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Manifestation and Management of Dysmenorrhea - A Cross Sectional Study

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Abstract

Objective: Dysmenorrhea, a Greek word, describes menstrual pain experienced by women in the form of lower abdominal discomfort radiating to the thighs and back. Global research shows prevalence varies from 25.6% to 38.66%. Disparities exist, with Indian surveys indicating rates as high as 84.2% of employees and 79.66% of university students. The present cross-sectional study aimed to focus on the manifestation and management of dysmenorrhea in several aspects and also to provide valuable suggestions to participants from healthcare experts. **Methods:** By supplying a questionnaire, a Google form was provided to 501 participants, aiming to understand the prevalence, severity, and management strategies after obtaining informed consent. A cost-effectiveness analysis was conducted to examine the average prices and maximum and minimum prices of each formulation. Additionally, we collaborated with the health specialist team to develop an informative booklet on managing dysmenorrhea and practical self-care tips. This booklet was forwarded via email to participants serving as a valuable resource for understanding and managing dysmenorrhea. **Findings:** The study revealed differences in the distribution pattern of participants in different sections. The mean age of participants is 18.2 years. It is clear that due to stress and lifestyle, most of the participants are encountering aggravated symptoms of dysmenorrhea, and risk factors underlying this condition were also found most significant in the study. Cost analysis revealed the best economical options for treatment. **Novelty:** In conclusion, our study highlights the importance of integrating cost considerations into treatment decisions for dysmenorrhea, while also emphasizing the value of education and patient empowerment in the managing of dysmenorrhea.

Keywords: Dysmenorrhea; Cost analysis; Management; Cross-sectional survey; Diet

1 Introduction

Research from around the world indicates that the prevalence of dysmenorrhea varies greatly. The prevalence of dysmenorrhea varies by subgroups. School girls aged 11-15 years have 25.6 %, university girls aged 16-30 years have 35.8 % and employees aged 31-50 years have 38.66 %. There is a significant disparity in the prevalence of dysmenorrhea among several surveys conducted suffering 84.2 % of the 31-50 years age group of employees and 79.66 % of the 16-30 years age group of university girls according to an Indian survey.⁽¹⁾

Dysmenorrhea, a term of Greek origin, refers to the discomfort and pain experienced during a woman's monthly menstrual bleeding⁽²⁾. One of the most frequent causes of pelvic discomfort and menstrual disorders is dysmenorrhea. The pain is usually located in the lower abdomen and may radiate to the inner thighs and back⁽³⁾. The combined symptoms of primary and secondary dysmenorrhea are illustrated in [Figure 1].

