

# Effectiveness of Aromatherapy Upon Premenstrual Syndrome among B.Sc. Nursing Students

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## ARTICLE DETAILS

### Article History

Published Online: 15 July 2019

### Keywords

Aromatherapy, Premenstrual Syndrome, B.Sc. (N) Students.

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## ABSTRACT

India is one of the fastest growing youth populations in this world, with an estimation of 200 million young adults, in that 75% of them experience some problem associated with premenstrual discomforts. Alternative and complementary medicine interventions have evidence in reducing the level of premenstrual syndrome. A quasi experimental study to assess the effectiveness of aromatherapy upon premenstrual syndrome among B.Sc Nursing students at selected colleges, Chennai. **Research methodology:** Quasi experimental research was conducted among 80 B.Sc Nursing students who were selected using Total enumerative sampling technique. Tools such as background characteristics proforma, clinical variable proforma, standardized rating scale on premenstrual syndrome and rating scale on level of satisfaction of aromatherapy were used. **Results:** There was a significant difference in Mean and standard deviation level of premenstrual syndrome before ( $M=27.6&SD=5.3, M=28.8&SD=5.2$ ) and after ( $M=27.5&SD=5.3, M=9.1&SD=6.6$ ) administration of aromatherapy in control and experimental group of B.Sc Nursing students with  $t$  value of 14 at  $p<0.001$ . **Conclusion:** The above findings showed that the effectiveness of aromatherapy upon premenstrual syndrome.

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## 1. Introduction

India has one of the fastest growing youth populations in this world, with an estimation of 200 million young adults, in that girls below 24 years of age comprise one quarter of India's rapidly growing population among them 75% of the girls were experiencing some problems associated with premenstrual discomforts. Alimentazeri (2012). This complex passage from childhood to adulthood is stressful for girls. So as health care professionals we have to give more importance to this particular period and to bring a healthier adult population. Premenstrual syndrome more common during three to four days before the onset of menstruation, because that is the end stage of luteal phase during that time the estrogen and the progesterone level decreases causes more physiological and psychological discomforts. Freeman (2017).

Brent (2011) investigated the alleviating effects of aromatherapy massage and acetaminophen on menstrual pain among students. The level of menstrual pain was assessed using a visual analogue scale at baseline and twenty-four hours afterward. The reduction of menstrual pain was significantly higher in the aromatherapy group than in the acetaminophen group. These finding suggest that aromatherapy massage provide effective treatment for the management of premenstrual discomforts among the students.

**Statement of the problem:** A quasi experimental study to assess the effectiveness of aromatherapy upon premenstrual syndrome in B.Sc Nursing students at selected colleges, Chennai. **Objectives of the Study:** 1. To assess the level of premenstrual syndrome before and after administration of aromatherapy in control and experimental group of B.Sc Nursing students. 2. To assess the effectiveness of aromatherapy by comparing the level of premenstrual

syndrome before and after administration of aromatherapy in control and experimental group of B.Sc Nursing students. 3. To find the association between the selected background variables and clinical variables upon the level of the premenstrual syndrome before and after administration of aromatherapy in control and experimental group of B.Sc Nursing students. 4. To determine the level of satisfaction regarding aromatherapy in experimental group of B.Sc Nursing students.

**Null Hypotheses:**  $H_0$ 1 There will be no significant difference in the level of premenstrual syndrome before and after administration of aromatherapy in control and experimental group of B.Sc Nursing students.  $H_0$ 2 There will be no significant association between selected background variables and the level of premenstrual syndrome before and after administration of aromatherapy in control and experimental group of B.Sc Nursing students.

## 2. Materials and methods

The study was conducted at selected nursing colleges Chennai, using Experimental research approach with quasi experimental design. Total enumerative sampling technique was used to conduct survey among the students and then 80 samples were selected. Among them 40 were in control group and 40 were in experimental group. The tools used in this study were background variable proforma includes Age, Religion, Monthly family income, Dietary pattern and Family history of premenstrual syndrome. Clinical variable proforma includes Age at menarche, Weight in kilograms, Body mass index, Onset of premenstrual syndrome, Duration of menstrual flow. Standardized rating scale on premenstrual syndrome was used to assess the level of premenstrual syndrome in B.Sc Nursing students before and after administration of aromatherapy, which was collected by the researcher through self

administration method. It consists of both physiological and psychological symptoms. Rating scale on satisfaction of aromatherapy: This scale was designed by the researcher to assess the satisfaction level of the Participants regarding aromatherapy provided during premenstrual syndrome which was assessed after 3 days. It consists of four response includes highly satisfied, satisfied, dissatisfied, and highly dissatisfied.

