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"Effectiveness of muscle stretching exercises in reducing the pain and discomfort in primary dysmenorrhea among adolescent girls in a selected high school at Indore"

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Abstract
Back ground: Primary dysmenorrhea is thought to afflict 50-90% of the world's young female population.
Methods: The prevalence of primary dysmenorrhoea was found to be 51%. Majority (76%) of the students had severe and very severe dysmenorrhoea before muscle stretching exercise whereas majority (57%) of the students had moderate dysmenorrhoea after muscle stretching exercise in Group II. In Group I, 70% of the students had severe and very severe dysmenorrhoea. A significant difference was found in pain score (t=8.4, P<0.005) and associated symptoms (t=9.086, P<0.005) before and after muscle stretching in Group II. A significant difference was found in pain (t=3.58, P<0.05) and symptoms of dysmenorrhoea (t=1.76, P<0.005) in Group I and Group II.
Interpretation: The results show that yoga therapy is effective in reducing dysmenorrhoea.
Conclusion: Integrated approaches of muscle stretching exercises are non-pharmacological, cost-effective, simple and easy to practice, which do not have any side effects.

Keywords: Primary dysmenorrhea, pain, discomfort, muscle stretching exercises

Introduction

Dysmenorrhoea, a common gynecological disorder among females, is characterized by painful menstrual cramps, often underdiagnosed due to women's reluctance to seek medical attention. Primary dysmenorrhea is menstrual discomfort that has no known biological origin and is mostly caused by an excess of prostaglandins]. This is a regular and predictable ache that usually appears immediately before or at the beginning of menstruation. Primary dysmenorrhea is thought to afflict 50-90% of the world's young female population.Primary dysmenorrhea (PD) is a common complaint in young and adult females, causing painful cramps in the lower abdomen before or during menstruation. Despite its prevalence, it is often poorly treated and ignored, leading to silent suffering. Primary healthcare providers play a crucial role in diagnosing, educating, and providing treatment for PD. This review aims to provide an updated perspective on PD diagnosis and recommended treatment modalities for managing PD in young females.

Problem Statement

"A study is to assess the effectiveness of Muscle Stretching Exercises reducing the pain and discomfort in primary dysmenorrhea among adolescent girls in a selected high school at Indore (M. P)"

Objectives

1. To determine the degree of pain and discomfort in primary dysmenorrhea among adolescent.
2. To find out the effectiveness ofMuscle Stretching Exercises in reducing pain and discomfort in primary dysmenorrhea among adolescent girls.
3. To find out the association between pre-test knowledge score with selected variables.

Hypotheses

H1: The mean post-test pain and discomfort score of adolescent girls onMuscle Stretching Exercises in reducing the pain and discomfort in primary dysmenorrhea will be significantly lower than the mean pre-test score at 0.05 level of significance.

H2: There will be a significant association between the selected variables and pretest score of discomfort in primary dysmenorrhea at 0.05 level of significance.

Methods

The prevalence of primary dysmenorrhoea was found to be 51%. Majority (76%) of the students had severe and very severe dysmenorrhoea before muscle stretching exercise whereas majority (57%) of the students had moderate dysmenorrhoea after muscle stretching exercise in Group II. In Group I, 70% of the students had severe and very severe dysmenorrhoea. A significant difference was found in pain score (t=8.4, P<0.005) and associated symptoms (t=9.086, P<0.005) before and after muscle stretching in Group II. A significant difference was found in pain (t=3.58, P<0.05) and symptoms of dysmenorrhoea (t=1.76, P<0.005) in Group I and Group II.
Interpretation: The results show that yoga therapy is effective in reducing dysmenorrhoea.

Results

It is presented and analysed in terms of frequency and percentage.

Table 1: Distribution of Baseline Characteristics of Subjects (N=41)

Variable	Group I Frequency (%)	Group II Frequency (%)	TotalFrequency (%)
Age (in years)			
18	13 (65)	11 (52)	24 (58.5)
19	3 (15)	6 (29)	9 (22)
20	3 (15)	2 (9.5)	5 (12.2)
21	1 (5)	2 (9.5)	3 (7.3)
Year of study			
I Year	14 (70)	11 (52.4)	25 (61)
II Year	6 (30)	6 (28.6)	12 (29)
III Year	-	4 (19)	4 (10)

Table 2: Comparison of pain and associated symptoms of dysmenorrhoea among students of Group I and Group II (N=41)

Area	Group I			Group II			Mean Difference	't' value
	Mean	SD	Mean % Score	Mean	SD	Mean % Score		
Pain	7.94	1.35	74.00	3.62	1.94	36.2	4.3	3.58*
Associated symptoms	4.42	2.03	31.57	2.09	1.60	14.93	2.33	1.76**

** Significant at 0.05 level 't' (39) = 1.645 (p<0.05)
* Significant at 0.005 level 't' (39) = 2.576 (p<0.005)

The data shown in Table 4 indicates that the mean pain and associated symptoms score of students in Group I are higher than group II. The 't' value computed for pain and associated symptom scores shows that there is significant difference in group I and group II, hence, we can conclude that yoga therapy produced a significant difference in pain score and associated symptom scores of students in Group I and Group II.

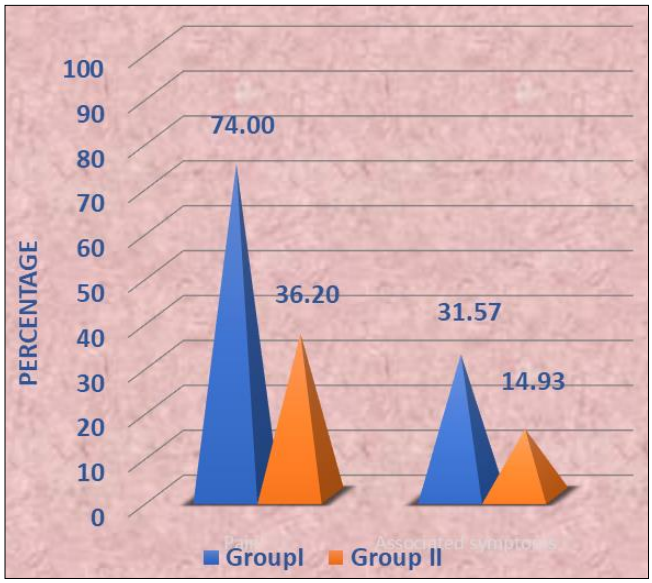

Fig 1: Pain and associated symptom scores in Group I and Group II

Recommendations

1. A similar study can be conducted for a longer duration.
2. An experimental study can be undertaken with a control group.
3. A comparative study can be conducted between pharmacological measures.
4. A study can be conducted to find out the effectiveness of home remedies on premenstrual syndrome.
5. Other varieties of exercises can be introduced to manage primary dysmenorrhea.

Conclusion

Muscle Stretching Exercises were simple, cost effective, easy to prepare and administer without adverse effects.

Key Words: Dysmenorrhea, Pain, Discomfort, Muscle Stretching Exercises

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