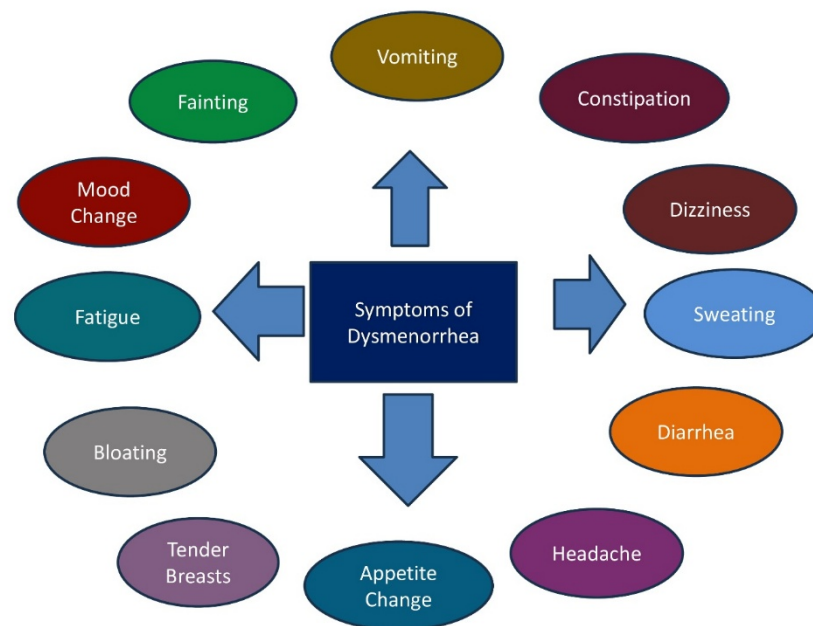


Fig 1. Pictorial representation of symptoms of dysmenorrhea

Diagnosis for dysmenorrhea can be made concerning gynecological and non-gynecological conditions⁽⁴⁾. Conditions related to gynecology include endometriosis, an imperforate hymen, transverse vaginal septum, vaginal agenesis, OHVIRA syndrome (uterus didelphys with blocked hemivagina and ipsilateral renal agenesis), adnexal cysts both functional and non-functional, adnexal torsion which typically does not manifest as menstrual cyclic pain, adenomyosis, intercourse-related pelvic inflammatory diseases, STDs, endometrial polyp, ectopic pregnancy. The conditions related to non-Gynaecological conditions include irritable bowel syndrome, Urinary tract infections, Interstitial cystitis, and Musculoskeletal causes: Inflammation in abdominal wall muscles, abdominal wall fascia, pelvic and hip muscles, sacroiliac joints, and lumbosacral muscles. Dysmenorrhea can be influenced by various risk factors such as low BMI, nulliparity, early menarche, positive family history, tobacco habits, sedentary lifestyle, depression, stress, anxiety, high caffeine consumption, insufficient intake of polyunsaturated fatty acids, and the presence of periodic or chronic pain syndromes, and autoimmune disorders.⁽⁵⁾ The pathophysiology of primary and secondary dysmenorrhea varies from person to person. [Figure 2] illustrates the pathophysiology of primary and secondary dysmenorrhea.^{(5) - (6)}

Dysmenorrhea management encompasses non-pharmacological, pharmacological, and surgical approaches. Non-pharmacological methods like heat application,⁽⁷⁾ acupuncture, and transcutaneous electrical nerve stimulation (TENS) offer low-cost, side-effect-free relief. Regular exercise is also found beneficial.⁽⁸⁾ Dietary supplements such as Vitamin E, Omega-3 fatty acids, and magnesium can aid in pain reduction by modulating prostaglandin synthesis and improving muscular relaxation and vasodilation. Pharmacological treatment focuses on NSAIDs such as mefenamic acid and ibuprofen, which inhibit prostaglandin synthesis by targeting cyclooxygenase enzymes. Combining diuretics like amino methyl propanol and

