



EFFECTIVENESS OF FOOT REFLEXOLOGY ON PREMENSTRUAL SYNDROME (PMS) AMONG EARLY ADULT WOMEN.

Gynecology

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ABSTRACT

Back ground:

Premenstrual syndrome (PMS) is a collection of physical and emotional symptoms that alter changes in physical health, mood and behaviors. It affects the women recurrently and interfere with regular aspects of life.

Methods: The pre-experimental, one group pre and post-test design was adopted. The purposive sampling technique was used to select 30 early adult women as per inclusion criteria. The level of PMS was assessed by using the PMS rating scale before and after foot reflexology intervention.

Results: The overall pre-posttest mean score with SD was 29 ± 3.40 and 5.76 ± 6.79 . In association, the educational status, BMI, age at menarche and type of menstrual flow are statistically significant at $p < 0.05^*$.

Conclusion: The paired 't' value of 16.81 was significant at $p < 0.05^*$ revealed that, foot reflexology is effective method in reducing the PMS.

KEYWORDS

Effectiveness, Foot reflexology, Premenstrual syndrome and Early adult woman

1.Introduction

One of the amazing journeys from adolescence to womanhood is puberty; a momentous event for becoming a woman. The premenstrual problems suffered by women were formally described by Frank in 1931 and the term Pre-Menstrual syndrome (PMS) was first used by Greene and Dalton in 1953.^[1] The PMS is not really life-threatening problem but it can seriously alter the quality of life of many women, affect their productivity and mental health. It also seems to be burden and upsets their day to day life. There is no therapeutic cure, consuming medicines every month can lead to several adverse effects.^[2]

The non-invasive, Complementary Alternative Medicine (CAM) of the foot Reflexology is a natural healing therapy which is highly effective in dealing with many health complaints. It promotes equilibrium and wellbeing through application of pressure to reflex points of the hands or feet using specific thumb, finger and hand techniques, to bring about a state of balance within the body. It is the treatment which will provide with energies as a result of stimulating all the systems in the body, therefore being able to heal itself and feel more comfortable. The benefits of foot reflexology are; reduces PMS, release stress and tension, improves blood circulation, activates lymph drainage, assists in elimination of toxins, strengthens the immune system, harmonizes vital functions, enables a deep state of relaxation and wellbeing.^[3]

1.2. Need for the study

According to American College of Obstetrics and Gynecology (ACOG), the prevalence rate of pre- menstrual symptoms in India 1,065,070,607. The WHO estimated that 199 million (i.e., 5.8%) women have PMS; 80% of menstruating women have experienced at least one symptom and prevalence ranges from as low as 3% to as high as 80%. The foot reflexology helps to improve blood supply, normalize overactive or underactive glands, unblock nerve impulses and relieve stress.^[4]

In regard to the high prevalence of PMS, side effects, costliness of pharmaceutical methods and increasing tendency toward complementary medicine, the necessity of nurses being upgraded with modern treatment methods; the researcher was persuaded to do this study. In her experience, she had come across many of the students suffering with physical symptoms of PMS also felt that heightened mood swings, other negative symptoms which affects the personal life, academic, sickness, absenteeism among students. This motivated the investigator to use foot reflexology for reducing the symptoms of PMS and absenteeism among college students.

1.3. Statement of the problem

A study to evaluate the effectiveness of Foot Reflexology on Premenstrual syndrome (PMS) among Early Adult Women at Arun College of Nursing, Vellore-01

2. Materials and Methods

A quantitative, pre-experimental one group pre, post-test design was adopted. The Purposive sampling technique was used to select 30 early adult women having regular menstrual cycle with moderate and severe PMS. The students who were having their menstrual disorders are excluded in this study. The structured interview method was used to collect data from the participants of 15-20 minutes without having any possible interaction with other participants.

2.1 Tools and techniques

After extensive and systematic review of literature, the investigator developed a demographic profile and PMS rating scale. They are,

Section A:

It contains demographic variables and background such as age (in years), religion, educational status, family income, residence, age at menarche (in years), BMI, type of diet, duration of menstruation (in days), average length of menstrual cycle (in days), type of menstrual flow, LMP, family history of PMS, previous information about PMS and sources of information.

Section B:

The total of 35 symptoms included in the different aspects of PMS rating scale as follows, Physical -20, Physiological -3, Psychological -8 and Emotional-4. Each response is interpreted as score of never- 0, sometimes -1, always -2 and the maximum score was 70. To interpret the level of PMS the scores are distributed as follows, 0 No PMS, 1 - 23 Mild PMS, 24 - 46 Moderate PMS and 47 - 70 Severe PMS. The test and retest method were used to obtain the reliability of the tool 'r' value of 0.62, was found to be reliable.

2.2. Data collection procedure

The necessary ethical and administrative permission was obtained. The confidentiality was assured to the participants (B.Sc., (N), P.B.Sc., (N) & M.Sc., (N) Students) and informed consent was obtained. The PMS rating scale was administered to each participant before the intervention. After the pretest, 4 sessions of foot reflexology were started from 4th day of menstruation in early follicular phase and completed on 24th day of luteal phase followed by same PMS rating

scale was assessed as posttest. The obtained data was analyzed by using descriptive and inferential statistics.

