A PROSPECTIVE SURVEY TO ASCERTAIN THE SYMPTOMS, HEALTH ISSUES AND SUBSEQUENT OTC MEDICATION USAGE DURING MENSTRUATION AMONG COLLEGE STUDENTS

Mintu George1, Anagha Melbin1, Mary Paul Dominic1, Reshma Dominic1, Aysha Saja P.S1, Jobin Kunjumon Vilapurathu2

1 Department of Pharmacy Practice, Nirmala College of Pharmacy, Muvattupuzha
2 Assistant Professor, Department of Pharmacy Practice, Nirmala College of Pharmacy, Muvattupuzha

<table>
<thead>
<tr>
<th>Article History</th>
<th>Abstract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received: 06-10-2023</td>
<td></td>
</tr>
<tr>
<td>Revised: 26-10-2023</td>
<td></td>
</tr>
<tr>
<td>Accepted: 15-10-2023</td>
<td></td>
</tr>
</tbody>
</table>

Keywords: Premenstrual syndrome, premenstrual dysphoric disorder, Menstruation, Premenstrual syndrome treatment, Lifestyle modifications.

Up to 14 days before your period begins, you might see bulging, Migraines, temperament swings, or other physical and enthusiastic changes. These Month to month side effects are known as premenstrual disorder, or PMS. Around 85% of ladies experience some level of PMS. A couple have more serious. Manifestations that disturb work or individual connections, known as premenstrual Dysphoric problem (PMDD). The etiology of these disorders remains uncertain, Research suggests that altered regulation of neurohormones and neurotransmitters is involved.

Study Site: college students studying in Nirmala College of pharmacy Muvattupuzha. Design: The study will be done as an online survey using Google form. The Developed questionnaire consists of knowledge of premenstrual syndrome, Quality of Life, Medication. Conclusion: Premenstrual syndrome and premenstrual dysphoric disorder are Complex but highly treatable disorder and can improved by providing patient education on Premenstrual symptoms and counseling women on lifestyle interventions.

*Corresponding Author
Jobin Kunjumon Vilapurathu

https://doi.org/10.37022/jiaps.v8i3-S.529

Production and Hosted by
www.saap.org.in

Introduction
Menstruation, also known as menses, is the regular discharge of blood and mucosal tissue from the inner lining of the uterus through the vagina. It is a part of the menstrual cycle. The first occurrence of the menstrual cycle is called menarche. However periods may occasionally start within the age of 12- 15. The decline in reproductive hormones leads to menopause, when a woman reaches 40s-50s [1]. A group of symptoms that occur in woman typically between ovulation and a period called premenstrual syndrome (PMS) [2]. Symptoms included changes in appetite, weight gain, abdominal pain, back pain, low back pain, headache, swelling and tenderness of the breasts, nausea, constipation, anxiety, anger, restlessness, mood swings and crying, depression, food craving, fatigue, irritability etc [3]. Most women have at least one sign of PMS each month. But it's not the same for everyone. The etiology of premenstrual syndrome appears to be related to ovarian function, as suppression of ovarian hormone secretion markedly attenuates PMS. Disproportion of hormones like progesterone deficiency and oestrogen surplus have been proposed. Oestrogen comprises three major hormones mood swings are associated with fluctuations in oestrogen level during the luteal phase. Intake of coffee, junk food and other lifestyle factors also lead to PMS [4]. Recurrent changes in chemicals, synthetic changes in the cerebrum, existing psychological well-being conditions are also included. The pathophysiology of premenstrual disorder is intricate, uncertain, and isn't completely perceived [5]. Several clinical entities can have a manifestation similar to premenstrual syndrome. They include psychiatric conditions like substance abuse disorders, affective disorder (e.g., depression, anxiety,
Material and Methods

Study design: The study was done as a prospective online survey using Google form. The developed questionnaire consisted of knowledge of premenstrual syndrome, quality of life, medication.

Study site: The study was conducted among them and they cooperated with the study and the study was recorded.

Sample size: Estimated to be not less than 400 students.

Study population: The students of Nirmala College of Pharmacy, Muvattupuzha, in the year of 2021-2022 and who satisfied the inclusion and exclusion criteria were selected for the study.

Selection of study population:

Inclusion Criteria: All female students willing to take part in the study. Age: 18-25.

Exclusion criteria: Subjects who are unable to provide informed consent

Study period: The study period was carried out for a period of one and half year starting from February 2021 to March 2022.

Data collection: The pre-designed questionnaires were given to the interested respondents through Google Form and the data was collected and recorded. Data collection tools: Google form: The study was done as an online survey using Google form. The developed questionnaire consisted of knowledge of premenstrual syndrome, quality of life, medication. Data Collection: The process will involve collection of data from college students. The Google form was chosen to be the medium for the distribution of the questionnaire. The developed questionnaire was encrypted in the web page before it can be distributed to most of the social networks, WhatsApp. The link to the online survey was also forwarded to the respondents who agreed to participate through email.

Data collection form: The data collection form includes the following details: Demographic details: First part includes mail id, consent, age, weight, sex. Knowledge of premenstrual syndrome: second part include whether the menstruation is regular, have PMS symptoms, combination of symptoms, assessment of premenstrual syndrome.

Quality of life: Third part include how symptoms adversely affects, questionnaire was used to evaluate four domains of the quality of life of the students physical, mental, social relationships, and environmental.

