

A Pre - Experimental Study to Assess the Effectiveness of Oral Mint Leaves Paste on Dysmenorrhea among Nursing Students in Selected Colleges

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Abstract: *Background:* Dysmenorrhea is the most common gynecological problem among females and it is defined as cramping pain in the lower abdomen occurring just before or during menstruation. *Objectives:* 1) To assess the level of dysmenorrhea among nursing students in selected nursing colleges. 2) To evaluate the effectiveness of oral mint leaves paste on dysmenorrhea among nursing students in selected nursing college. 3) To compare the pre - test & post - test scores after intervention among nursing students in selected nursing colleges. A study was conducted in selected colleges to assess the effectiveness of oral mint leaves paste on dysmenorrhea. The 60 samples were selected by using purposive sampling technique. The socio demographic data was collected by using questionnaire method on 1. Age, 2. weight, 3. dietary pattern 4. Age at menarche 5. Duration of menstrual flow per month 6. Duration of dysmenorrhea and Dysmenorrhea rating scale to assess the level of dysmenorrhea. Pre - test conducted using dysmenorrhea rating scale. *Intervention:* administration of oral mint leaves pastes 5gm twice a day from 1st to 3rd day of menstruation. Post - test conducted using same tool after intervention. *Result:* comparisons of the pretest and posttest mean scores of dysmenorrhea among Nursing students using paired t test. The test was conducted at 5% level of significance. The pretest average score was 27.48 with standard deviation of 5.06. The post - test average score was 19.46 with standard deviation of 5.52. The test statistical value of the paired t test was 26.88 with p value 0.000 which is < 0.05, hence H_0 is rejected and H_1 is accepted. Therefore, there was significant difference in pre - test and post - test. *Conclusion:* Oral mint leaves paste was found to be effective on dysmenorrhea among Nursing students and has been proved statistically.

Keywords: Assess, Effectiveness, Oral Mint leaves paste, Dysmenorrhea, primary Dysmenorrhea, Nursing students

1. Introduction

Menstruation is a natural event as a part of the normal process of reproductive life in females. Menstruation, or period, is normal vaginal bleeding that occurs as part of a woman's monthly cycle. Menstrual pain which is severe enough to limit normal activities is termed as dysmenorrhea. But a more realistic and practical definition includes causes of painful menstruation of sufficient magnitude so able to incapacitate day to day activities. (Dutta, 2013). The term dysmenorrhea is derived from the Greek words 'dys' meaning difficult/painful, 'Meno' meaning month and 'rrhea' meaning flow¹.

Due to today's lifestyle and food habits, dysmenorrhea is becoming today's burning problem throughout the world which ensuing discomfort for women's daily routines and resulting in missing work, college or school, inability to participate in sports or other activities. About 25 - 50% of adult women and about 75% of adolescents experience pain during menstruation, with 5 - 20% reporting severe dysmenorrhea²

The first menstrual period is called menarche. It usually starts between the ages 11 and 14. But it can happen as early as age 9 or as late as 15. Menarche is the sign of growing up. In the days before the periods start, the adolescent may feel

tense or emotional, gain water weight and feel bloated, pain in the abdomen, back or legs that last few hours or more. The torment is typically in the pelvic area or lower abdomen. Other indications may incorporate back torment, looseness of the bowels, or sickness.³

Primary dysmenorrhea is the most common gynecological problem among menstruating young adults and adolescents. Primary dysmenorrhea is defined as a cramp - like pain in the lower abdomen at the onset of menstruation without any identical pelvic pathology in which pain begins at the onset of the menstrual flow and lasts for 12 - 48 hours. It is the occurrence of a physiologic alteration and it usually appears 6 to 12 months after menarche, when ovulation is established.⁴ Pain may be accompanied by back pain, nausea, vomiting, blotting, breast tenderness and diarrhea. Besides being a gynecological problem, Primary dysmenorrhea is an important health problem concerning public health, occupational health and family practice, as it affects both the quality of life and the national economy due to short - term school/college absenteeism and loss of labor.⁵