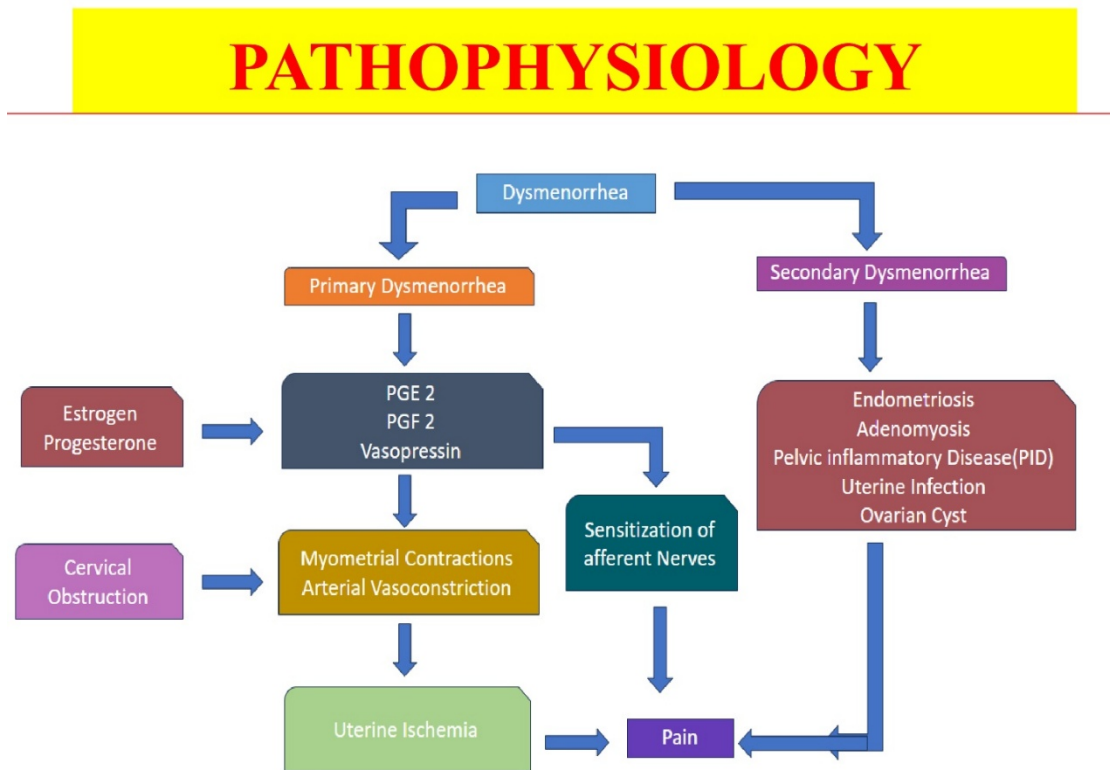


Fig 2. Pathophysiology of primary and secondary Dysmenorrhea

bromo theophylline or 1, 3, 7-Trimethylpurine-2, 6-dione⁽⁹⁾ with acetaminophen can also alleviate dysmenorrhea pain. Hormonal contraceptives prevent ovulation⁽¹⁰⁾ and reduce endometrial development and prostaglandin synthesis. Antispasmodics like hyoscine butyl bromide can also be used to relieve muscle spasms.⁽¹¹⁾ Surgical interventions are considered when other methods fail to serve the purpose. Hysterectomy, though a last resort, may be recommended, sometimes necessitating the removal of ovaries. However, nerve transection techniques like presacral neurectomy and laparoscopic uterine nerve ablation are discouraged due to the risk of pain recurrence upon nerve regeneration and potential side effects such as constipation, pelvic organ prolapse, and urinary dysfunction. The present work is designed to conduct an online survey on the comprehensive manifestation and management of Dysmenorrhea.

2 Methodology

The study employed a validated questionnaire distributed via Google Forms on WhatsApp and Email. It was divided into four sections: demographics, menstrual characteristics, medical history, and lifestyle/diet. The survey was conducted with ethical approval and informed consent. Inclusion criteria is menstruating individuals aged 13 and above. Exclusion criteria is non-menstruating individuals and incomplete responses.

In this study 501 members actively participated. The invitation to participate was disseminated via social media. Informed consent was acquired on the first page of the questionnaire which provided information about the researcher's affiliations, clarified the purpose of the study, and underlined the confidentiality of the data supplied. It was made clear to participants that they could withdraw from the study of research at any time.

The questionnaire was created with the goal of effectively achieving the study's objectives. It contains four sections. The first segment comprises six questions that collect the participant's demographic data, includes name, age, height, weight, BMI, and designation. Participants are categorized in this section according to their height, weight (underweight, normal weight, overweight) and daily activities.

The second section consists of seventeen questions asking about the age of menarche, the regularity of the menstrual cycle, and whether the participant has consulted a doctor regarding irregular menstruation. This section focuses mainly on dysmenorrhea and related symptoms. The inquiries aim to address the causes of irregular menstruation, the volume and intensity of menstrual flow, the number of pads used during their monthly cycle, particularly during the first three days, as well as the types of sanitary products (cloth, pads, cups, tampons) that are used.

Inquiries are also made regarding abdominal pain and cramps that occur during menstruation including the pain location, frequency, and stage of the menstrual cycle. Premenstrual symptoms (such as food cravings, mood swings, body pains, and irritability) and other menstrual symptoms (such as nausea, vomiting, stomach pain, dizziness, fever, sweating, acne, edema, constipation, diarrhea, skin rashes, bloating, breast changes, nervousness, increased appetite, headache and loss of appetite) are covered in this questionnaire. The purpose of this section is to list common symptoms and how they affect an individual ability to focus on work.

The third section contains questions regarding medical issues, medication use, and family history. The use of painkillers to alleviate menstrual pain, the frequency of visiting a doctor for menstrual pain, any health issues or medications that may exacerbate menstrual pain are among the queries covered. Participants were also asked about their family history of dysmenorrhea. The purpose of this section is to identify risk factors and the other potential of health concerns that could worsen menstrual pain.

The fourth section includes questions about food and physical exercise. Its inquiries about the amount and type of physical activity (such as running, yoga, meditation, sports, and walking) as well as if these activities are performed during menstruation. The consumption of various food items, such as dairy products, green vegetables, fruits, vegetable juices, chocolates, candies, spicy meals, and soft drinks was also examined. This section intends to assess the dietary patterns of participants. With a focus on the significance of a healthy lifestyle and nutrition, this part seeks to understand how dietary practices and lifestyle choices impact dysmenorrhea and associated symptoms.