3.Results and Discussion

Based on objectives, the results are discussed below,

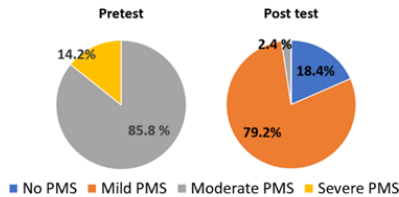
3.1 Regarding the demographic and background variables,

Out of the 30 early adult women, majority of 77% ,78%, 84% were in the age group of 18-19 years, Hindu and non-vegetarians respectively. Nearly 45% of them studying were in the first and third year of B.Sc., (N) students, 80% had the previous knowledge about PMS and 25-30 days menstrual cycle. Nearly half of participants (52%) were attained menarche between the ages of 14-16 years, 47% had normal BMI and 49% received the previous information from mothers. Regarding menstruation, 70%, 87%, 63% had the moderate flow, flow between 4-6 days and the family history of PMS respectively.

3.2. To assess the overall level of PMS before and after foot reflexology,

In pretest, the majority 86 % of women had moderate level, remaining 14% had severe level of PMS. Whereas in posttest the participants had, 18% no PMS, the majority 79% in mild PMS,2% only in moderate PMS and no one in severe PMS. The similar findings are supported by, **Valiani.M** (2010) identified that Reflexology method was associated with more reduction of intensity and duration of menstrual pain in comparison with Ibuprofen therapy.^[5]

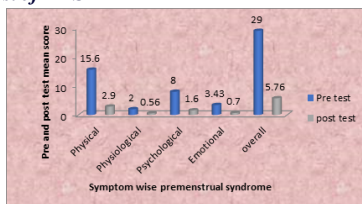
Fig 1 shows, the Overall level of PMS among Early Adult Women Before and After Foot Reflexology



3.3 To evaluate the effectiveness of foot reflexology on PMS,

The level of PMS was assessed in different areas, among this the pretest mean score was highest 15.6 in physical symptoms and lowest 2 in physiological symptoms where as in posttest reduced to 2.9 and 0.56 respectively. The Commonest symptom experienced by the subjects who had PMS was abdominal discomfort and followed by lower abdominal pain, pimples, puffy face, tender breast, depression, disturbed sleep, decreased appetite and abstain from work was reduced in posttest. The similar findings were supported by the comparison of pre and post intervention in reflexology significantly led to decrease of average of mental symptoms (25.12 %) and physical symptoms (19.34 %) at p<0.0001. [6]

Fig 2 shows, the comparison of mean difference between pre and posttest of PMS



Regarding the effectiveness of foot reflexology on PMS the overall pre and Posttest mean score with the SD was 29±3.40 and 5.76± 6.79 respectively. The paired 't' value of 16.81 was higher than the tabulated value (t=2.042) which is highly significant at p<0.05. Hence there is difference between pre and post test score of PMS the null hypothesis of H1 is rejected. The similar findings are seen in *Kim.YH.et.al.,* (2004) in pretest, the mean score of the PMS was 8.35; it was reduced to 4.16 at the first menstruation and 3.25 at the second menstruation after reflexology in the experimental group.^[7]

Table 1: Comparison of Pre and posttest mean scores on level of PMS among early adult women.

S.n o.	Level of PMS	Mean	Standard deviation	Mean Difference	Paired t Test
1.	Pretest	29	3.40	23.23	16.81*
2.	Post test	5.76	6.79		

Significant at p<0.05*

3.4. Regarding association of post test score of PMS with selected demographic variables,

The chi square test revealed that educational status, BMI, age at menarche and type of menstrual flow are statistically significant at p<0.05. Hence there is association between post test score of PMS with demographic variables the null hypothesis of H2 is rejected. The findings were supported by Seedhom AE(2013) also found that 80.2% of the participants experienced various degrees of PMS symptoms which were significantly associated with a family history of PMS, physical inactivity, habitual excess consumption of coffee, BMI and frequent consumption of fast food.^[8]

4.Recommendations

- The study can be replicated by using a larger sample and in different settings there by findings can be generalized.
- A comparative study may be conducted to evaluate the effectiveness of foot reflexology with other non-pharmacological measures for PMS.
- A longitudinal study can be done on the early adult women to elicit the effectiveness of PMS.
- A descriptive study can be conducted to assess the knowledge and attitude of nurses towards using the complementary therapies for PMS

5. Conclusion

The foot reflexology is simple, safe and non-pharmacological intervention method used to balance the body's vital energies and thus promote overall health. This study findings suggested that, the foot reflexology is effective in reducing the PMS and also the specific information has to be provided to the early adult women in reducing the level of PMS.

6.ACKNOWLEDGEMENT

I am privileged to thank the Management, Principal for providing the permission to conduct the research and the participants for their kind cooperation for completion of this study. This study is done as part of my Ph.D., under The Tamilnadu Dr.M.G.R.Medical University, Chennai.

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