Effectiveness of Mint and Fenugreek Paste for Reduction of Dysmenorrhea among the Adolescent Girls in Selected Areas

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**ABSTRACT**

Menstruation is an ordinary physiological marvel for ladies showing her capacity for reproduction. Monthly cycle is an intricate cycle, including the concepitive and endocrine framework. It has to be a regular cycle. Anyway, this ordinary wonder isn’t a simple one; it is regularly connected with some level of sufferings and shame. The pain during the menstrual cycle is known as Dysmenorrhea. The present study aims to determine the effectiveness of dietary mint and fenugreek paste for the reduction of dysmenorrhea among adolescent girls. A quantitative experimental research was conducted among 60 adolescent girls. A convenient sampling technique was used to select the samples. Self-administered structured questionnaires were used to collect demographic data, and pain scale was assessed. After the Pretest, an intervention was given to the study participants, i.e. administration of 6 grams of mint fenugreek paste prepared from 2 grams of mint powder, 2 grams of fenugreek powder mix with 2 grams of honey. It was given orally twice a day (i.e. 2 days before and 3 days during the cycle). On 5th day after intervention, post-test was conducted by a numeric pain rating scale. The study results shows mint and fenugreek paste had a significant reduction in the dysmenorrhea, p<0.001. Thereby, this indicates that the mint and fenugreek paste is effective in reducing the pain during menstruation.

**INTRODUCTION**

Menstruation is an ordinary physiological marvel for ladies showing her capacity for reproduction. The menstrual cycle is a complex process involving the reproductive and endocrine system. It is the regular cycle (Janssen et al., 2013). Anyway, this ordinary wonder isn’t a simple one; it is regularly connected with some level of sufferings and shame. The pain during the menstrual cycle is known as Dysmenorrhea. It typically starts around the time that the monthly cycle starts. Side effects normally last under three days (Banikarim et al., 2000). The torment is typically in the pelvic area or lower abdomen. Other indications may incorporate back torment, looseness of the bowels, or sickness. In young ladies, agonizing periods happens with no issue (Campbell and McGrath, 1997). It is more normal among those with hefty periods, unpredictable periods whose periods began before twelve years old, or who have low body weight (Ameade et al., 2018). Dysmenorrhea is the common problem among the adolescent girls during menstruation. It influences around 40 to 70 % of ladies of concepitive age with 10% of ladies depicting serious side effects. Among the feminine problems, dys-
menorrhöe is the most widely recognized one in, half of the ladies of younger bearing age (Sharma et al., 2008). In 60-90% of juvenile young ladies in India, dysmenorrhoea is a significant reason for non-attendance from school or limitation of day by day living or social connection. In the second and third year after menarche, 20% of ladies encounter dysmenorrhoea. About 80% of ladies create torment during the period inside the long term of menarche. Beyond 25 years old years, the incidence of dysmenorrhoea is typically optional to other pelvic issues (Hilário et al., 2009).

The home consideration the executives to lessen dysmenorrhoea is watched more if there should arise an occurrence of those with iron insufficiency of general handicap. It is essential to have an even nutritious eating routine which incorporates green vegetables, occasional natural products, dates, coconut, milk and milk items, entire grain oats, entire heartbeats, mustard leaves, bathua, spinach, fenugreek, dried foods grown from the ground. Half teaspoon of sesame powder taken with warm water two times per day is additionally valuable to ease torment. Bathua is generally excellent for restoring iron deficiency and torment during a feminine cycle. One teaspoon of radish seed powder brought with warm water two times per day is acceptable in such conditions. A large portion of the girls utilize home solutions for easing the Dysmenorrhoea.