A study was conducted to assess the prevalence of dysmenorrhea among adolescent girls residing at Gwalior. 970 girls were selected using multistage cluster sampling technique. A semi structured dysmenorrhea status questionnaire with a total of 14 items were used. It was

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found that 698 (79.6%) of girls had experienced dysmenorrhea. Most of them, that is 37.96% experienced dysmenorrhea every month. The three most common symptoms present on both days, that is day before and first day of menstruation were lethargy and tiredness (first), depression (second) and inability to concentrate in work (third), whereas the ranking of these symptoms on the day after the stoppage of menstruation showed depression as the first common symptoms. Negative correlation had found between dysmenorrhea and the General health status as measured by the body surface area. The study concluded that the dysmenorrhea is a very common problem among adolescent girls, and they experience a number of physical and emotional symptoms associated with dysmenorrhea, and with the increased intensity of pain in occurrence of dysmenorrhea the probability of experiencing these symptoms is also increased.

Traditionally in India, variety of Folk medicines has been used to treat day - to - day minor disorders such as dysmenorrhea, indigestion, nausea. Among the various folk medicines, mint is known to have outweighing benefits. mint is helpful to reduce the menstrual cramps. It is also helpful in relaxing the muscular spasms and in relieving the pain present during menstrual periods.

2. Problem Statement

“A STUDY TO ASSESS THE EFFECTIVENESS OF ORAL MINT LEAVES PASTE ON DYSMENORRHEA AMONG NURSING STUDENTS IN SELECTED COLLEGES.”

3. Objectives of the study

- 1) To assess the level of dysmenorrhea among nursing students in selected nursing colleges.
- 2) To evaluate the effectiveness of oral mint leaves paste on dysmenorrhea among nursing students in selected nursing college.
- 3) To compare the pre - test & post - test scores after intervention among nursing students in selected nursing colleges.

Hypothesis:

H₀: - There will be no significant effect of oral mint leaves paste on dysmenorrhea among nursing students.

H₁: There will be significant effect of oral mint leaves paste on dysmenorrhea among nursing students.

4. Methodology

Research Approach: Quantitative evaluative approach.

Research Design: Pre - Experimental One Group Pre - test Post - test Design.

Setting of the Study: The investigator selected Nursing colleges. e. Wanless hospital and Gulab Rao Patil.

Research Variables Under Study

Two variables were identified in this study. They are independent and dependent variables.

Independent variable

The independent variable in this study is oral mint leaves paste.

Dependent variable

The dependent variable in this study is dysmenorrhea.

Demographic variables under study

Age, Weight, Dietary pattern, Age at menarche, Duration of menstrual flow per month, Duration of dysmenorrhea.

Target population

Nursing students with primary dysmenorrhea of selected Nursing colleges.

Accessible population

Nursing students with primary dysmenorrhea between 17 - 21 years of age, in selected Nursing colleges.

Sample

The Nursing students with dysmenorrhea and who fulfilled the inclusion criteria

Sampling Technique

Non - probability purposive sampling technique.

Sample Size

60

Criteria for Selection of Sample

Inclusion Criteria

- Nursing students who have dysmenorrhea.
- Those who have regular 3 - 5 days of menstrual cycle.
- Those who are willing to participate in the study.

Exclusion Criteria

- Nursing students with PCOD, thyroid disorders.
- Those who have secondary dysmenorrhea (endometriosis, ovarian, cysts, pelvic congestion and adenomyosis).
- Those who are taking medications for dysmenorrhea.

Preparation of Tool

The data for the present study was collected by constructing following tool

Section - I: Socio - demographic profile - such as age in years, weight in kilograms, dietary pattern, age at menarche, duration of menstrual flow per month, duration of dysmenorrhea.

Section - II: Dysmenorrhea rating scale to assess the level of dysmenorrhea.

