and medial aspect ofthighs. Systemic discomforts like diarrhoea, giddiness, fatigue, nausea, vomiting, and headache may bepresent and it may be associated with vasomotor changes like pallor, cold sweats or occasional fainting.Rarelysyncopeand collapsein severe cases maybeassociated**(Campell&Monga, 2006)**[5]**.**

## OBJECTIVESOFTHE STUDY

1. To identify the prevalence of dysmenorrhoea BA students in college of education,
2. To assess the degree of pain and discomforts during dysmenorrhoea BA students in college of education,
3. Toevaluatetheeffectivenessofmusclestretchingexerciseonpainanddiscomfortsduringdysmenorrhoea.

**Methodology**

The sample size was 30 students aged in18-23years.The samples 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 8weeks at home. This study concluded that muscle stretching exercise are effectiveinreducingpain intensity, painduration of girls with dysmenorrhoea(P<0.001).

**DESCRIPTIONOFINTERVENTION**

In this study included six types of muscle stretching exercises for abdominal, pelvic, and groin regions.

**In the first stretching exercise**, told the subjects to bend their trunk forward from the hip joint so that theshoulder and back was on a straight line. And the upper body was parallel to the floor. Duration of holdingtimewas 5 seconds; repetition was 20 times.

**In the second stretching exercise**, requested the subjects to raise their one heel from the floor, then repeattheexercise with theother heel alternatively.This exercise needed toperform 20 times.

**In the third exercise**, requested the subject to spread their feet wider than shoulder width, place trunk andhands in forward stretching mode; after that completely bend the knees for maintaining squatting position.The duration of this position was 5 seconds. Again, raised the body and repeated the same movement 20times.

**In the fourth exercise,** requested the subject to spread their feet wider than shoulder width. Then told thesubject to bend and touch left ankle with their right hand while putting their left hand in a stretched positionabove the head, so that the head is in the middle and turn the head and look for the left hand. This exerciseneededtorepeatalternativelyfortheoppositefootwiththesamemethod.Theexerciserepeatedalternatively20times for each the bodyandrepeated thesamemovement 20 times.

**In the fifth exercise,** requested the subject to lie down in supine position after that the shoulders, back, andfeetkeep on thefloor. Next theknees shouldbendwith thehelp ofhand andbringit towards the cheek.

**DEVELOPMENTANDDESCRIPTIONOFTOOL**

Thedatacollectiontoolwasdysmenorrhoeascreeningquestionnairetoscreenoutthesubjects withdysmenorrhoeafrompopulation,baselinedatacollectingquestionnaireforidentifyingthedemographiccharacteristicsofsubject,primarydysmenorrhoeadiscomfortassessingratingscaleandstandardizednumerical pain scale for assessingpainduringmenstruation.
Thetool consisted of

**TOOLI**:BaselineData CollectingQuestionnaire

**TOOLII:**dysmenorrhoeascreeningquestionnaire

TOOLIII:Part1

Ratingscaleforassessingthediscomforts duringdysmenorrhoea.

Part2

**NumericalPain**scale for measuringthepain duringdysmenorrhoea.

(Jensen&Mcfarland 1993)[11]

**TOOLI**

Toassessthebaselinecharacteristicsofsubjectsconsistedof7itemsseekinginformationaboutbackgroundo fsubjects. (Ageinyears, ageat menarche, height,weight,BMI,andLMP.)

TOOLII

**Dysmenorrhoeascreeningquestionnaire**:Toscreenoutthestudentswithdysmenorrhoeafrom total population and this questionnaire consisted of 10 items seeking information about dysmenorrhoea.Thealternativegaveasnormal,mild,moderate,andsevereandtheseresponseswerescoredb y0, 1, 2, and 3.
Finalscoringofdysmenorrhoeascreeningquestionnaire:

Score

Mild dysmenorrhoea: 8-14

Moderate dysmenorrhoea: 15-22

Severe dysmenorrhoea: 23-30

Does not have dysmenorrhoea: 0-7

**TOOL III**
Part1

Rating scale helps to detect discomforts of dysmenorrhoea. The tool consisted of 36 items. Thealternativegaveasfrequently,onetothreetimes,neverandtheseresponseswerescoredby3,2,and1.Each answerscored based on alternativeresponses as 3,2,1 and the totalscore was 108.
Part2

**Numerical pain scale:** The scale consisted of ranked choices that are no pain, mild pain, moderate pain,severepain veryseverepain and worst possible pain. Thepain scale is

divided into 10 parts. Each choice was assigned by a corresponding number. The scale was a standardizedscale**.(Jensen &Mcfarland 1993)[11]**
Reliabilityof thetool:

