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A STUDY TO ASSESS EFFECTIVENESS OF AEROBIC EXERCISE ON PREMENSTRUAL SYNDROME AMONG LATE ADOLESCENT GIRLS IN A SELECTED COLLEGE OF NURSING, KOLLAM

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ABSTRACT

Women are smart and savvy. Striving to live up to their potentials, they are curious about the world they live in and want to make a difference. But adolescent is a period they struggle with the issues of menstruation. Thus the researcher evaluate the effectiveness of Aerobic Exercise on Premenstrual Syndrome among adolescent girls. A quantitative approach using quasi experimental pre-test post-test design with control group.30 adolescent girls with moderate to severe Pre menstrual syndrome was selected using non-probability purposive sampling technique. A. Self administered modified Stainer and Wilkins PMS diagnostic criteria were used to assess the level of PMS and the collected data was analyzed using descriptive and inferential statistics. The result showed that the calculated t value is 7.112 at 0.05 % level of significance which is greater than the table value 2.78, it reveals that the observed differences is significant at 0.05 level of significance. The study concluded that aerobic exercise helps in decreasing Pre menstrual syndrome among late adolescent girls.

Key words: Effectiveness, Aerobic exercise, Pre menstrual syndrome, Adolescent girls.

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INTRODUCTION

Menstruation is a the cyclic recurrence in the luteal phase of the menstrual cycle of a combination of distressing physical, psychological, and behavioural changes of sufficient severity to result in deterioration of interpersonal relationships and or interference with normal activities. The initiation of menstruation takes place during the early adolescence period. Nearly all women of child bearing age have some premenstrual symptoms, but those between their late 16s and early 40s are most likely to experience Premenstrual Syndrome (PMS)[1].

A prospective-co relational design was conducted in Jordan (2017) to examine the prevalence and association of PMS and PMDD with academic performance among female students. 307 Students were selected by Convenience sampling technique, self-administered questionnaires were distributed. The data analysis showed that the GPA scores among students with PMS were as follows: 18% (n = 99) of them had poor GPA scores, 37% (n = 204) had good GPA scores, 30.9% (n = 170) had a very good GPA scores, and 10.9% (n = 60) had excellent GPA scores. The GPA scores according to the University of Jordan are obtained once per semester. The study concluded that the impact of PMS symptoms on the academic performance measures (social involvement, academic involvement, self-determination, and GPA sores) among female students [2].

A cross sectional study was conducted in Al-Nahyan Medical Complex Hospital, Pakistan (2017) to assess the prevalence and impact of premenstrual syndrome among nursing students. Non-probability sampling technique was used for sample selection and Self-structured and self-administered questionnaire were used for data collection. Data was analyzed through SPSS. The result showed Prevalence of PMS found to be (n=95, 26.5%) in study participants those who have

irregular periods were more suspected to diagnosed with PMS (n=16, 32.6%) and its P value is (0.570) which is insignificant. The study concluded that prevalence of PMS found to be low in nursing students of Quetta city and respondents with irregular periods were more suspected to be diagnose with PMS [3].

It is estimated that between 85%-97% of women of reproductive age experience some symptoms in the premenstrual phase of the cycle and about 30-40% of these women seeks help from their physician. PMS is a combination of physical and psychological disturbance that occur in last half of women's menstrual cycle after ovulation which normally end with the onset of the menstrual flow [4].

Pre menstrual symptoms is very common in late adolescent girls, it affect their daily activities, so for reducing this symptoms so many girls were taking analgesics but it causes many side effects, rather than pharmacological some non-pharmacological measure are very helpful to relieve this symptoms. Relaxation is one of the important techniques to reduce this symptoms and investigator also felt that less research has been done about the use of Aerobic exercise in pre menstrual period and its effectiveness has been proven through the previous research studies, hence the present study is an attempt to find the effect of J Aerobic exercise on reduction of pre menstrual syndrome among late adolescent girls.