Total score of dysmenorrhea was divided in to four groups like no dysmenorrhea (0 - 10 score), mild dysmenorrhea (11

- 20 score), moderate dysmenorrhea (21 - 30 score) and severe dysmenorrhea (31 - 40 score).

Reliability

The reliability for the research tool of DYSMENORRHEA RATING SCALE was elicited by using Karl Pearson’s coefficient correlation test (r=0.886) which is highly reliable. Hence, the tool for the research study was considered reliable.

Data Collection Procedure

The present study was conducted in college of nursing, Wanless Hospital Miraj & college of nursing, Gulab Rao Patil memorial trust, Miraj. Permission was obtained from local ethical committee and concerned authorities. Informed and written consent was obtained from selected subjects after explaining the study. 60 subjects were selected using non - probability purposive sampling technique. Subjects were selected according to the inclusion & exclusion criteria of the study. Pre - test was conducted using dysmenorrhea Rating Scale, followed with administration of 5 - gram Mint

Leaves paste prepared from 3 grams of mint leaves dried powder mixed with 2 grams of honey, orally twice a day, for 3 days during menstruation. (1st - 3rd day). On 3rd day after intervention Post - test was conducted by using same tool.

Plan for Data Analysis

The data obtained was analyzed using descriptive and inferential statistics based on objectives and hypothesis of the study.

Ethical Consideration

The study was approved by research committee of the institution. Assurance was given to the subjects that anonymity of each individual would be maintained.

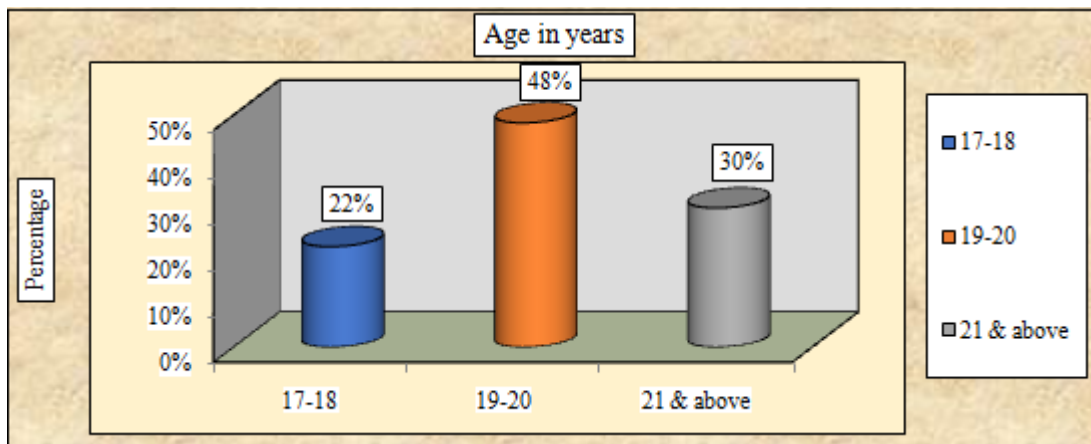
5. Result

Section I

Distribution of frequency & percentage of demographic variables of the Nursing students.

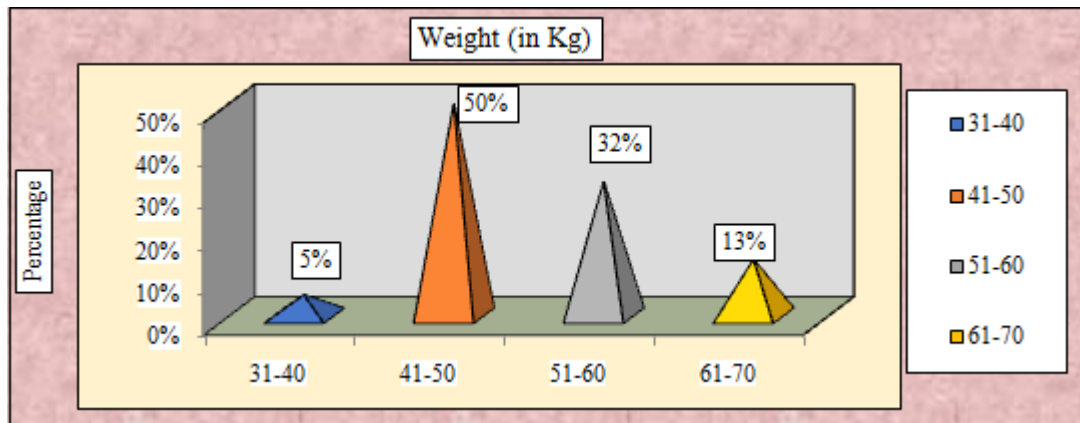
Table 1: Frequency & percentage distribution of demographic variables of Nursing students. n = 60