Split-half reliability was used to check the reliability of primary dysmenorrhea discomfort rating scale andscore (correlation co-efficient, r = 0.72) shown that the dysmenorrhoea discomfort rating scale

isreliablein assessingdiscomfort duringmenstruation

**RESULTS:**

**SECTION I: DEMOGRAPHIC VARIABLES OF THE STUDENTS**

**Table 1: Distribution of subjects according to their demographic characteristics**

**N=50**

| S. No | Demographic Variables | Frequency(f) | Percentage (Per Cent) |
|---|---|---|---|
| 1 | **Age In Years** | | |
| | a. up to 20 | 37 | 74.00 |
| | b. 21 & above | 13 | 26.00 |
| 2 | **Year Of Study** | | |
| | a. I year | 10 | 20.00 |
| | b. II year | 13 | 26.00 |
| | c. III year | 13 | 26.00 |
| | d. Iv year | 14 | 28.00 |
| 3 | **Age At Menarche** | | |
| | a. Up to 13 | 27 | 54.00 |
| | b. 14 and above | 23 | 46.00 |
| 4 | **Body Mass Index** | | |
| | a. Up to 18 | 13 | 26.00 |
| | b. 18.1 – 20 | 20 | 40.00 |
| | c. 20.1 and above | 17 | 34.00 |

Table 1: Shows distribution of the demographic variables of 50 students, out of 50 students more than half of the students (74 per cent) were aged 20 and below 20.Regarding year of B.Sc Nursing programme more students were from IV year (28 per cent).And less students from I year (20 per cent).Among 50 students about 54 percentage of students attained menarche at 13 and below 13 years of old. About 46 percentage of students attained menarche at 14 and above 14 years. On the basis of Body Mass Index about 40 percentage of students, the body mass index were in between 18.1 to 20, 26 percentage of students body mass index were up to 18 and 34 percentage of students were body mass index 20.1 and above.

SECTION II: DESCRIPTION OF DEGREE OF PAIN AND DISCOMFORT DURING PRIMARY DYSMENORRHOEA AMONG B.SC NURSING STUDENTS

Table 2: The degree of pain during primary dysmenorrhoea among students before intervention (pre-test)

**N=50**

| **Sl. NO** | **Degree Of Pain** | **Frequency (f)** | **Percentage (Per Cent)** |
|---|---|---|---|
| 1 | Up to 5 | 20 | 40.00 |
| 2 | 6 to 7 | 20 | 40.00 |
| 3 | 8 & above | 10 | 20.00 |

Table: 2 shows that out of 50 students about 20 (40 per cent) of students the degree of pain were from 0 to 5, next 20 students (40 per cent) the degree of pain were from 6 to 7 and the remaining 10 students (20 per cent) the degree of pain were 8 and above 8 that means up to 10.

SECTION III: Association between pre-test post-test pain and discomfort scores of the subject with selected demographic variables.

Table 3: Association between pretest pain score and demographic characteristics of the subject.

N=50

| Sl.No | Variables | Degree of pain | | | $\chi^2$ | df | P value | Inference |
|---|---|---|---|---|---|---|---|---|
| | | Up to 5 | 6 to 7 | 8 and above | | | | |
| 1 | **Age In Years** | | | | 5.561 | 2 | 0.062 | NS |
| | Up to 20 | 12 | 15 | 10 | | | | |
| | 21 and above | 8 | 5 | 0 | | | | |
| 2 | **Year Of Study** | | | | 6.703 | 6 | 0.349 | NS |
| | 1st year | 4 | 4 | 2 | | | | |
| | 2nd year | 3 | 6 | 4 | | | | |
| | 3rd year | 5 | 4 | 4 | | | | |
| | 4th year | 8 | 6 | 0 | | | | |
| 3 | **Age At Menarche** | | | | 1.087 | 2 | 0.581 | NS |
| | Up to 13 | 12 | 9 | 6 | | | | |
| | 14 and above | 8 | 11 | 4 | | | | |
| 4 | **Body Mass Index** | | | | 0.703 | 4 | 0.951 | NS |
| | Up to 18 | 6 | 5 | 2 | | | | |
| | 18.1 to 20 | 7 | 8 | 5 | | | | |
| | 20.1 and above | 7 | 7 | 3 | | | | |

**NS – Non Significant**

Table 3: Shows that in the association of pre-test primary dysmenorrhoea pain score and demographic variables, the chi – square value obtained when associated with age is 5.561 which is not significant at 0.05 level. The chi –square value when compared with year of study is 6.703 which is not significant at 0.05 level. The chi square value obtained when associated with age at menarche is 1.087 which is not significant at 0.05 levels. The chi 52 square value obtained when associated with Body Mass Index is 0.703.Thus it revealed that there is no association between primary dysmenorrhoea pre-test pain score of the participant and demographic variables like age, year of study, age at menarche, and Body Mass Index.

CONCLUSION

Thefollowingconclusionismadeonthelightofabovefindingsthatmost ofthestudentssuffermoderatetosevere pain and discomfort during menstruation. Muscle stretching exercises are the effective, simple, non-medicinalmeasuretoreducethepainanddiscomfortduringdysmenorrhoea.Thisresearchcanmakeanawarenessregardinghowtomanagedysmenorrhoeapainanddiscomfortamongstudents,

College lectures and parents. Muscle stretching exercises are the effective, safe, less time consuming

formof therapy for students with primary dysmenorrhoea. It can be implemented into clinical practice and healtheducationin order to increasethe qualityoflifefor students with primarydysmenorrhea

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