Medication: Fourth part include medication used in this condition. Methodology: The study proposal was approved by the ethics committee of the Nirmala College of Pharmacy, Muvattupuzha. The concerned authority of the 2 centres approved the study protocol and permitted to conduct the study.

Data collection was carried out through 4 phases: Phase 1- The respondents who met the study criteria were informed about the study. Procedure and were enrolled into the study after obtaining their informed consent. Demographic data were collected and entered into the data collection form which includes age, gender, and weight. These were collected through the predesigned questioners. The survey was conducted for the assessment of symptoms and health issues related with premenstrual syndrome and subsequent OTC medication usage among college students. The survey was conducted through questionnaire which consisted of 21 items that were distributed into 4 sections. First part include. Questions from 4-12 consist whether menstruation regular or not, having PMS symptoms including headache, bloating, stomach ache, vomiting, loss of energy, fatigue. 13-18 questions contain quality of life related questions which include difficulty in sleeping, paying attention in class, depression, and craving. Pre-menstrual syndrome awareness session: Under the Department of Pharmacy Practice in association with Women Cell, Nirmala College of Pharmacy, we had organized an awareness session on the topic "Premenstrual syndrome". Providing information to students to know more about the condition and to find out the techniques with which they can avoid the difficulties. The awareness session conducted on 18-December-2021, in seminar hall under the guidance of Mr. Jobin Kunjumon. The session was organized for the first year B pharm students and around 60 students participated the session.

Result and Discussion

Figure 1 Occurrence of PMS

Figure 2 Occurrence of nausea and vomiting
Caffeine, dairy products, spicy foods and alcohol are some of the relief measures. Ginger, chamomile, peppermint, and essential oils are some of the natural remedies for this. Chamomile acts as a digestive relaxant. But aroma therapy using essential oils has not given enough evidence in reducing nausea. Vitamin b-6 and NSAIDS give long term relief. Folic acid, Calcium with vitamin D, Magnesium and Vitamin E may also help [10]. In another question (figure 3), respondents were asked if any kind of stomach ache, diarrhea and cramping occurred. 37.5% responded that they had moderately and 21.7% participants had mildly experienced this. About 21.4% had severe stomach ache, diarrhea and cramping. Only 17.2% does not have such an issue. Too many prostaglandins produced from uterus is primarily responsible for cramping, stomach ache etc. Prostaglandins lead to tightening and relaxation of muscles that cause cramps. This hormone rises to its peak right before the period starts. Cramping feels like immense pressure in the pelvic region that mimics contraction. Changing hormonal levels affects the tissue, causing inflammation and pain and may generate cramps even two weeks before the period. There are several home remedies for alleviating the premenstrual cramps. Always stay hydrated, take hot baths, and use hot bags, practice yoga and other mild exercises that helps in relaxing the uterine muscles. The prostaglandins that are produced during premenstrual period also trigger contractions of the intestine that lead to gastrointestinal symptoms like diarrhea. The hormone enhances electrolyte secretions that contribute to diarrhea. Foods such as spicy ones, caffeine, dairy products, and artificial sweeteners must be avoided. Include more fibre containing foods. Also add probiotic foods that help restoring the gut bacteria. Ibuprofen decreases the effects of prostaglandins in the body. Over the counter anti-inflammatory drug. Cyclosporin is a non-steroidal anti-inflammatory drug. Cyclosporin improves menstrual cramps. It is an alternative to Meftal-Spas. Diclofenac restores physical performance along with relieving pain [12].

Conclusion

Therefore, we can conclude that Premenstrual syndrome is a prevalent condition in college students. 39.7% of the respondents were sure that they were having PMS. These participants experienced the symptoms in one or the other way such as in a moderate, mild, rare, often, very often or sometimes. Both physical and psychological issues were found out. Many of the women are not sure about whether the go through the condition of PMS and therefore lack proper

![Figure 3 Occurrence of stomach ache or diarrhea and cramping](image)

![Figure 4 Pain relievers](image)
treatment and other necessary precautions. Fluctuating levels of progesterone and estrogen are responsible for mild and severe headaches during PMS. They can be prevented in some of the ways like- engaging in a physical activity, dietary changes, proper sleep, preventive medications, management of stress etc. Changes in hormone levels provoke negative emotions like irritability and anger. If there is frequent fluctuations in mood, it is better to consult a doctor. Vitamin B-6, NSAIDs give long term relief in nausea and vomiting. Too many prostaglandins produced from uterus is primarily responsible for cramping. Foods such as spicy ones, caffeine, dairy products, artificial sweeteners must be avoided. Include more fibre containing foods. Also add probiotic foods that helps restoring the gut bacteria. Stomach ache etc. Foods such as spicy ones, caffeine, dairy products, and artificial sweeteners must be avoided. Include more fibre containing foods. Also add probiotic foods that helps restoring the gut bacteria. Prevalence of premenstrual syndrome among college students necessitates helping and supporting individuals who suffer a lot. Providing awareness regarding PMS is a mandatory. Several educational programs can be established such as traditional educational system or by using novel technological methods.

Acknowledgments
We express our heartiest gratitude to the management of Nirmala College of Pharmacy, Muvattupuzha for their valuable guidance and support for our project work. We also thank all the teachers and students of Nirmala College of pharmacy, also Ms.Anagha Melbin, Ms. Mary Paul Dominic, and Ms. Reshma Dominic for their immense help.

Conflict of interest
Nil

Funding
Nil

Reference
5. Rapkin AJ, Akopians AL. Pathophysiology of premenstrual syndrome and