Sr. No.	Variable	Groups	Frequency (f)	Percentage (%)
1	Age (in years)	17 - 18	13	21.67
		19 - 20	29	48.33
		21 & above	18	30.00
2	Weight (in Kg)	31 - 40	3	5.00
		41 - 50	30	50.00
		51 - 60	19	31.67
		61 - 70	8	13.33
3	Dietary pattern	Vegetarian	9	15.00
		Non - vegetarian	51	85.00
4	Age at menarche	11 - 12 years	6	10.00
		13 - 14 years	41	68.33
		15 - 16 years	13	21.67
5	Duration of menstrual flow per month	Less than 3 days	2	3.33
		3 - 5 days	45	75
		6 - 7 days	13	21.67
6	Duration of dysmenorrhea	One day before menstruation	1	1.67
		1st day	11	18.33
		1st & 2nd day	28	46.67
		Throughout the menstruation	20	33.33



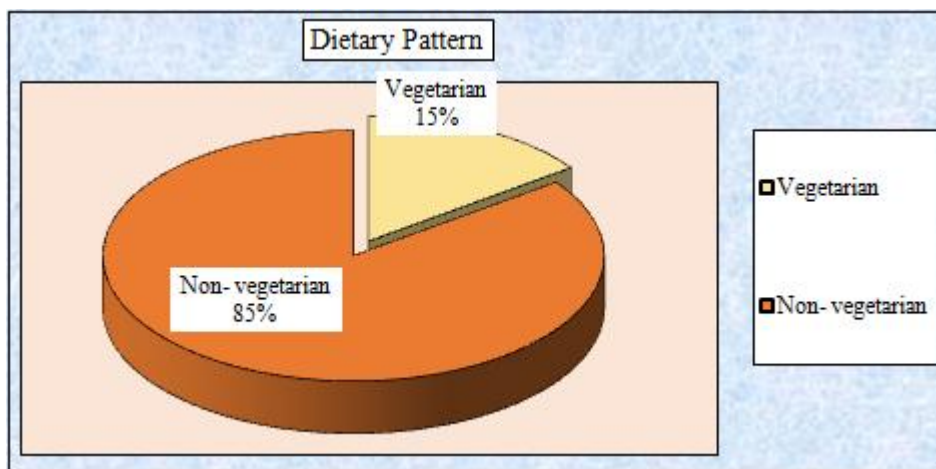
Graph 1: Cylindrical Graph showing Frequency and Percentage distribution according to age.

Above graph depicts that, according to age, 13 (21.67%) belonged to age group 17 - 18 years, 29 (48.33%) belonged to 19 - 20 years & 18 (30%) belonged to 21 & above years.



