

EFFICACY OF FENUGREEK SEEDS ON SEVERITY OF PAIN AND SYSTEMIC SYMPTOM OF DYSMENORRHEA: A PRE-EXPERIMENTAL STUDY

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Abstract

Monthly periods may be a cyclic physiological phenomenon; that having various issues like abnormal cycles, excessive bleeding, and dysmenorrhea. Globally prevalence of dysmenorrhea is 15.8% to 89.5%, with greater rates among adolescents. Dysmenorrhea affects the quality of life and productivity of 60% to 90% of females. The main aim of the study was to assess Efficacy of Fenugreek Seeds on Severity of Pain and Systemic Symptom of Dysmenorrhea: A Pre-Experimental Study. **Method:** In view of the nature of the problem selected for the study and objective to be accomplished pre-experimental research approach was considered. Researcher was adopted. 60 samples were selected by convenient sampling technique. The intervention applied in this study was the capsules containing 1000 mg fenugreek seed powder, the one capsules was administered thrice in a day. **Results:** The study results Pretest and posttest comparisons of mean pain and systemic symptoms. The numerical Pain Scale had a pretest mean 5.10 ± 2.53 , and a posttest mean 1.07 ± 1.52 , with a mean difference of 4.03. After administration of fenugreek seeds during menstruation, the students' pain score was lowered by 40.3 percent. T value was 22.1, with df 59, and the p value was significant at the 0.00 level. The pretest mean score on the Multimodal Verbal Scale was 2.95 ± 1.80 , while the posttest mean score was 0.63 ± 1.30 , resulting in a 2.32 mean difference. Taking fenugreek seeds during menstruation lowered 23.2 percent of the students' systemic symptoms. **Conclusion:** This study concludes that the fenugreek seeds significantly reduced the severity of pain and systemic symptoms of dysmenorrhea among students.

Key words: fenugreek, severity of pain, systemic symptoms, dysmenorrhea.

Introduction:

Dysmenorrhea affects the quality of life and productivity of 60% to 90% of females. Dysmenorrhea is the common problem among all women there is no effect of their race and age¹. Dysmenorrhea is common cause of pelvic pain among females. Severe pain due to dysmenorrhea is among 2% to 29% females². The symptoms related to dysmenorrhea encompass gastrointestinal sign and symptoms like constipation, nausea diarrhoea, bloating etc. Dysmenorrhea also causes headache, irritability and low back pain³. It also causes dizziness and tiredness. Review of Literature of previous studies that the prevalence of dysmenorrhea is 45 to 95% among females during menstruating age⁴.

The incidence of dysmenorrhea is around, 40.7% in India, 84.1% in Italy and 85% in the U.S.A. NSAIDs are effective in treating dysmenorrhea in approximately 80% of women, However, they are having potential side effects. Further, to reducing inflammation and pain, fenugreek has also tested

antioxidant, antispasmodic, diuretic, antihistaminic, anti-diabetic, and immunomodulatory properties. Further, to reducing inflammation and pain, fenugreek has also tested antioxidant, antispasmodic, diuretic, antihistaminic, anti-diabetic, and immunomodulatory properties⁽⁵⁻⁷⁾.

Scientists believe that these unique medicinal properties may additionally give it PMS-fighting abilities beyond just reducing pain during periods.⁸ There is no serious side effect of fenugreek. In a case of there is decrease in consciousness of a 5-week child who was given fenugreek herbal tea.

These seeds are rich in isoflavones which have a positive effect on the estrogen levels of a woman. Low estrogen levels in a woman means irregular periods, and if you take fenugreek seeds it can improve your blood flow during the menstruation cycle.