In pursuit of our study objectives, we interacted with a gynecologist, nutritionist, and yoga therapist to gather their essential insights. Their expertise aimed to mitigate symptoms among respondents affected by dysmenorrhea, enriching our understanding and potential strategies for managing this condition effectively.

2.1 Pharmacological treatment options for dysmenorrhea management:

Non-Steroidal Anti-Inflammatory Drugs (NSAIDs), such as mefenamic acid, ibuprofen, diclofenac, aceclofenac, and naproxen sodium, are the most commonly used drugs. They inhibit cyclooxygenase enzymes, thus reducing prostaglandin synthesis and alleviating pain. Antispasmodics like dicyclomine and hyoscine butylbromide help in relieving uterine muscle spasms and provide additional comfort. Hormonal agents, primarily oral contraceptives, regulate the menstrual cycle and suppress ovulation, thereby reducing endometrial buildup and associated pain. Combination therapies that include agents such as paracetamol with drotaverine or caffeine, and others like amino methyl propanol with bromo theophylline, enhance the pain-relieving effect and are widely used.

2.2 Pharmacoeconomics of Dysmenorrhea Medication

CIMS is the compiled index which is the primary source for obtaining up-to-date information on drugs available in the market used to treat all medical conditions. Drug pricing and classification data were extracted to provide information on drug formulations available in different regions along with their current market prices and manufacturer details. The analysis included all pharmacological agents listed in CIMS for the treatment of dysmenorrhea. Drugs were included regardless of their prescription status, dosage form, or route of administration. For each drug, the following information was collected: brand name, manufacturer, dosage form, and both maximum and minimum prices for each formulation were noted as per the latest update available in the CIMS-2024. Further comparison of drug cost was conducted by calculating percentage price variations using a unit price of each brand of different drugs. The following parameters were calculated with details of the above data for the drugs used to treat dysmenorrhea.

- The average prices of each formulation for all drugs were analysed.
- The percentage price deviation of maximum and minimum prices was determined using their respective formulas, Minimum percent price deviation refers percent price deviation of the minimum price from the average price⁽¹²⁾.

$$\text{Minimum percent price deviation} = \frac{\text{Maximum price} - \text{Average price}}{\text{Average price}} \times 100$$

Maximum percent price variation indicates the percent price variation of the average price from the maximum price.

$$\text{Maximum percent price deviation} = \frac{\text{Maximum price} - \text{Average price}}{\text{Average price}} \times 100$$

- Percentage price variation refers percent price variation between maximum and minimum prices was determined using the below formula:

$$\frac{\text{Price of the most expensive brand (max)} - \text{Price of the least expensive brand (min)}}{\text{Price of the least expensive brand (min)}} \times 100$$

Then, these results were analyzed and compared across different brands of drugs having the highest and lowest price variation.

3 Results and Discussion

The method employed in this study involved the use of a cross-sectional survey design analysed through statistical measures of central dispersion. This cross-sectional approach enabled efficient data collection from a large and diverse population at a single point in time, making it both time- and cost-effective compared to longitudinal or experimental designs. The use of central dispersion measures, such as mean and standard deviation, provided a clear understanding of the spread and concentration of demographic variables, enhancing the interpretability of the data. Additionally, the random sampling technique minimized selection bias and increased the generalizability of the findings.

The information collected from study participants through surveys disseminated in four different sections was analysed using statistical measures of central dispersion. The sample size is 501.

Age distribution of the survey indicated that 15% of participants were between 13-18 years of age, 79% members were between 19-24 years of age, 3% members were between 25-30 years, and 2% were more than 31 years. The cross-sectional study participants were randomly selected from different habitats, as suggested by Shiferaw M *et al.*⁽¹³⁾ Enthusiastic participation was observed from the age group of 19-24 years similar to the study conducted by Kural M *et al.*⁽¹⁴⁾ and Al-Jefout M *et al.*⁽¹⁵⁾. The mean age of participants was 18.2 years. Under the BMI category, 16.8% of participants were overweight, 63.4% were of normal weight and 19.8% were underweight. Furthermore, 98.5% of the respondents were students, 1% were working women and 0.5 respondents were housewives.