Accordingly, a large portion of the home solutions for feminine issues are widening the veins and facilitating the muscles. The remedies for Dysmenorrhoea include hot application measures, exercise, diet, herbs and rest & sleep (Banikarim et al., 2000). Mint leaves have the probability of decreasing post-operative nausea. It very well may be additionally used to mitigate queasiness brought about by movement disorder or feminine spasms by loosening up the smooth muscles of the stomach pit (Masoumi et al., 2016). Mint can calm muscle hurts and agony by reproducing similar desensitizing activity on the nerves which distinguish torment. Acid reflux can be assuaged liquids and utilized as a solution for awful breath. It has antispasmodic movement and narcotic properties which can ease strain during agony and muscle hurts (Khodakarami et al., 2015).

Before a decade a study conducted to assess the effectiveness of the mint extract upon dysmenorrhoea among the students in Chennai, in which, the level of dysmenorrhoea was assessed before and after mint extracts administration for consecutive days. The distinction between the trial pretest and post-test is discovered to be measurably demonstrated to be critical. There was no huge relationship between the chose segment factors and pretest post-test dysmenorrhoea score. The outcome could be ascribed to the viability of the mint concentrate (Unsal et al., 2010). The purpose of the study [1] to assess the level of Dysmenorrhoea among adolescent girls [2] to assess of the level of knowledge regarding dysmenorrhoeal and self-care among adolescent girls. [3] to assess the effectiveness of the administration of the Mint and fenugreek paste and fenugreek paste among adolescent girls. [4] to associate with the level of pain after administration of mint and fenugreek paste among adolescent girls with the selected demographic variables.

MATERIALS AND METHODS

A quantitative research approach with an experimental one group pretest post-test research design was used to conduct the study in Thiruvallur district. Last information was gathered in the period of January 2020 among juvenile young ladies. Reason for the examination was disclosed to the subjects. The subjects were guaranteed about anonymity and privacy of the data gave by them, and composed assent was taken from the adolescent girls. Total 60 adolescents were selected by using a convenient sampling technique. The data collection period was done with prior permission from the institutions. A pretest was conducted using a numeric pain rating scale. After pretest intervention was given to the study participants, i.e. administration of 6 grams of mint and fenugreek paste prepared from 2 grams of fenugreek and 2 grams of mint and 1 grams of honey. It was given orally twice a day after food, 2 days prior to menstruation and 3 days during menstruation, on the 5th day after intervention post-test was conducted by using a numeric pain rating scale. The data were analyzed using descriptive and inferential statistics. The sample characteristics were described using frequency and percentage. Pearson’s correlation coefficient was used to assess the effectiveness of mint and fenugreek paste among adolescent girls. Chi-square was used to associate the post-test level of pain with the selected demographic variables.

RESULTS AND DISCUSSION

Section A: Description of the demographic variables of the adolescent girls.

Most of the adolescent girls 44(73.3%) were in the age group of 18-20 years 40(66.7%) were graduate and above 40(66.7%) were Hindus 33(55%) belonged to the nuclear family and 44(73.4%) were non-vegetarian.
Table 1: Frequency and percentage distribution of level of pain among adolescent girls (N = 60).

| Pain                                                                 | Pre-test |          | Post-test |          |
|---------------------------------------------------------------------|----------|----------|-----------|----------|
|                                                                    | No       | %        | No        | %        |
| The onset of dysmenorrhea                                           |          |          |           |          |
| Immediately after menarche                                          | 37       | 61.7     | 37        | 61.7     |
| 3 months after menarche                                             | 13       | 21.6     | 13        | 21.6     |
| 2 years and above after menarche                                    | 10       | 16.7     | 10        | 16.7     |
| Level of pain level                                                 |          |          |           |          |
| 0 - 3 score                                                         | 26       | 43.3     | 59        | 98.3     |
| 4 - 7 score                                                         | 33       | 55.0     | 1         | 1.77     |
| 8 - 10 score                                                        | 1        | 1.7      | -         | -        |
| The alternate treatment for dysmenorrhea                            |          |          |           |          |
| Homeopathy                                                          | 18       | 30.0     | 19        | 31.7     |
| Siddha                                                              | 21       | 35.0     | 20        | 33.3     |
| Allopathy                                                           | 21       | 35.0     | 21        | 35.0     |
| Pelvic pain begins with the onset of menses and last for            |          |          |           |          |
| First 24 hours                                                      | 32       | 53.3     | 32        | 53.3     |
| Second day                                                          | 20       | 33.4     | 20        | 33.4     |
| Third day                                                           | 8        | 13.3     | 8         | 13.3     |
| Hot water bag on the abdomen helps to relieve menstrual cramps by   |          |          |           |          |
| Decreasing blood supply                                             | 24       | 40.0     | 25        | 41.7     |
| Increasing blood supply                                             | 27       | 45.0     | 26        | 43.3     |
| Decreasing hormone level                                            | 9        | 15.0     | 9         | 15.0     |