Herbal medicines have been common for thousands of years, long before pharmaceutical companies began making synthetic drugs. Because natural products are known to be effective, many modern pharmaceuticals have an herbal basis. Approximately 60% of the world's population is dependent almost entirely on plants as medication for all health problems, including menstrual disorders.⁹

Need for the Study

Dysmenorrhea—the medical term for period pain—is the most common gynaecological disorder in people who menstruate. It's estimated that between 45% and 95% of people with periods experience dysmenorrhea. Dysmenorrhea hinders the quality of life and productivity of 60% to 90% of women. Most people in Western countries rely on Non-Steroidal Anti-Inflammatory Drugs (also known as NSAIDs, such as aspirin, ibuprofen, and Advil) to manage their period pain. However, these drugs have only been around for the last 100 or so years.

Painful cramps that occur during menstruation are known as dysmenorrhea, and they can negatively affect a woman's quality of life. Pain medication is a primary treatment, but commonly used non-steroidal anti-inflammatory drugs (NSAIDs) are associated with certain adverse side effects. Fenugreek (*Trigonella foenum-graecum*, Fabaceae) has been used traditionally for pain during menstruation and to induce childbirth,¹ and studies have shown that the plant has anti-inflammatory, antioxidant, carminative (flatulence-relieving), hypoglycemic, and hypolipidemic properties.¹⁰

In a 2014 study Trusted Source, 51 women with painful periods took capsules of fenugreek seed powder three times a day for the first 3 days of their periods for 2 consecutive months. They experienced shorter durations of pain and fewer symptoms between the months.

Fenugreek is commonly consumed in foods. It is possibly safe when the powdered seed is taken for up to 3 years. Side effects may include diarrhea, stomach upset, bloating, and gas. It may also cause allergic reactions in some people.¹¹

Fenugreek are effective in the relieving symptoms of dysmenorrhoea. Though clinical studies have tried to see the effects of fenugreek seeds in relieving the spasm in dysmenorrhoea by unfortunately no study has been conducted stating which one is better than other. Therefore, the researcher intended to conduct a comparative study on the Spasmolytic Effects of Fenugreek seed with reference to Dysmenorrhoea.

Aim Of the Study: The main aim of the study was to assess Efficacy of Fenugreek Seeds on Severity of Pain and Systemic Symptom of Dysmenorrhoea: A Pre-Experimental Study

Methodology: In view of the nature of the problem selected for the study and objective to be accomplished Quantitative research approach was considered. One group pretest and posttest pre-Experimental research design. The research was conducted at SGT University in Budhera, Gurugram. Students with dysmenorrhoea who manage the inclusion criteria. Sample technique was a convenient non-probability sampling selected 60 students. The study's participants were first-year B.Sc. Nursing

and GNM students from SGT University's Faculty of Nursing in Gurugram. Each capsule contains 1000 milligrams of fenugreek seed powder. The one capsule was taken three times each day. On third day of her menstruation, I assessed impact of fenugreek seed on her pain severity, systemic symptoms after giving it to her. The actual steps for acquiring data are unique to each study and are dependent on the research design and methodology. Formal written authorization was obtained from the concerned authority, as well as from the Dean, the head of department, and the class coordinator.

The sample characteristics were described using frequency and percentage. Pearson's co-relation coefficient was used to assess the Efficacy of Fenugreek Seeds on Severity of Pain and Systemic Symptom of Dysmenorrhea. The content validity and reliability of the tool was done, which suggested that the tool was reliable. The data obtained was analyzed in terms of the objective of the study using descriptive and inferential statistics. The plan of data analysis was developed under the excellent direction of experts in the field nursing and statistics.