The average age of menarche was reported as 13 ± 2 years. The majority of the participants i.e., 63.2% reported that menarche began between the ages of 11 to 13 years; the remaining 36.8% stated that menarche started after the age of 13. Among 501 Participants, 389 (77.8%) experienced regular menstruation, while 111(22.2%) had irregular menstruation. Among 111 members, 37.6% of members have consulted doctors to understand the reason for their irregular menstruation compared to only 9 % in a study conducted by Eman MM in Egypt in 2012.⁽¹⁶⁾ The percentage was 4 % in a study conducted by Saadia Y in Pakistan in 2014. The percentage of individuals who did not seek any medical advice regarding the reason was 62.4%. The respondents upon self-realization of their daily activities, attributed the reasons for their irregular menstruation was opted in different means. The stress factor holds a major portion in the reasons i.e., 59.4%, PCOD comes in the next place with 40.9%, and thyroid hormone irregularity is the reason in 19.6%. Side effects of other medicines accounted for 18.9%, and usage of oral contraceptives leads to irregular menstruation in 7.1%.

Bleeding duration among participants, 41.8% reported a bleeding duration of 5 or more days, 25.6% reported less than 3 days, and 32.4% reported bleeding for 4 days. Out of these 75% of participants experienced moderate flow, 16% of participants had heavy flow, and 10.4% of participants had mild flow. When bleeding duration and pain are correlated, it is observed that participants with bleeding duration greater than 5 days had significantly experienced higher pain levels. Regarding the presence of clots, the data indicated that 14.2% (71 members) of study participants were observed with the presence of clots during their menstruation and nearly 44% of 71 members had dysmenorrhea. Thus, it is clear that there exist a strong association exists between dysmenorrhea and the presence of clots.

Among surveyed, 97.8% used sanitary napkins, rather than cloth or cups. 48.3% of respondents have reported using 6 pads per day during the first 3 days of their menstruation. 36.7% of participants reported using more than 12 pads in a menstrual cycle. Therefore, from the above responses we can conclude that the average usage of pads by participants during the first 3 days of periods is 6. Among respondents, multiple factors may contribute to irregular periods, with stress appearing as the predominant cause of irregular menstruation appears to be stress. Polycystic Ovary Syndrome (PCOS) affected 40.95% of participants. Additional contributors to irregular periods included stress-related factors in 59.4%. Thyroid dysfunction at 19.6%, the use of various medications at 18.9%, and the use of oral contraceptives alone at 7.1%. Notably, PCOS emerges as the primary cause in this study, underscoring the importance of addressing hormonal imbalances for optimal reproductive health.

Among participants, 44.1% suffered from abdominal pain and cramps in every period, while 29.1% of them faced abdominal pain and cramps in some periods. Whereas 22% of respondents are experienced pain and cramps rarely. The location of pain varied from one person to another person among the surveyed, 51.9% of respondents experienced pain in their lower abdomen, 58.6% had pain in their back, 35.6% of respondents experienced pain in the entire abdomen area, 21.8% in the thighs and 19.5% in the hips region. The duration of pain among the participants varied 34.7% of girls experienced pain for one day, 30% for 2 days, 22.2 for 3 days, 8.2% for 4 days, and 4.9% for 5 or more days. Among respondents, each one may have one or more symptoms, 73.25% of participants had body pains at the beginning of their menstruation, 37.4% of them usually experienced mood swings, and 36.5% of participants faced irritation. Additionally, 23.5% experience food cravings. Out of 501 people, 69.9% of them experienced stomach pain. 29.7% of them had acne, 24.4% of them suffered from headaches, and 17.8% of them experienced dizziness. 15.8% of them had a loss of appetite. 13% of them experienced bloating. 9% of them had skin rashes. 8.6% of them suffered from vomiting and increased appetite. 8% of them experience nausea and sweating. 7.8% of them experience nervousness. 6.6% of them had breast changes. 5.4% experienced diarrhoea. 5% of them experienced constipation and 1.2% experienced edema. The above-mentioned symptoms were experienced by 49.3% of the respondents in every period. 32.3% of them had in some periods. 18.4% of them had rarely.

