

A Study to Assess the Effectiveness of Mint Leaves Paste on Dysmenorrhoea among Adolescent Girls in Selected Area at Moradabad

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Abstract: Menstruation is a normal, healthy happening so many years in life, and the dysmenorrhoea is the most common problem among adolescent girls and causes moderate to severe pain and discomfort, and it affects their academic performance and it is necessary to resolve these problems at least decrease the severity of symptoms, and home remedies will be helpful because home remedies have less side effects. The main objective of this study is to assess the effectiveness of the mint leave paste on dysmenorrhoea among adolescent girls in selected area at Moradabad, quasi experimental design was adopted, among 60 adolescent girls, 30 in each group purposive sampling technique was used to select the samples. 5gram mint leaves paste with honey was given to the participants for 5 days in the experimental group. The analysis revealed that, in control group there was no statistically significant difference noted in the mean values of dysmenorrhoea pain scores ($p>0.05$) between pre-test score was 4.67 ± 0.95 and post-test score was 4.70 ± 0.95 and in the experimental group there was a statistically significant difference noted in the mean values of dysmenorrhoea pain scores ($p<0.05$) between pre-test score was 5.23 ± 0.43 and post-test score was 2.90 ± 0.60 . So, it was identified that mint leaves paste was reducing pain during menstruation, so it can be implement to prevent the dysmenorrhea and reduce the pain during menstruation.

Keywords: Adolescent Girls, Mint Paste, Menstruation and Dysmenorrhea.

1. Introduction

Globally if we see the prevalence especially adolescent girls are suffering from dysmenorrhoea about 67% to 90% and more in aged 17 to 24 years. However, the true occurrence and generality of dysmenorrhea are not understandably believe or confirmed in Bharat. And dysmenorrhoea affects the normal life of adolescent girls and their quality of life became affected due to dysmenorrhea. Menthol in mint, it cleans and purifies the blood and have an anti-spasmodic effect on the smooth muscles and decreases the menstrual cramps and nausea related to dysmenorrhoea. It makes calm and soothing effect of uterus too.

Objective of the study:

- To assess the level of dysmenorrhoea among adolescent girls in Pakbara at Moradabad.
- To evaluate the effectiveness of the mint leave paste on dysmenorrhoea among adolescent girls in Pakbara at Moradabad.
- To find out the association between the post-test score of dysmenorrhea with their selected demographic variables among adolescent girls at Pakbara at Moradabad.

2. Methods

Research Approach: A quantitative research approach was used in this study.

Research Design: Non randomized control group design.

Sample: Adolescent girls.

Sample Size: 60.

Sampling Technique: Purposive sampling technique.

Description of Tool:

Section A: Demographic Variables

Section B: Numeric Pain Scale

Section A: It contain demographic variables such as Age, education, dietary habits, family history, the average menstrual cycle, age at menarche, amount of blood per cycle, duration of bleeding in every month, premenstrual symptoms.

Section B: The numerical pain scale (numeric rating scale) ranges from 0 to 10, with 0 considers as “no pain” and 10 considers as “the worst pain.”

Data collection:

The study was done at Pakbara, Moradabad, U.P. after permission letter taken from Chairman of Pakbara, Moradabad. Total 60 participants were selected, who were divided in to two groups 30 participants in the comparison group and 30. In the treatment group by non-probability method. Written informed consent was taken from the each and every participant. Through numeric rating pain scale pre-test was assessed, after the pre- test intervention mint leave paste (5 g mint leaves powder with honey) was given in 30 girls of experimental group, during periods from first day to fifth day of menstruation. Then post-test was done with the same tool numeric pain scale. Then interpretation was done.

Statistical analysis:

Both descriptive and inferential statistics was done, with the help of SPSS 16 version. Descriptive statistics was done for analysis of demographic characteristics of theof the adolescent girls suffering from dysmenorrhea in term of frequency and percentage. Frequency, percentage, mean

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were used to assess the level of dysmenorrhea, chi-square value was used to associate level of dysmenorrhea with selected demographic variables.

3. Results

Major findings are

- Majority of the adolescents were in the age group of 16-17 years, i.e. 73.3% in the experimental group and 76.7% in the control group.
- Majority of the adolescent girl's education were, i.e. 73.3% in the experimental group and 76.7% in the control group in 11th-12th standard.
- In Experimental group percentage of dietary habits of vegetarian and non-vegetarian habits of participants are 50%. And in Control group vegetarian habits of participants were 10% were and non-vegetarian habit were 90%
- Majority were in both group of adolescent girls were not known for their family history in experimental group were 90% and in control group were 80%.
- Majority were in both group of adolescent girls were 30 days of menstruation cycle in experimental group were 86.6% and in control group were 60%.
- Majority were 11 years at age of menarche in both group of adolescent girls in experimental group were 63.30% and in control group were 46.70%.
- The majority were less than 10 ml blood loss per cycle in experimental group were 93.30% and less than 20 ml blood loss per cycle in control group were 73.30%.
- Majority of duration of menstrual flow in both group were 3-5 days 73.30%
- Majority of pre-menstrual symptoms in adolescent girls' were lower abdominal pain in experimental group were 93.30% and in control group 76.70%.
- Majority (86.7%) of the participants had mild level of dysmenorrhoea in experimental group, 13.3% of the participants had moderate level of dysmenorrhoea, where as in the control group majority (93.3%) of the participants had moderate level of dysmenorrhoea and 6.7% of the participants had mild level of dysmenorrhoea at post-test.
- The study revealed that there was no statistically significant difference noted in the mean values (**0.58**) of dysmenorrhoea pain scores ($p>0.05$) between experimental group and control group. Both groups were homogenous at their baseline dysmenorrhoea pain scores.
- Data presented in study revealed that there was a statistically significant difference noted in the mean values of dysmenorrhoea pain scores ($p<0.05$) between experimental group and control group during post-test. This shows that the mint leave paste is an effective intervention to reducing the dysmenorrhoea pain among adolescent girls.
- Data presented in this study revealed that there was a statistically significant difference noted in the mean values of dysmenorrhoea pain scores ($p<0.05$) between pre-test and post-test among adolescent girls in experimental group.
- Data presented that there was no statistically significant difference noted in the mean values of dysmenorrhoea

