Muscle stretching exercise for primary dysmenorrhoea pain

CHAPTER-V

DISCUSSION, SUMMARY, CONCLUSION, IMPLICATIONS,

LIMITATIONS AND RECOMMENDATIONS

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. Primary dysmenorrhoea is characterized by a crampy, suprapubic pain and this pain starts several hours before and a few hours after the onset of menstruation. And this pain is characteristically colicky and located in the midline of the lower abdomen but sometimes the pain may extends to lower quadrants, the lumbar area, and the thighs. The associated symptoms of primary dysmenorrhoea are diarrhoea, nausea and vomiting, fatigue, light-headedness, headache, dizziness and, rarely, syncope and fever. Age is a determinant factor of primary dysmenorrhoea, the symptoms being more pronounced in adolescents than in older women(SOGC-primary dysmenorrhoea consensus guidelines)

The present study was designed to assess the effectiveness of muscle stretching exercise on pain and discomfort during primary dysmenorrhoea among B. Sc Nursing students in KMCH College of Nursing, Coimbatore. The

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

The first objective of the study wasto identify thePrevalence of primary dysmenorrhoea among B. Sc Nursing students

Demographic Description

It is seen that among 50 subjects, regarding the age, most of the subjects were under 20 years of old that means from 17 to 20. In respect of year of study, primary dysmenorrhoea was high in III year B. Sc Nursing students (72. 84 per cent). With regard to age at menarche 54(per cent) attained menarche at and below 13 years and 46 (per cent) attained menarche at 14 years and above. Regarding their Body Mass Index, 40 (per cent) of students were 18. 1 to 20 and 34 per cent of students were 20. 1 and above.

Agarwal, (2010)conducted an explorative survey technique with a co-relational approach to find out thethe prevalence of primary dysmenorrhoea in adolescent girls from the study he concluded that primary dysmenorrhoea is a very common problem among adolescent girls.

Prevalence rate 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 wastoassess 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.

Banikarim et al., (1999)conducted a cross sectional research study in that he found among 705 subjects 27(per cent) had mild primary dysmenorrhoea pain, 32 (per cent) had moderate and 41% had severe primary dysmenorrhoea pain. Other discomforts that associated with primary dysmenorrhoea were fatigue (67 per cent), backache (56 per cent), dizziness (28 per cent), vomiting (12 per cent) and headache (58 per cent). Primary dysmenorrhoea is a common cause for severe disruption to the lives of adolescent girls. Therefore the health workers should educate the female girls regarding the treatment options for primary dysmenorrhoea in order to reduce the existing health and college limitations caused by primary dysmenorrhoea.

Al-Kindi and Al-Bulushirevealed in their research 94 (per cent) of the participants had primary dysmenorrhoea. Primary dysmenorrhoea was mild in 21 per cent, moderate in 41(per cent) of subjects, and severe in 32 (per cent) of subjects. Primary dysmenorrhoea resulted in limited sports activities in 81 (per cent), class concentration in 75 (per cent) of subjects, limited homework in 59 (per cent) of cases, College absenteeism in 45 (per cent) of subjects, limited social activities in 25(per cent), and decreased study performance in 8 (per cent) of the affected subjects.

The third objective of the study wasto 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 mean pre-test primary dysmenorrhoea discomfort score was 67. 74 and post test primary dysmenorrhoea discomfort was 45. 54 and the computed value of‘ t’ was 14. 08. 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 discomfort during primary dysmenorrhoea.

Shahr-jerdy et al., (2012)conducted a research to assess the effectiveness of muscle stretching exercise on primary dysmenorrhoea. The participants were randomly divided into 2 groups: an experimental group (n = 124) and a control group (n = 55). After muscle stretching exercise intervention the pain intensity was reduced from 7. 65 to 4. 88, and primary dysmenorrhoea discomfort was decreased from 7. 48 to 3. 86(p <0. 001).

Onur et al., (2012)assessed the effect of home-based exercise on pain intensity and quality of life in women with primary dysmenorrhoea. The sample size was 45. The data collection tools were Physical Activity Questionnaire (IPAQ), visual analogue scale (VAS), and SF-36 health survey. A standard home-based exercise intervention was instructed for all participants, and the outcome measures were re-collected during three

consecutive menstrual cycles. At the end of the study VAS showed a significant reduction (P <0. 001). When the eight domains of the SF-36 health survey and the physical and mental component summary scores were compared between the first and fourth visits, all aspects showed significant improvement (P <0. 012). So this study concluded home-based exercise intervention is effective to provide a significant improvement for primary dysmenorrhoea.

SOGC Primary Dysmenorrhoea Consensus Guidelines (2005)shows in a review of 4 randomized controlled trials and in 2 observational studies, exercise was effective to reduce primary dysmenorrhoea symptoms. A more recent research pointed out that vigorous exercises (more than 3 times per week) effective to reduce the physical symptoms related to menstruation.