Major finding of study:

Demographic variables

Data analysis and interpretation:

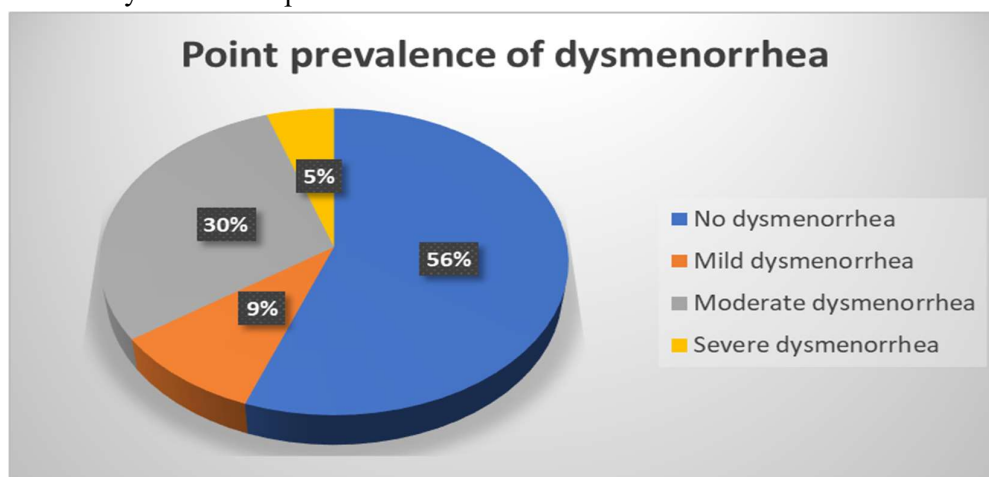


Fig.1 Point prevalence of dysmenorrhea among selected students

The above graph shows point prevalence of dysmenorrhea among selected students; maximum students 75(55.55 percent) do not have dysmenorrhea. 40(29.96%) have moderate dysmenorrhea, 13(9.66%) have mild dysmenorrhea, and 7(5.1%) have severe dysmenorrhea.