pain scores ($p>0.05$) between pre-test and post-test among adolescent girls in control group

- The Association between post-test level of dysmenorrhoea with their selected demographic variables among adolescent girls in experimental group. Chi-square test was computed to find the significant association between post-test level of dysmenorrhoea with their selected demographic variables It revealed that, there was a significant association found between post-test level of dysmenorrhoea with their selected demographic variables like age in years, education and dietary pattern ($P<0.05$).
- The Association between post-test level of dysmenorrhoea with their selected demographic variables among adolescent girls in control group. Chi-square test was computed to find the significant association between post-test level of dysmenorrhoea with their selected demographic variables It revealed that, in control group there was no significant association found between post-test level of dysmenorrhoea with their selected demographical variable ($p>0.05$).

4. Discussion

The present study depict that there was a statistically significant difference noted in the mean values of dysmenorrhoea pain scores ($p<0.05$) between experimental group and control group during post-test. This shows that the mint leave paste is an effective intervention to reducing the dysmenorrhoea pain among adolescent girls. A similar study done by T. Priya (2012), done A study to assess the effectiveness of mint paste on dysmenorrhoea among adolescent girls at selected school, Salem. With 60 adolescent girls, in experimental group the pretest score of dysmenorrhea was 23.67 ± 7.25 , and posttest mean score was 15.03 ± 4.93 , with a difference of 8.63 and in control group the pretest score of dysmenorrhea was 27.93 ± 5.92 , and posttest mean score was 27.00 ± 5.58 , with a difference of 0.93, at $p>0.05$ level. This shows mint leave paste was effective on reduction of dysmenorrhoea.

Present study is congruent with the study conducted by GurinderpalKaur (2017) An experimental study to assess the effectiveness of mint leaves paste on dysmenorrhea among nursing students at SGRD college of nursing, Vallah, Amritsar, Punjab, with 60 Simple, Numeric Rating Scale was used to assess the effectiveness of mint leaves paste on dysmenorrhea. The study revealed that majority 55% of nursing students had severe pain during dysmenorrhea in Pre-test whereas majority 57% of nursing students had mild pain during dysmenorrhea in Post-test. Results depicted that pre-test mean dysmenorrhea score of nursing students was 6.3 ± 2.04 and post-test mean dysmenorrhea score of nursing students was 2.68 ± 1.71 . This difference in the mean scores was statistically significant at $p<0.001$ level. The study concluded that, there was a decrease in level of pain during dysmenorrhea after administration of mint leave paste.

5. Conclusion

The adolescent girls had reduction in the dysmenorrhoea score as evidenced by the results shown. Hence mint leaves paste is effective in the reduction of dysmenorrhoea and it

was found to be less cost effective procedure. Therefore, mint leaves paste should be used as a supportive therapy among adolescent girls to alleviate dysmenorrhoea.

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Declarations:

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Conflict of interest: None

6. Future Scope

Menthol is the most important active material in mint which has analgesic effect and other beneficial effects. Mint leaves cleans and purify the blood and have an anti-spasmodic effect on the soothe muscles of the body, it is a very good home remedy to decrease and relieve the pain of menstrual cramps. It also decrease nausea related to dysmenorrhoea. It makes calm and soothing effect of uterus too. Considering the essentiality of mint leaves an overview is conducted involving nearly all aspects to provide unabridged repository of studies to explore future researchers for effective exploration of the species in human health benefits and for mankind.

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Tables

Frequency and percentage distribution of participants based on level of dysmenorrhoea during pre-test and post-test

Level of dysmenorrhea	Experimental group (n=30)		Control group (n=30)		
	F	%	F	%	
Pre test	Mild	0	0	0	
	Moderate	30	100%	30	100%
	Severe	0	0	0	0
Post test	Mild	26	86.7%	2	6.7%
	Moderate	4	13.3%	28	93.3%
	Severe	0	0	0	0

Comparison of pre-test mean dysmenorrhoea pain scores among adolescent girls between experimental and control group.

Comparison of Pre-test and Post-tests Mean and Standard Deviation of dysmenorrhoea pain scores among adolescent girls between experimental and control group

Dysmenorrhea pain score at time-points	Experimental group (n=30)			Control group (n=30)			Mean Difference	Independent t-test	p-value	df	Inference
	F	M	SD	F	M	SD					
Pre test	30	5.24	0.43	30	4.68	0.94	0.50	1.09	0.3	58	NS
Post test	30	2.93	0.59	30	4.61	1.05					