STATEMENT OF THE PROBLEM

A study to assess the effect of aerobic exercise on premenstrual syndrome among late adolescent girls in a selected college of nursing, Kollam

OBJECTIVES

1) To assess the pre -test and post- test scores of PMS among late adolescent girls in group I (experimental group) and group II (control group).
2) To compare the effectiveness of aerobic exercise on PMS in group I and group II.
3) To find out the association between post-test score of PMS with selected demographic variables of group I and group II

Hypotheses

Hypothesis will be tested at 0.05 level of significance

- H_1 - There will be significant difference between pre-test and post -test scores of PMS in group I and group II.
- H_2 - The mean post-test scores of PMS among late adolescent girls in group I will be significantly difference from group II.
- HH3 -There will be significant association between PMS with selected demographic variables among late adolescent girls.

MATERIALS AND METHODS

Research Approach was quantitative approach. The research design was pre test post test control group design the study was conducted in Holy cross college of Nursing, Kottiyam among 30 adolescent girls having moderate to severe PMS was selected using Non-probability purposive sampling technique. 15 each for experimental and control group. Aerobic Exercise was given for a period of 15-20 minutes three days prior to menstruation. The pilot study was conducted among 5 samples.

TOOLS AND TECHNIQUES

Part I: Demographic Proforma such as age at menarche, duration of menstruation, family history of PMS,religion, type of family, diet ,previous gynaecological disorders and knowledge regarding PMS.
Part II: Modified Stainer and Wilkins PMS Diagnostic criteria
Part III: Attitude scale for PMS

SCORING METHOD

- Nil - 0-5
- Mild level- 6-10
- Moderate level- 11-15
- Severe level-16-20

DATA COLLECTION PROCESS

Prior permission was obtained from Principal of the selected College of Nursing at Kollam and data collection was carried out on the month of July. On day one, the purpose of the study was explained to the sample and informed consent was taken before starting the study. First, Modified Stainer and Wilkins PMS criteria tool was used to select the samples. The girls with moderate to severe level of PMS were assigned alternatively to the control and experimental group. Pre test level of PMS was assessed in both the control and experimental group by PMS scale. The experimental group was treated with aerobic exercise for 5 days prior to menstruation. The post test was assessed on first day of menstruation by PMS scale for both experimental and control group.

ANALYSIS AND INTERPREATATION

The data obtained using both descriptive and inferential statics significance of effect of aerobic exercise on reduction of PMS was analysed using paired 't' test and association between pre test scores of PMS with selected demographic variables were analysed using chi-square

RESULTS

Data presented in Table :1 shows that in experimental group the majority of the sample belongs to the age group of 13-15 years (58.33%) who had 4-5 days (58.33%) of menstruation, whereas (60%) had family

history of premenstrual syndrome and (66.66%) believes in Christianity .In this group (80%) belongs to nuclear had previous gynaecological disorders and (80%) had previous knowledge regarding PMS.

In control group majority of the sample (53.3%) are in the age group of 10-13 years and (70%) had 2-3 days of menstruation, (66.66%) had family history of PMS