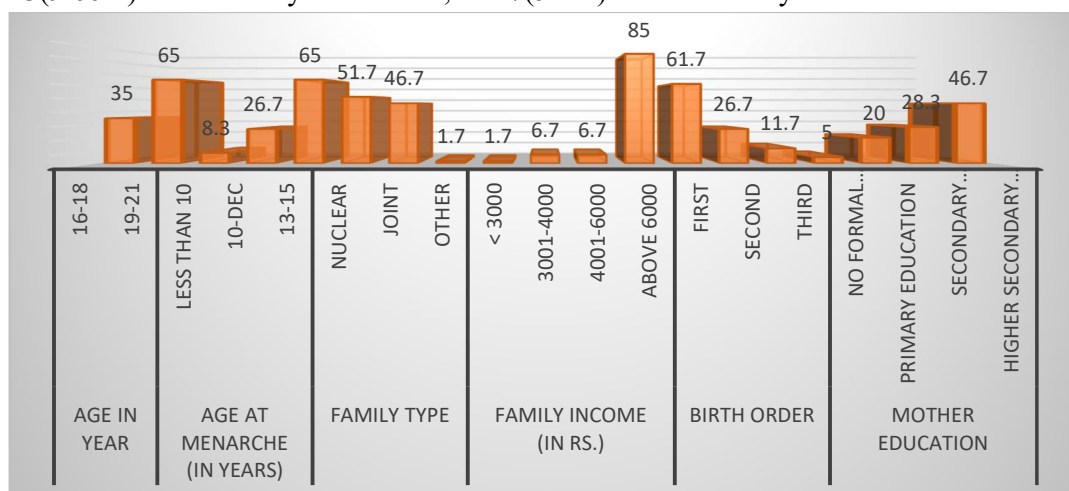


Fig.2 Distribution of students according to their socio-demographic variables

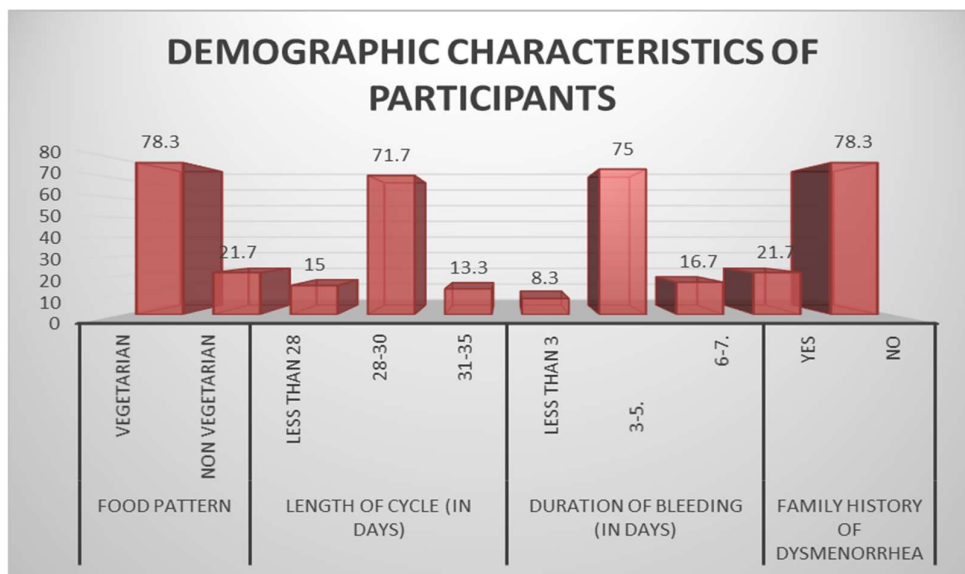


Fig. 3 Distribution of students according to their socio demographic variables

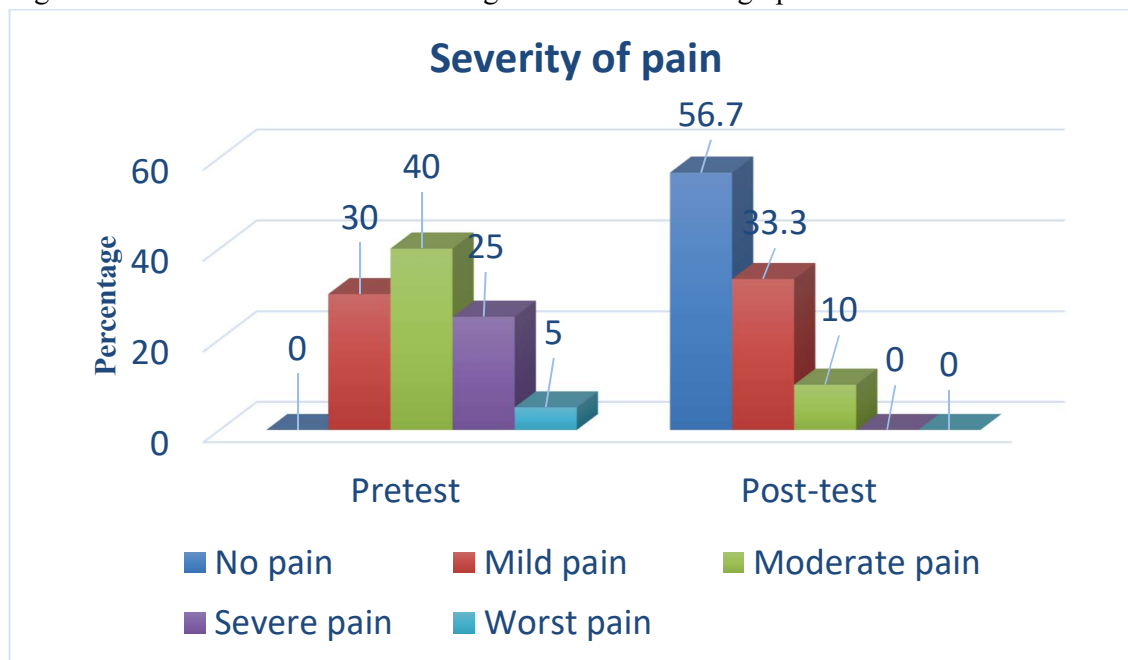


Fig.4 bar graph showed Severity of pain of dysmenorrhea among selected students

Fig.4 bar graph showed Severity of pain of dysmenorrhea among selected students. The above graph displays pretest severity of pain among students. Most of the students 24 (40%) have moderate pain, 18(30%) have mild pain, 15(25%) have severe pain, 3 (5%) have worst pain and No one is pain-free. The graph above shows the post-test pain severity among students; the majority of the students have no pain, 20 (33.3%) have mild pain, 6 (10%) have moderate pain, and none have severe and worst pain.

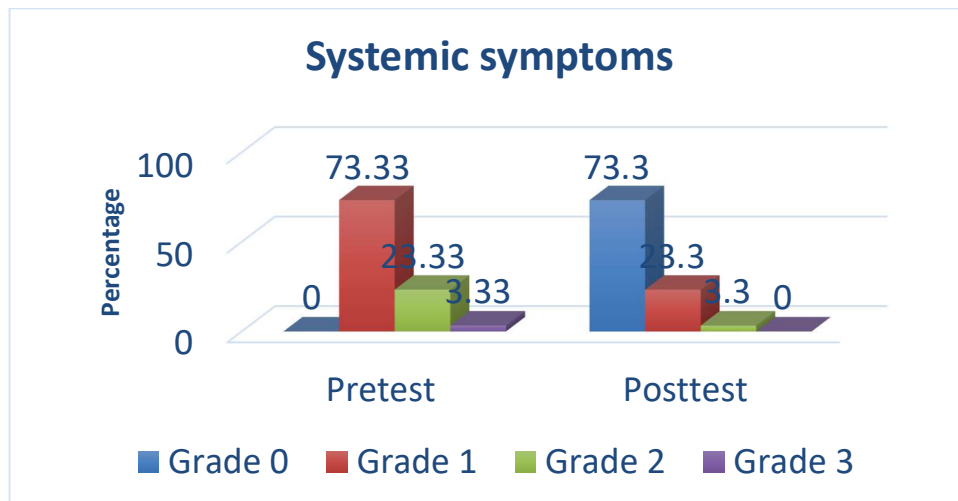


Fig. 5 graph depicts students' pre-test systemic symptoms

Fig. 5 graph depicts students' pre-test systemic symptoms. The majority of the students have Grade 1 systemic symptoms 44(73.33 percent), 14 (23.33 percent) have Grade 2, 2 (3.33%) have Grade 3, and none have Grade 0 systemic symptoms.