Family history positive for dysmenorrhea was seen in 13.6% of the total recorded responses whereas it was 50% in studies conducted by Al Asadi JN *et al.*, Nohara M *et al.*, Lee JC *et al.*, Sahin S *et al.* (501). This study suggested that genetic factor is involved in the pathogenesis of primary dysmenorrhea and increase familial tendency. Among those surveyed, 11.6% were taking opioid analgesics with a medical prescription to reduce their symptoms. The remaining participants relied on NSAIDs, which included mefenamic acid, dicyclomine hydrochloride, diclofenac, naproxen sodium, ibuprofen, aceclofenac, and nimesulide. Other medications used in conjunction with NSAIDs included drotaverin, paracetamol, and amino methyl propanol with Bromo theophylline. The most often prescribed combination for the management of dysmenorrhea was found to be Meftal-Spas. The frequency of medication was reported bimonthly is 0.4%, rarely at 16.4% and every period is 4.6%. Only 14.2% out of 501 have sought medical advice. Of these, 14.2% visit the doctor regularly, while the remaining individuals do so rarely. Approximately 26.6% of members are now taking medication for other health reasons with 15.2% of them taking it specifically for menstrual pain. Comorbid conditions were reported in 8.6% of the recorded responses during the respondent's periods in the past to address dysmenorrhea. Among the participants, 61.3% reported using NSAIDs to relieve menstrual pain, making it the most frequently used drug category. Specifically, mefenamic acid was the dominant choice among these users. Additionally, 45.7% of participants used antispasmodics, primarily dicyclomine, often in the form of combination formulations like Meftal-Spas.

Regarding physical activity the frequency of participation in physical exercise was based on the recorded responses 24.6% exercise daily, 12.6% exercise frequently, 29.9% exercise sometimes, 19.2% exercise rarely, and 13.8% engage in any. The respondents involved in different physical activities in their daily lives included 72 % of participants performing walking, 7% doing jogging, 15.4% doing yoga, and 10.4% observed as in other sports. Among respondents, 11.8% do meditation to reduce their stress levels. It is also reported that 32.7% of the participants were engaging in physical activity during their period. Among the participants, the consumption of fruits and fruit juices was 55.8%, dairy products and leafy vegetables were 54.6%, chocolates was 52.3%, dry fruits, and sprouts were 38.4%, food containing iron and magnesium was 41%, junk food was 35.5%, intake of sweets was 35.7%, spicy cuisine was preferred by 39% and cold beverages were consumed by 25.3%. The frequency of food consumption was also inquired. Among them, 26.7% eat these foods every day, 34.3% eat often, 31.3% eat occasionally and 7.6% eat rarely. Dietary pattern variations were observed across various studies, it was reported that dietary intake changed in 73.9% of the participants. In the present study, 58% of the participants stated that they usually crave chocolates and other sweets before and during menstruation, which is found nearly similar to previous studies.^(?)

Dietary components that helped alleviate dysmenorrhea included the consumption of fruits, dairy products, and green leafy vegetables, which are rich in vitamins and minerals known to reduce inflammation and muscle spasms. Foods rich in magnesium and omega-3 fatty acids, such as nuts, seeds, and certain fish, were also associated with symptom relief. On the other hand, increased consumption of chocolates, sweets, and spicy foods appeared to exacerbate symptoms. Processed foods and sugary snacks may contribute to increased prostaglandin levels, which can intensify uterine contractions and pain. Alcohol may also disrupt hormones and worsen cramps.

Our findings align with several prior studies, reinforcing the consistency and relevance of the results. For instance, the age group 19–24 years formed the majority in our study (79%), which mirrors similar demographic participation observed by Kural *et al.* and Al-Jefout *et al.* in their respective cross-sectional studies. The association of stress with irregular menstruation (59.4%) and the high incidence of PCOS (40.95%) in our data is consistent with earlier findings by Sahin *et al.*, who also reported stress and hormonal imbalances as dominant contributors to menstrual irregularities.

Medication usage in our study was dominated by NSAIDs and antispasmodics, especially the combination of mefenamic acid and dicyclomine (Meftal-Spas), aligning with data presented in Kirsch et al. and Ferries-Rowe et al. which confirm the efficacy of such regimens. However, only 14.2% of participants sought medical advice, which is lower than the 50% clinical consultation rate observed in studies by Al Asadi JN and Lee JC, suggesting a continued need to promote healthcare-seeking behavior.