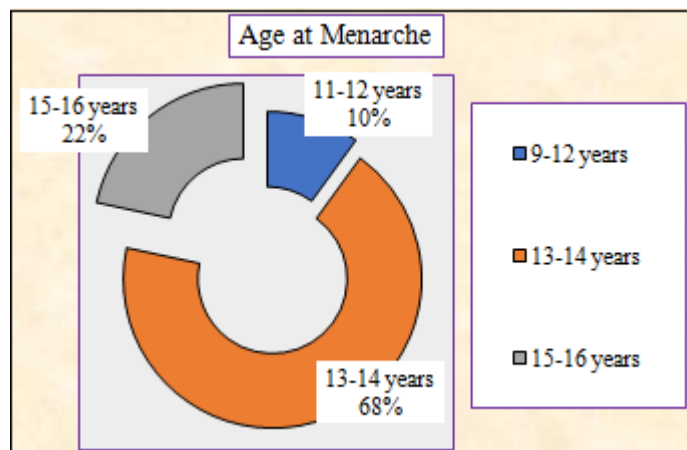
Graph 2: Pyramid graph showing Frequency and Percentage distribution according to weight.

The above graph depicts that, 3 (5%) students had weight between 31 - 40 Kg, 30 (50%) students had weight between 41 - 50 Kg, 19 (31.67%) had weight between 51 - 60 Kg and 8 (13.33%) had weight between 61 - 70 Kg.



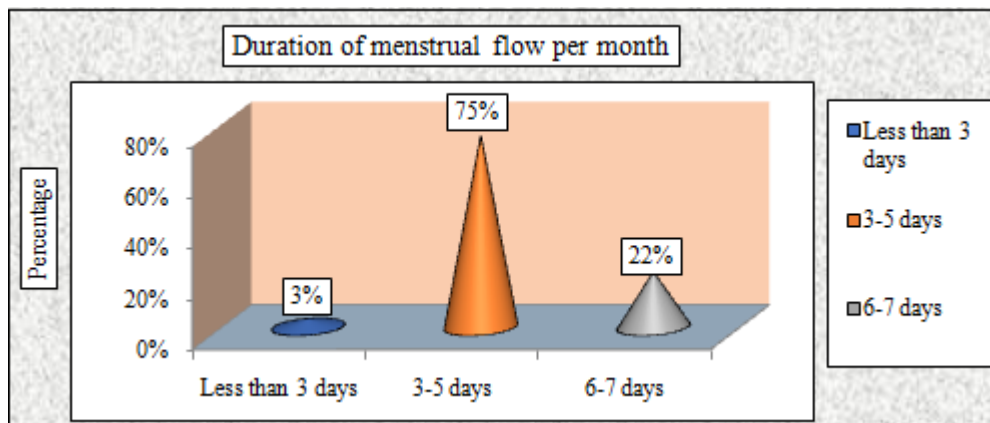
Graph 3: Pie Graph showing the Frequency and Percentage distribution according to Dietary Pattern

The above graph depicts that, according to dietary pattern 9 (15%) Nursing students were vegetarian and 51 (85%) were non-vegetarian.



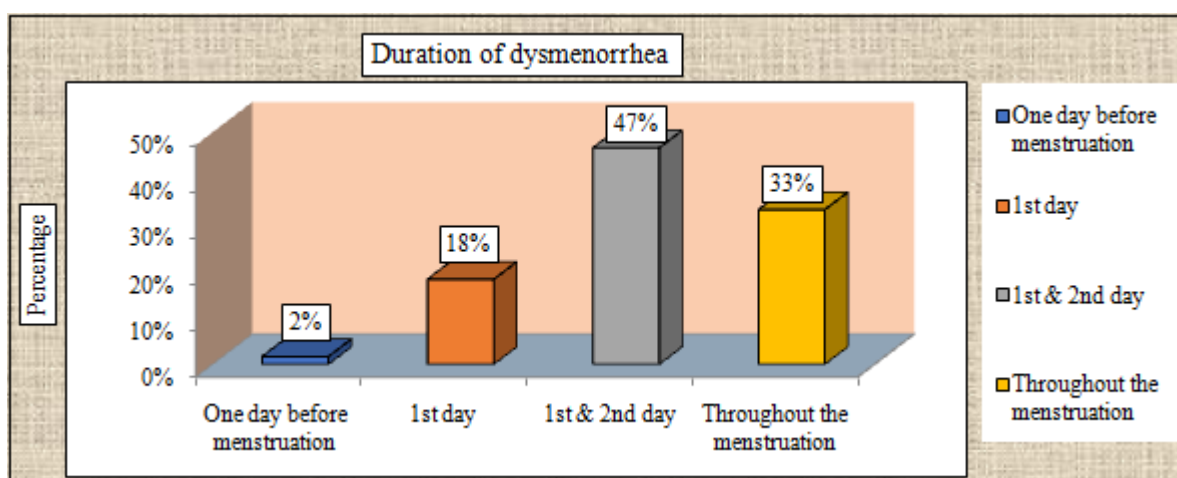
Graph 4: Doughnutgraph showing the Frequency and Percentage distribution according to Age at Menarche.