The fourth objective of the study wasto 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. And they did not find any significant association between primary dysmenorrhoea and age at menarche

Chauhan & Kala (2012)found the incidence rate of primary dysmenorrhoea was high in low Body Mass Index (<18. 1) group. Therefore by improving the nutritional status of adolescent females may decrease incidence rate of primary dysmenorrhoea.

SUMMARY

Primary dysmenorrhoea is a common health problem of adolescent females. So they need further education regarding the treatment options for primary dysmenorrhoea in order to decrease the existing health and college limitations caused by primary dysmenorrhoea(Banikarim et al., 1999). Keeping in this view, the researcher aimed to conduct 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 at Coimbatore.

The objectives of the study were

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

Review of literature helped the researcher to collect the relevant information to support the study, to design the methodology and to develop the tools.

The sample size was 50 B. Sc Nursing students. The one group pretest post-test was designed by the investigator to assess the effectiveness of muscle stretching exercises on pain and discomfort during primary dysmenorrhoea among B. Sc Nursing students. 50 B. Sc Nursing students were selected by purposive sampling technique. The research tool was developed and adopted after reviewing the relevant literature. The tools were numerical pain scale for measuring pain and primary dysmenorrhoea rating scale for measuring discomfort of primary dysmenorrhoea.

The collected data was analyzed by descriptive and inferential statistics based on the formulated objectives of the study. The tested and accepted the hypothesis that there is a significant reduction in primary dysmenorrhoea pain and after muscle stretching exercises.

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 primary dysmenorrhoea 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 was22. 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.

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.

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.

Nursing Practice

- A midwife can practice planned education programme to impart knowledge and skill in management of primary dysmenorrhoea.
- Midwife can teach medicinal, non-medicinal, and conventional practices for managing primary dysmenorrhoea.
- Midwifery nurses can conduct camp for school and college students regarding how to manage primary dysmenorrhoea.
- Understand the importance of muscle stretching exercise for managing primary dysmenorrhoea.
- Encourage the doctors to differentiate the primary dysmenorrhoea from secondary dysmenorrhoea and offer treatment if necessary.

Nursing Education

- This study helps the student nurses to gain more idea regarding how to differentiate primary dysmenorrhoea from secondary dysmenorrhoea.
- The nurse educator can encourage the student nurses to conduct research based on the other complementary therapies for managing primary dysmenorrhoea.
- The nurse educator can encourage the student nurses to conduct research among adolescent girls regarding the prevalence rate and risk of primary dysmenorrhoea.
- Encourage the student nurses to participate in exercise progrmmes for managing primary dysmenorrhoea.
- Nurse educator can encourage the student nurses to educate the health professionals about primary dysmenorrhoea, its severity and its impact on adolescent health.

Nursing Research

- This study gives guidance for further studies to conduct in this area.
- This is important to identify the existing prevalence rate, risk factors, and medicinal, non-medicinal, and complementary therapies of primary dysmenorrhoea.
- The evident from other literatures indicates more research in the area of primary dysmenorrhoea management.

Nursing Administration

- Nurse administrator can plan and organize camp for school and college students regarding the complementary therapies for managing primary dysmenorrhoea.

- Programme for nurse midwives to update their knowledge regarding menstruation related complications of adolescents.
- Local mass media can be used to popularize muscle stretching exercise as a conventional therapy for managing primary dysmenorrhoea.

LIMITATIONS OF THE STUDY

- The study was limited to B. Sc Nursing students of 17-21 years
- The study samples were taken from only one college
- The short term effect of the muscle stretching exercise only assessed

RECOMMENDATIONS

- A similar study can be conducted in larger group to generalize the findings.
- A long term study to reinforce the effectiveness of muscle stretching exercise can be undertaken.
- An extensive descriptive study to assess the knowledge attitude and practice of primary dysmenorrhoea among adolescent girls can be conducted.
- A study can be conducted to assess the incidence rate of primary dysmenorrhoea.
- A similar study we can conduct to findout the effectiveness of non-medicinal interventions for primary dysmenorrhoea.
- A similar study we can conduct to find out the effectiveness of conventional therapies for managing primary dysmenorrhoea.

- A comparative study we can conduct between medicinal and non-medicinal treatment of primary dysmenorrhoea.
- A similar study can be conducted to know the effectiveness of muscle stretching exercise on pre-menstrual symptoms also.

ABSTRACT

Title of the study:“ 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, determine the degree of pain and discomfort during primary dysmenorrhoea among B. Sc Nursing students, evaluate the effectiveness of muscle stretching exercise on pain and discomfort during primary dysmenorrhoea, associate the level of pain and discomfort during primary dysmenorrhoea with selected demographic variables. 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. The model of this study was developed from Titler et al (2004) Effectiveness model. 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 was16. 09 (p <0. 05) and the paired‘ t’ value for discomfort during primary dysmenorrhoea and exercise was14. 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.