The graph above reveals post-test systemic symptoms among students; the majority of the students 44(73.3%), have no systemic symptoms, 14 (23.3%) have grade 1, 2 (3.3%) have grade 2, and none have grade 3 symptoms.

Table 1. Effectiveness of the fenugreek seeds on severity of pain and systemic symptoms

Section	No. of students	Pre-test Mean \pm S.D.	Post-test Mean \pm S.D.	Mean Difference	T-Value	df	p-value
1. Numerical Pain Scale	60	5.10 \pm 2.53	1.07 \pm 1.52	4.03	22.1	59	.000*
2. Multimodal Verbal Scale	60	2.95 \pm 1.80	0.63 \pm 1.30	2.32	22.08	59	.000*

P value is 0.00. (*Significant at $p < 0.05$)

Table 1 showed Pretest and posttest comparisons of mean pain and systemic symptoms. The numerical Pain Scale had a pretest mean 5.10 \pm 2.53, and a posttest mean 1.07 \pm 1.52, with a mean difference of 4.03. After administration of fenugreek seeds during menstruation, the students' pain score was lowered by 40.3 percent. T value was 22.1, with df 59, and the p value was significant at the 0.00 level. The pretest mean score on the Multimodal Verbal Scale was 2.95 \pm 1.80, while the posttest mean score was 0.63 \pm 1.30, resulting in a 2.32 mean difference. Taking fenugreek seeds during menstruation lowered 23.2 percent of the students' systemic symptoms.