The above graph depicts that, according to age at menarche, 6 (10%) Nursing students belonged to 11 - 12 years of age, 41 (68.33%) belonged to 13 - 14 years of age and 13 (21.67%) belonged to 15 - 16 years.



Graph 5: Conical graph showing the Frequency and Percentage distribution according to Duration of Menstrual Flow

The above graph depicts that, according to duration of menstrual flow per month, 2 (3.33%) Nursing students had menstrual flow for less than 3 days, 45 (75%) had for 3 - 5 days and 13 (21.67%) had menstrual flow for 6 - 7 days.



Graph 6: Bar Graph showing the Frequency and Percentage Distribution according to Duration of Dysmenorrhea

The above graph shows that, 1 (1.67%) Nursing students had dysmenorrhea One day before menstruation, 11 (18.33%) had on 1st day, 28 (46.67%) had for 1st& 2nd day, and 20 (21.67%) had dysmenorrhea throughout the menstruation.

The above table shows that, according to pretest, none of the Nursing student had no dysmenorrhea, 6 (10%) had mild dysmenorrhea, 32 (53.33%) had moderate dysmenorrhea and 22 (36.67%) had severe dysmenorrhea.

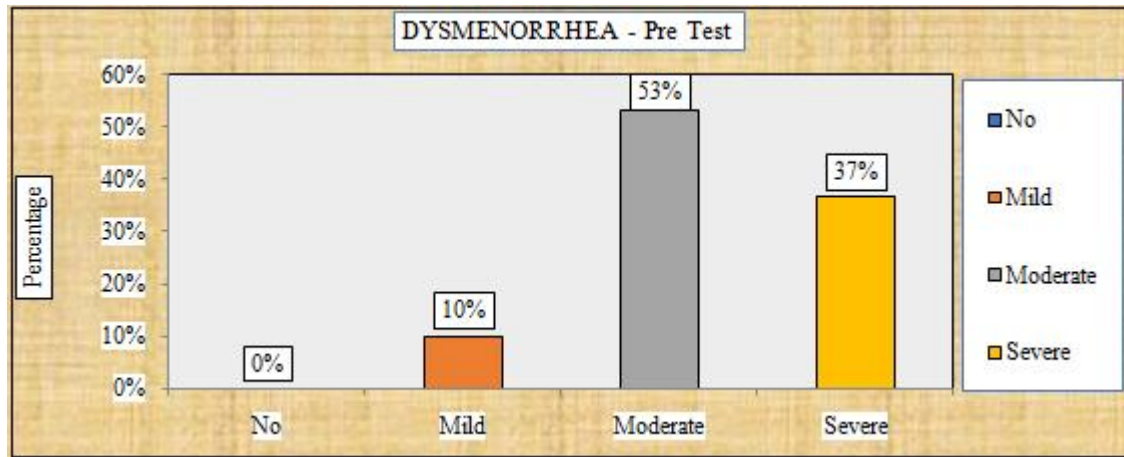
Section II

Assessment of the level of dysmenorrhea before intervention among Nursing students.

Average dysmenorrhea mean score at the time of pretest was 27.48 with standard deviation of 5.06. The minimum score of dysmenorrhea was 17 with maximum score of 37.