family, and (80%) of them were non-vegetarian, (86.67%) and (53.3%) believes in Christianity. In this group (66.7%) belongs to nuclear family and (66.67%) belongs to non vegetarian and (80%)had previous gynaecological disorders and (93.33%) had previous knowledge regarding PMS.
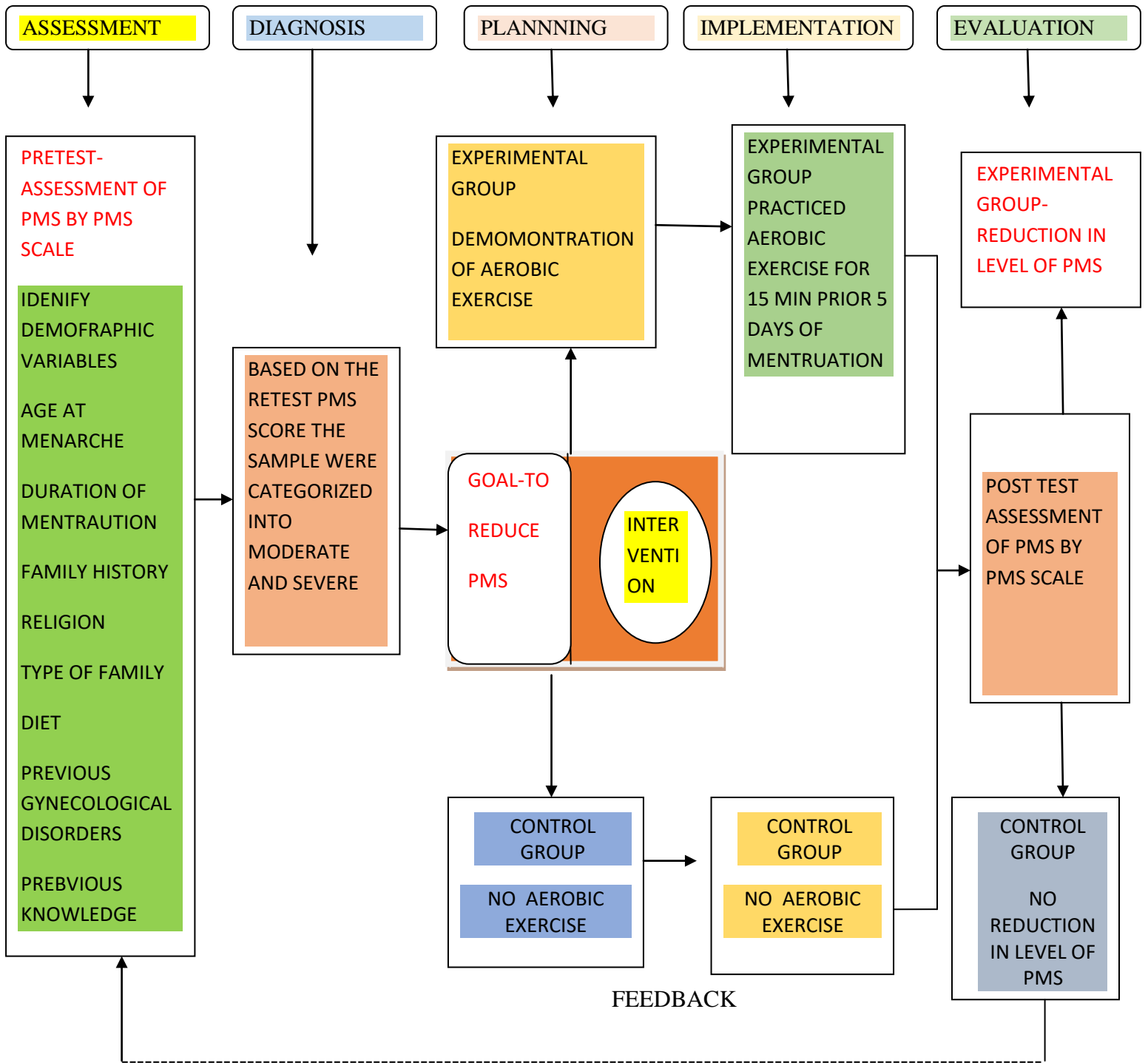

FIGURE -1 CONCEPTUAL FRAMEWORK BASED ON MODIFIED ORLANDO'S NURSING PROCESS MODEL

Table 1. Description of demographic variables

Age(years) at menarche	Experiment		Control		Total	
	Frequency	Percentage	Frequency	percentage	Frequency	Percentage
10 – 13	7	46.67	8	53.33	15	100
13 – 15	8	58.33	7	46.67	15	100
15 – 18	0	0	0	0	0	0
Duration of menstruation						
2 - 3 days	7	46.67	8	53.33	15	100
4 - 5 days	8	58.33	7	46.67	15	100
5 - 6 days	0	0	0	0	0	0
Family history of Premenstrual syndrome						
Yes	9	60	10	66.66	19	63.33
No	6	40	5	33.33	11	36.66
Religion						
Hindu	4	26.66	5	33.33	9	30
Christian	10	66.66	8	53.33	18	60
Muslim	1	6.67	2	13.33	3	10
Type of family						
Nuclear family	12	80	10	66.67	22	73.33
Joint family	3	20	5	33.33	8	26.66
Extended	0	0	0	0	0	0
Diet						
Non –veg	12	80	10	66.67	12	40
Vegetarian	3	20	5	33.33	8	26.66
Eggetarian	0	0	0	0	0	0
Previous gynaecological disorders						
Yes	13	86.67	12	80	25	83.33
No	2	13.33	3	20	5	16.66
Previous knowledge						
Yes	12	80	14	93.33	26	86.66
No	3	20	1	6.67	4	13.33

Table 2. Association between post-test scores of PMS with selected demographic variables of group I and group II