Table 2: Comparison of pretest and post-test knowledge scores regarding the management of dysmenorrhea among adolescent girls (N = 60).

| Knowledge                                | Mean | S.D | Paired 't' test Value |
|------------------------------------------|------|-----|-----------------------|
| Pre-test                                 | 5.35 | 1.61| t= 9.031  p= 0.001    |
| Post-test                                | 7.45 | 0.93| $^{***}$             |

$^{***}$p<0.001, $^*$ Significant.

Table 3: Association of post-test pain score regarding among adolescent girls with their selected demographic variables (N = 60).

| Demographic Variables | 0 - 3 | 4 - 7 | 8 - 10 | Chi-Square |
|-----------------------|-------|-------|--------|------------|
|                       | No    | %     | No     | %          | x² = 6.610 |
| Pure vegetarian       | 8     | 13.3  | 0      | 0          | d.f=2      |
| Vegetarian but consumes egg | 7 | 11.7  | 1      | 1.7        | p = 0.037  |
| Non-vegetarian        | 44    | 73.3  | 0      | 0          | $^*$       |

$p<0.05.$
Section B: Assessment of level of knowledge regarding dysmenorrhea and self-care among adolescent girls

The pretest 30(50%) had inadequate knowledge, 27(45%) had moderately adequate knowledge and 3 (5%) had adequate knowledge. Whereas in the post test 31 (51.67%) had moderately adequate knowledge and 29 (48.33%) had adequate knowledge regarding management of dysmenorrhea among adolescent girls Table 1.

Section C: Effectiveness of mint leaves and fenugreek paste on dysmenorrhea among adolescent girls.

In the Pretest 30(50%) had inadequate knowledge, 27(45%) had moderately adequate knowledge and 3(5%) had adequate knowledge. Whereas in the post test 31(51.67%) had moderately adequate knowledge and 29(48.33%) had adequate knowledge regarding management of dysmenorrhea among adolescent girls Table 2. The present study finding is supported by Kaur et al., conducted a study to assess the effectiveness of mint leaves paste on dysmenorrhea among nursing students. The study revealed that the majority 55% of nursing students had severe pain during dysmenorrhea in Pretest, whereas a majority of 57% of nursing students had mild pain during dysmenorrhea in Post-test. Results depicted that pretest means 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 the level of pain during dysmenorrhea after administration of mint leave paste (Kaur et al., 2017).

Section D: Association of the level of pain among adolescent girls with selected demographic variables.

That is the pretest 33(55%) had pain score between 4–7 26(43.3%) had pain score between 0-3 and 1(1.7%) had a pain score between 8-10. Whereas in the post-test after the administration of Mint and fenugreek paste and fenugreek paste 59(98.3%) had pain score between 0-3 and 1(1.77%) had pain score between 4–7 Table 3.

CONCLUSIONS

Mint and fenugreek paste is an effective measure to reduce the dysmenorrhea. From the result of the study, it was concluded that mint and fenugreek paste reduced the pain level of the adolescent girls and had increased level of knowledge on dysmenorrhea. Thereby it is also the comfortable and easy method that can be practised by the adolescent girls to reduce the pain level of dysmenorrhea.

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Conflict of Interest
The authors declare that they have no conflict of interest for this study.

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