Table 2: Assessment of dysmenorrhea using Dysmenorrhea rating scale before intervention, n = 60

Variable	Groups	Score	Pre - Test	
			Frequency (f)	Percentage (%)
Dysmenorrhea	No	0 - 10	0	0.00
	Mild	11 - 20.	6	10.00
	Moderate	21 - 30	32	53.33
	Severe	31 - 40	22	36.67
	Minimum		17	
	Maximum		37	
	Mean ± SD		27.48 ±5.06	



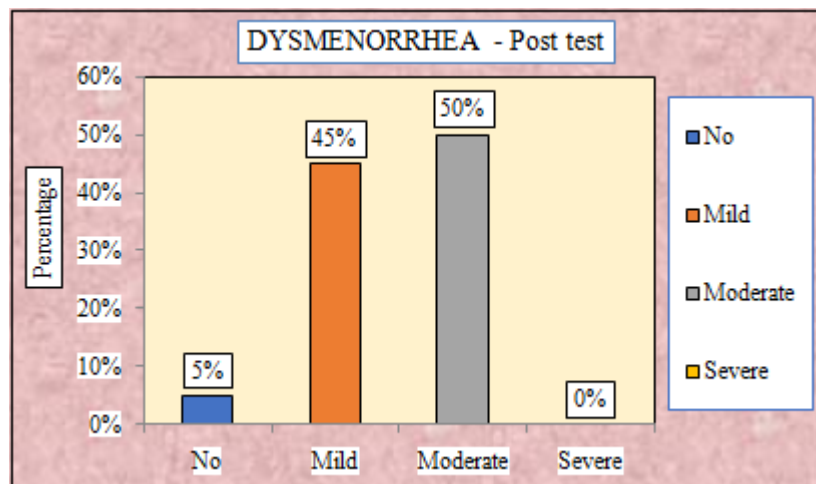
Graph 7: Bar graph showing pre - test Assessment score of Dysmenorrhea.

Table 3: Assessment of dysmenorrhea using Dysmenorrhea rating scale after intervention, n = 60

Variable	Groups	Score	Post Test	
			Frequency (f)	Percentage (%)
Dysmenorrhea	No	0 - 10	3	5.00
	Mild	11 - 20.	27	45.00
	Moderate	21 - 30	30	50.00
	Severe	31 - 40	0	0.00
	Minimum		10	
	Maximum		30	
	Mean ± SD		19.46 ± 5.52	

The above table shows that, according to post - test, 3 (5%) of Nursing students had no dysmenorrhea, 27 (45%) had mild dysmenorrhea, 30 (50%) had moderate dysmenorrhea and no one had severe dysmenorrhea.

Average dysmenorrhea mean score at the time of post - test was 19.46 with standard deviation of 5.52. The minimum score of dysmenorrhea was 10 and maximum score of 30



Graph 8: Bar graph showing post - test Assessment score of Dysmenorrhea

Section III

Evaluation of effectiveness of oral mint leaves paste on dysmenorrhea among Nursing students.

H₁: There will be significant effect of oral mint leaves paste on dysmenorrhea among Nursing students.

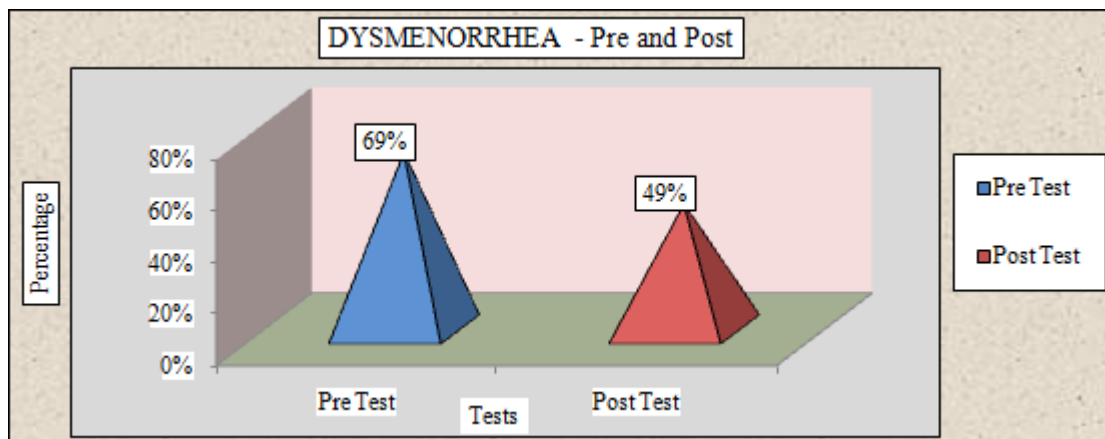
Table 5: Comparison of Pre - test and Post - test Scores on dysmenorrhea among Nursing students.