Demographic variables	Below median level	Above median level	Chi-square	df=4,table value at 0.05 level
Duration of menstruation 2-3 days 4-5 days 5-6 days	0 0 0	19 11	9.636	9.49

Figure 2. Assess the pre -test and post- test scores of PMS among late adolescent girls in group I (experimental group) and group II (control group).
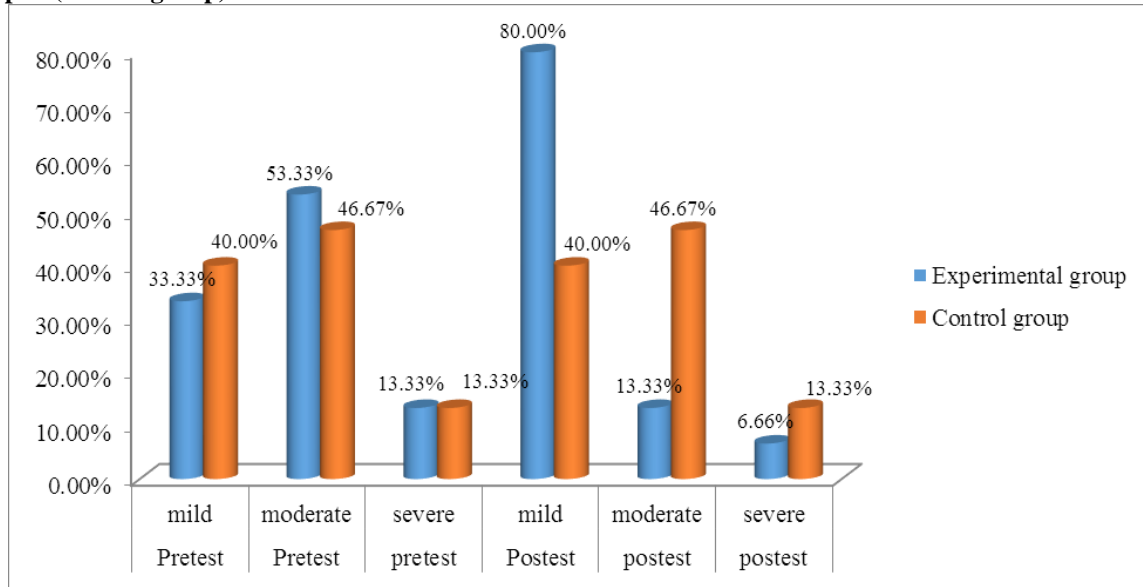
DISCUSSION

The study findings found that the post-test scores of PMS in experimental group (80%) and (40%) in control group had mild PMS and (13.33%) in experimental group and (46.67%) in control group had moderate PMS and in experimental group (6.66%) and control group (13.33%) had severe PMS. The calculated t value is 7.112 at 0.05 % level of significance which is greater than the table value 2.78 which reveals that the observed differences is significant at 0.05 level of significance. The chi square value related to presence of duration of menstruation(9.636) is greater than of table value(9.49) at 0.05 level of significance. Thus it concluded that there is significant association between post-test scores of PMS with selected demographic variables.

CONCLUSION

Based on the finding of the present study, the following conclusions were drawn. The mean post test scores of control group is higher than that of mean post test scores of experimental group, hence it can be concluded that there is significant difference in post test scores regarding aerobic exercise. It is inferred the aerobic exercise was effective in reducing premenstrual syndrome among late adolescent girls. There is an association between post-test scores of PMS and selected demographic variables.

NURSING PRACTICE

- The main focus of nursing practice is to reduce the severity of PMS to improve the quality of life.
- Regular Aerobic Exercise should be carried out for reduction of PMS among late adolescent girls.
- Help the adolescent girls to learn their role in controlling causative factors, modifying their daily routine and improve the quality of life.

NURSING EDUCATION

- Helping the students to learn to assess the PMS and the complementary therapy to reduce the severity of PMS.
- Differential alternative therapies for reduction of PMS can be included in their curriculum.

NURSING ADMINSTRATION

- Nurse Manager can arrange periodical demonstration program related to reduction of PMS in schools, college etc.
- Can arrange in-service education program for nurses based on different types of complementary therapies for reduction of PMS

NURSING RESEARCH

- The findings of this research study can be used as a reference to the future nurse researcher.
- The research study findings can be proclaimed through journals, articles, seminars, conferences etc.

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