Physical activity was found to be beneficial during menstruation in our study, consistent with the systematic reviews by Matthewman et al. and Carroquino-Garcia et al., who confirmed the pain-relieving effects of regular exercise. The correlation between physical inactivity and symptom aggravation also echoes findings by Armour M et al.

These parallels confirm the validity of our findings and highlight universal trends in the manifestation and management of dysmenorrhea across different populations. Participants were mostly aged 19–24 (79%). Common complaints included abdominal cramps, irregular menstruation, and symptoms such as mood swings and acne. Risk factors like stress (59.4%) and PCOS (40.95%) were common. Dietary habits showed that 55.8% consumed fruits and 54.6% consumed dairy and greens. Increased chocolate and spicy food intake correlated with higher symptom intensity. Physical activity during menstruation (32.7%) helped alleviate symptoms.

3.1 Pharmacoeconomic Analysis of Dysmenorrhea Medication

Pharmacogenomics was not directly studied but is recommended for future research to understand variability in NSAID response. Drug Used for dysmenorrhea NSAIDs (e.g., mefenamic acid), dicyclomine, and paracetamol combinations were the most used.

From the cost-effectiveness analysis of dysmenorrhea treatments, it is identified that various brands of each drug used to treat dysmenorrhea are available in the market. Based on the information collected from CIMS-2024, maximum and minimum prices for each formulation were recorded. The calculated percentage price variation using the unit price of each brand of different drugs was noted and these results will highlight a range of cost-effective options for dysmenorrhea management, as mentioned in [Table 1].

3.2 Information Booklet to Combat Dysmenorrhea

The information brochure is prepared by compiling valuable inputs collected from three important professionals: a gynecologist, a nutritionist, and a yoga therapist to modify their lifestyles to reduce the symptoms of dysmenorrhea. This information booklet is supplied to all survey participants via e-mail, to alleviate the discomfort and several other risk factors associated with dysmenorrhea. [Figure 3] illustrates yoga asanas that help in the management of dysmenorrhea.

4 Conclusion

The study was successfully conducted by collecting the data through Google Forms circulated through online mode. The recognition and management of dysmenorrhea are critical for enhancing the well-being of individuals grappling with menstrual pain. Understanding and diagnosing the root causes and symptoms enable the development of tailored treatment strategies. Lifestyle modifications, over-the-counter pain relief medications, hormonal therapies, and alternative modalities like acupuncture and yoga can all contribute to symptom alleviation. Seeking guidance from healthcare professionals ensures a thorough diagnosis and personalized treatment plan. Additionally, our cost analysis of drugs relevant to dysmenorrhea management sheds light on the financial aspects of treatment, emphasizing the need for accessible and affordable options. This study identifies key dysmenorrhea triggers and management patterns. Stress, diet, and lack of physical activity emerged as major contributors. Over-the-counter drugs remain widely used, with cost variations impacting access. Future studies should integrate pharmacogenomic assessments and explore longitudinal symptom tracking for individualized care strategies, investigating genetic and hormonal biomarkers for better diagnosis, assessing the long-term effectiveness of lifestyle interventions, and developing digital tools like mobile applications for symptom tracking and self-care guidance.

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Conflict of interest: Nil.

Ethics statement: The study was approved by institutional ethics committee. [IEC no SPMVV/Acad/IEC/C1/IX/2024].