The researcher was trained for one week in giving aromatherapy and certified before data collection. The participants were explained about the study and obtained written consent after providing assurance and developing confidence and the data collected from the participants through self administration method. The level of premenstrual syndrome was assessed by standardized rating scale on premenstrual syndrome and the samples were selected by following the inclusion criteria. The intervention was started three days before the onset of menstruation, evening prim rose oil 5 ml mixed with 10 ml of olive oil was used to massage over

the lower abdomen once in a day for three days with the duration of 15-20 minutes (especially in the morning hours between 6am -7am) for experimental group of B.Sc Nursing Students. The level of premenstrual syndrome was assessed after three days for both control and experimental group of B.Sc Nursing students. The level of satisfaction on aromatherapy was assessed in the experimental group of B.Sc Nursing Students by using the structured rating scale after three days of intervention.

**3. Results**

Frequency and percentage distribution of background and clinical variables in the control and experimental Group of B.Sc Nursing students revealed that most of the students were between the age group of 20-21years (90%, 97.5%), majority of them were Christians (55%, 62.5%) with monthly family income of Rs.10, 001-15,000 (57.5%, 57.5%) and majority of the students (57.5%, 80%) had the family history of premenstrual syndrome in control and experimental group respectively.

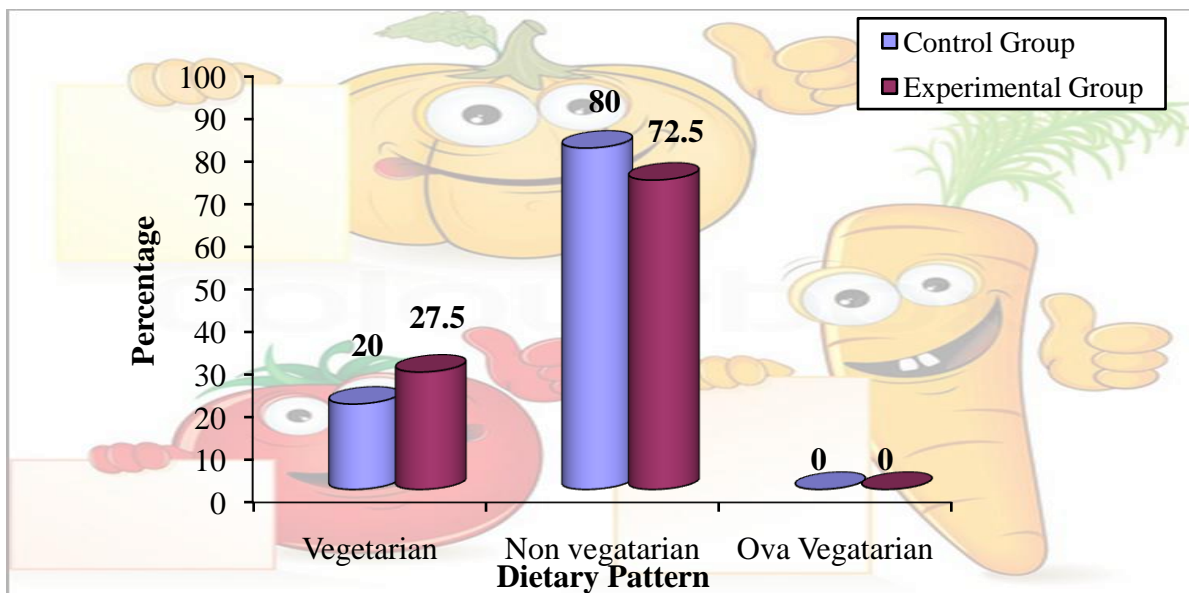


Fig.1 Percentage Distribution of Dietary Pattern in Control and Experimental Group of B.Sc. Nursing Students

Majority of the students attained menarche at the age of 12-13years (57.5%,90%) and had body weight within the range of 40-52 kg (85%,72.5%), between the height of (151-160) cm (50%,55%), had the body mass index within the range

of (20-24) (50%-55%) and had 4-5 days (62.5%,77.5%) of menstrual flow, nearly half (40%, 52.5%) of the students had the onset of premenstrual syndrome before (49-72) hours of menstruation in control and experimental group respectively.

Table 1

Comparison of Mean and Standard Deviation of Premenstrual Syndrome Before and After Administration of Aromatherapy in Control and Experimental Group of B.Sc Nursing Students.