The correlation between post-test pain severity and systemic symptoms of dysmenorrhoea among students is shown in the table above. The data revealed that the post-test mean of the numerical pain

scale was 1.07 (10.07%), while the post-test mean of the multidimensional verbal scale was 0.63. (6.3 percent). Additionally, the correlation coefficient estimated between pain severity and systemic symptoms was positive and significant ($r= 0.73$ by Pearson's co-relation method and p value = 0.00, Pearson's method). These findings revealed a strong and significant relationship between pain severity and systemic symptoms.

There was a significant association between the posttest severity of pain with selected socio demographic variables such as length of cycle (in days), in which chi square value was 21.05 and the degree of freedom was 10 at p value 0.021 (p value < 0.05). There was no significant association between the posttest severity of pain with other socio demographic variables.

There was a significant association between the posttest systemic symptoms of dysmenorrhea with selected socio demographic variables such as age of students (in years) in which chi square value was 12.18 and the degree of freedom was 5 at p value 0.032 (p value < 0.05). There was no significant association between the posttest systemic symptoms of dysmenorrhea with other socio demographic variables.

Discussion: In view of the nature of the problem selected for the study and objective to be accomplished Quantitative research approach was considered. One group pretest and posttest pre- Experimental research design. The research was conducted at SGT University in Budhera, Gurugram. . Even after prior appointments, if subjects were found busy in their emergency work, care was taken not to interrupt them in their work and again suitable time was taken. Study tool was filled personally by interviewing the subjects. Each capsule contains 1000 milligrams of fenugreek seed powder. The one capsule was taken three times each day. On third day of her menstruation, I assessed impact of fenugreek seed on her pain severity, systemic symptoms after giving it to her Result showed that Pretest and posttest comparisons of mean pain and systemic symptoms. The numerical Pain Scale had a pretest mean 5.10 ± 2.53 , and a posttest mean 1.07 ± 1.52 , with a mean difference of 4.03. After administration of fenugreek seeds during menstruation, the students' pain score was lowered by 40.3 percent. T value was 22.1, with df 59, and the p value was significant at the 0.00 level. The pretest mean score on the Multimodal Verbal Scale was 2.95 ± 1.80 , while the posttest mean score was 0.63 ± 1.30 , resulting in a 2.32 mean difference. Taking fenugreek seeds during menstruation lowered 23.2 percent of the students' systemic symptoms. These findings revealed a strong and significant relationship between pain severity and systemic symptoms. There was no significant association between the posttest severity of pain with other socio demographic variables. There was no significant association between the posttest systemic symptoms of dysmenorrhea with other socio demographic variables.

Conclusion:

The morbidity of dysmenorrhea has a significant impact on public health as it is one of the first causes of school and work absenteeism, and can therefore lead to higher health costs and reduced work/academic effectiveness, plus a major decrease to the quality of life of those affected. Despite the high prevalence, many studies have reported that women who suffer from dysmenorrhea do not seek medical care and/or consult with other health professionals, and are unaware of how to apply alternative therapy. Dysmenorrhea affects a large part of our university population, and is a problem that impacts students' daily life. However, data on experiences of menstruation & its impact on health status, quality of life & social integration among women in developing countries are scant. Thus, to improve the quality of life of adolescent girls suffering from dysmenorrhea, various health promotion measures should be undertaken

The present study showed that fenugreek reduced the severity of primary dysmenorrhea. Given that adverse effects were not reported for fenugreek, the herb can be administered safely for the management

of this condition. Fenugreek seeds were effective in reduction of severity of pain and systemic symptoms of dysmenorrhea among students. This is noninvasive, non-pharmacological complementary and alternative therapy to reduce the dysmenorrhea among students. It can be done for any setting.

Conflict of Interest: The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

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