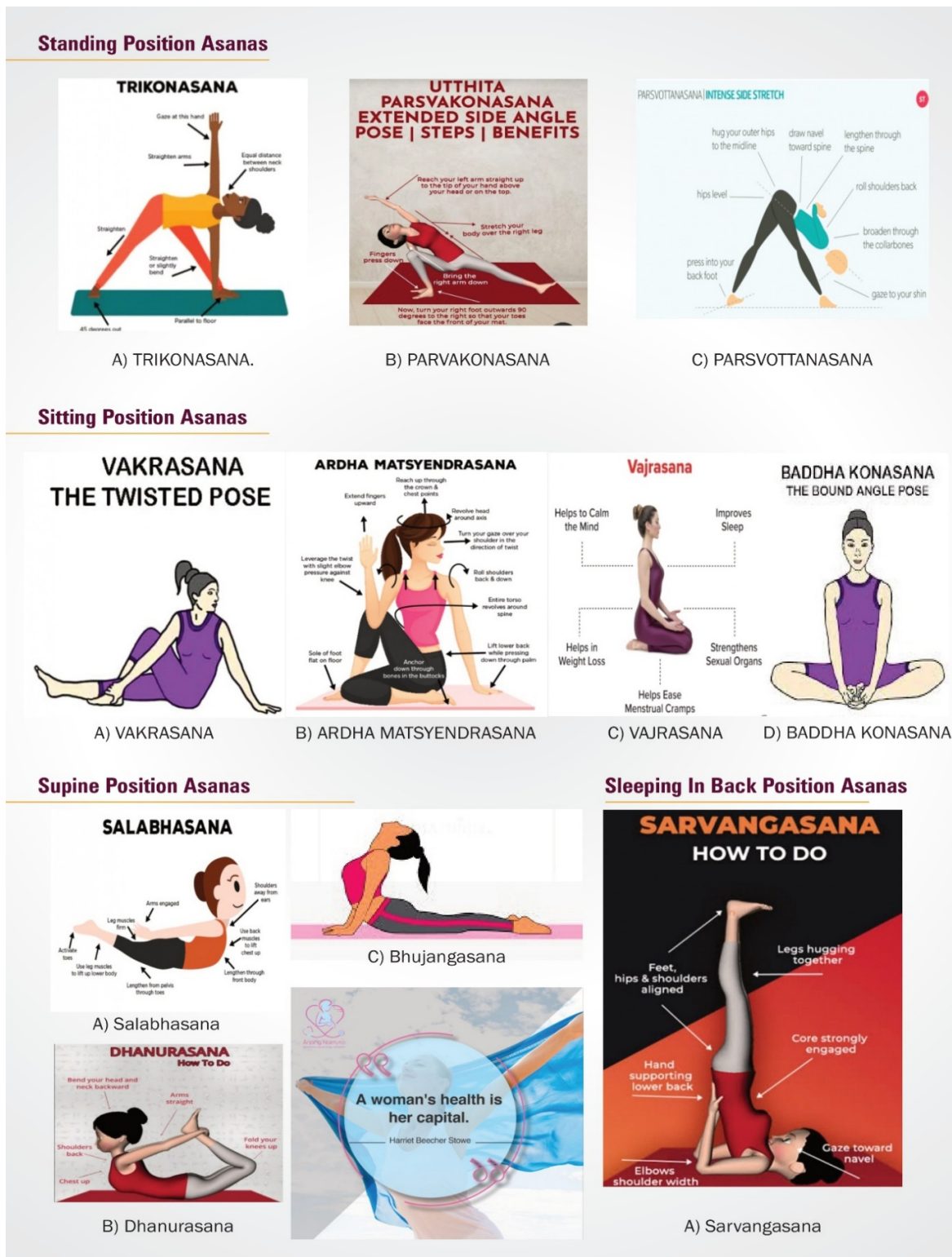


Fig 3. Yoga Asanas for Manifestation and Management of Dysmenorrhea

Table 1. Pharmacoeconomic analysis of Dysmenorrhea medication

S. No	Name of the Drug	Type of Formulation	Average Prices of Each Formulation (Rs).	Maximum Prices of Each Formulation (Rs).	Minimum Prices of Each Formulation (Rs).	%Price Variation of The Most Expensive Brand and Least Expensive Brand
1	Diclofenac	Gel	53	69	37	4212%
		Injection	7.93	15	1.60	
		Tablet	23	27	8.55	
2	Diclofenac +Paracetamol	Injection	9.70	95	45	1047%
		Tablet	45			
3	Flurbiprofen	Gel	60			106%
		Tablet	29			
4	Ibuprofen	Capsule	11.75	16.12	7.38	597.8%
		Suspension	14.33	21.28	8.55	
		Tablet	21.7	51.50	6.34	
5	Ketoprofen	Patch	399			106%
6	Mefenamic Acid	Suspension	32.6	36.5	26.8	128.1%
		Tablet	22.5	31.50	16	
7	Nimesulide	Tablet	27.8	52	14.32	263.1%
8	Naproxen+	Tablet	88.5	142	49	189%
9	Domperidone	Tablet	677.8	754	535	40.9%
10	Norethisterone	Tablet	99.5	200	48.15	315.3%

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