Level of premenstrual syndrome	Control Group (n=40)		Experimental Group (n=40)		‘t’ Value
	M	SD	M	SD	
Before therapy	27.6	5.3	28.8	5.2	1
After therapy	27.5	5.3	9.1	6.6	14

P < 0.001

There was a significant difference in Mean and standard deviation level of premenstrual syndrome before (M=27.6& SD=5.3, M=28.8 & SD=5.2) and after (M=27.5&SD=5.3,M=9.1&SD=6.6) administration of

aromatherapy in control and experimental group of B.Sc Nursing students with t value of 14 at p<0.001, it proved the effectiveness of aromatherapy upon premenstrual syndrome.

Level of Satisfaction regarding Aromatherapy in Experimental Group of B.Sc Nursing Students revealed that Majority of the B.Sc. Nursing students in the experimental group were highly satisfied (85%) in aspects related to researcher, regarding the method of administration of aromatherapy (97.5%) and related to the effectiveness of aromatherapy (90%).

Association between the selected background variables and the level of premenstrual syndrome proved that there was a significant association between the selected background variables like family history and the level of premenstrual syndrome ( $p < 0.05$ ) before therapy in control group, but no significant association was found with other demographic variables namely age in years, religion and monthly family income in rupees with the level of premenstrual syndrome in control and experimental group of B.Sc Nursing students. Hence the Null Hypothesis  $H_{02}$  was rejected with regard to family history of premenstrual syndrome.

No significant association between the selected clinical variables namely age at menarche, weight in kilograms, height in centimeter, body mass index, onset of premenstrual syndrome and the duration of menstrual flow with the level of premenstrual syndrome in both control and experimental group of B.Sc. Nursing students.

#### 4. Discussion

Most of the students were aged between 20-21 years (90%, 97.5%), were non vegetarian (80%, 72.5%). Majority of them were Christians (55%, 62.5%) with monthly family income of Rs.10, 001-15,000 (57.5%, 57.5%) and had the family history of premenstrual syndrome in control and experimental group respectively.

Pal, Dennerstein, & Lehert (2011) Conducted a study to assess the incidence of premenstrual syndrome in young adults, which infers that premenstrual syndrome is common in young adults because of changing physiological and psychological pattern in the body, so as a health care professional we should adopt the comprehensive measures to reduce the incidence of premenstrual syndrome and improve the quality of life.

Nearly half (40%, 52.5%) of B.Sc. Nursing students had the onset of premenstrual syndrome before (49-72) hours of menstruation in control and experimental group respectively. Ryu & Kim (2015) conducted a study to find out the onset of premenstrual syndrome among adolescent girls. He concluded that premenstrual syndrome was more common during two to three days before the onset of menstruation, because that is

the end stage of luteal phase during that time the estrogen and the progesterone level decreases, due to the disturbances in the hormones produces more symptoms, so it is called as late luteal phase dysphoric disorder.

There was a significant difference in Mean and standard deviation level of premenstrual syndrome before ( $M=27.6$  &  $SD=5.3$ ,  $M=28.8$  &  $SD=5.2$ ) and after ( $M=27.5$  &  $SD=5.3$ ,  $M=9.1$  &  $SD=6.6$ ) administration of aromatherapy in control and experimental group of B.Sc Nursing students with t value of 14 at  $p < 0.001$ , it showed that aromatherapy proved to be effective upon premenstrual syndrome. Hence the null hypothesis  $H_{01}$  There will be no significant difference in the level of premenstrual syndrome before and after administration of aromatherapy in control and experimental group of B.Sc Nursing students was rejected.

This was supported by the research conducted by Brush, et al., (2011) to evaluate the effectiveness of primrose oil on management of premenstrual syndrome, based on self report scale the researcher concluded that among the participants 61% of them had complete relief of premenstrual symptoms, 16% of them had partial relief of symptoms. This can be attributed to the effectiveness of aromatherapy. Similar findings was supported by Kartal (2019) concluded that, aromatherapy proved to be more effective in management of premenstrual symptoms.

There was a significant association with the family history and the level of premenstrual syndrome ( $\chi^2 = 3.94$  at  $p < 0.05$ ), but there was no significant association with other variables, it proved that family history play a major in the development of premenstrual syndrome. Hence the null hypothesis  $H_{02}$  There will be no significant association between selected background variables and the level of premenstrual syndrome before and after administration of aromatherapy in control and experimental group of B.Sc Nursing students was rejected with regard to family history. So as health care professionals we need to take alternative measures to control the effect of premenstrual syndrome.

#### 5. Conclusion

The present study showed that the reduction of premenstrual symptoms was significantly higher in the experimental group than the control group. These findings suggested that aromatherapy massage proved to be effective in reducing the premenstrual discomforts among the students. So the incorporation of complementary medicine like aromatherapy in nursing care for the management of premenstrual discomforts is the best intervention to control the physiological and psychological discomforts in premenstrual period.

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