Group	Mean	S. D.	S. E.	t value	P value
Pre - Test	27.48	5.06	0.65	26.88	0.000
Post Test	19.46	5.52	0.71		

The table depicts comparisons of the pretest and posttest mean scores of dysmenorrhea among Nursing students using paired t test. The test was conducted at 5% level of significance.

The pretest average score was 27.48 with standard deviation of 5.06. The post - test average score was 19.46 with standard deviation of 5.52.

The test statistical value of the paired t test was 26.88 with p value 0.000 which is < 0.05, hence H₀ is rejected and H₁ is accepted. Therefore, there was significant difference in pre - test and post - test. Hence these findings conclude that oral mint leaves paste was effective on dysmenorrhea.



Graph 9: Comparison of the average pre - test and post - test dysmenorrhea score.

6. Nursing Implication

The study has implications in various areas such as, Nursing education, Nursing practice Nursing administration, and Nursing research.

Nursing Education

Nursing requires a broad knowledge base to provide Nursing care. This study will help the Nursing students to plan and provide a health education and demonstrate the administration of oral mint leaves paste. Nursing educators hold the responsibility of educating the students regarding mint leaves paste for reducing pain during menstruation. In the curriculum of ANM, MPH, GNM and B. Sc. (N) program should also include the nonpharmacological method for relieving painful periods.

Nursing Practice

In recent years, nursing practice has undergone many evolutions. These findings will be very helpful in nursing practice because the performance of the intervention is very simple and mainly it is evidence - based practice. It is also economical, mint leaves are easily available. This intervention also reduces the expense of medication for dysmenorrhea.

Nursing Administration

The findings will help nurse administrators in hospitals and Nursing colleges to conduct on going or in - service education on effectiveness of oral mint leaves paste on primary dysmenorrhea. The nurse administrator can coordinate her work along with the staffs & provide educational opportunities on natural remedies (Mint leaves paste) and its usefulness for the young nurses.

Nursing Research

The study will be a valuable reference material for future researcher

- The findings of the study would help to expand the scientific body of professional knowledge upon which further research can be conducted.
- Mint leaves paste administration for dysmenorrhea can be studied more scientifically and used as a specific nursing intervention

7. Conclusion

The above interventional study was a good learning experience for the investigator. Oral mint leaves paste was found to be effective on dysmenorrhea among Nursing students and has been proved statistically. Thus, the null hypothesis (Ho) is rejected and (H1) is accepted.

References

- [1] Dutta D. C. Textbook of Gynecology, 5th edition; New Central Book agency: Kolkata, p175 - 186
- [2] Boharupi P, Deogade MS. Assessment of Prevalence of Primary Dysmenorrhoea in University Students. International Journal of Ayurvedic Medicine. Vol 11 (2) 2020; 11 (2): 170 - 4.
- [3] Polite D. F. Hungler B. P. Nursing research, principal, and methods, philedelpia, 1999, p 32, 284.
- [4] VKSK Priyanka Kayuluru, A study to assess the effectiveness of ginger preparation on dysmenorrhea among adolescent girls. Int J Appl Res 2017; 3 (3): 22 - 25
- [5] Coco AS. Primary dysmenorrhea. American family physician.1999 Aug 1; 60 (2): 489.