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PREVALENCE AND MANAGEMENT OF PREMENSTRUAL SYNDROME-RELATED DYSMENORRHEA IN A UNIVERSITY POPULATION

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ABSTRACT
The study's goal was to determine the prevalence of dysmenorrhea related to premenstrual syndrome and the management options used to treat it. A total of 320 female students from private university in Karachi, participated in this cross-sectional survey. The information was acquired by a general survey as well as questionnaires on PMS linked with dysmenorrhea like abdominal pain, backache, headache, nausea, anxiety, sadness, breast tenderness, vomiting, food consumption, and self-management measures.
The average age of the study participants was 22.011. 170 (54%) females experienced PMS associated with dysmenorrhoea, with 198 (69%) using fast food and 90 (31.25%) using simple homemade food. Backache and abdominal pain affect 277 (96%) of females; nausea affects 282 (97%) of females; anxiety and depression affect 245 (85%) of females; irritability and pelvic discomfort affect 274 (95%) of females; breast tenderness affects 196 (68%) of females; headache affects 191 (66%) of females; and vomiting affects 166 (58%) of females. 267 (93%) of the girls were able to solve the condition by employing medicinal plants. Other medical aid (allopathic medication) was used by 21 (7%) people, including ponstan, brufen, Synflex, and others. Melaleuca alternifolia, Foeniculam vulgare, Trachyspermum ammi, 11 (4 percent) Zingiber officinalis, 18 (6 percent) Cinamoum verum, 3 (1 percent) Elateria cardamom, and 9 (3 percent) Cocos nucifera were used to treat 157 (55 percent) of the 93 percent. Conclusion: Dysmenorrhoea is a prevalent issue that impacts academic performance and daily activities, necessitating prompt treatment.

Keywords: Prevalence, Premenstrual, Dysmenorrhea, Herbal management

INTRODUCTION
Dysmenorrhea is a painful uterine cramping sensation characterised by backache, lower abdomen discomfort, headache, nausea, and vomiting that typically occurs at the start of the menstrual cycle that lasts for the first 3 days. The discomfort can last anywhere from 8 to 72 hours (Sultana et al., 2017). The majority of dysmenorrhea cases are classified as primary dysmenorrhea, meaning they have no evident pathology (Harel, 2006). Primary dysmenorrhoea is more common in adolescent girls and normally improves with maturity. Menstrual discomfort affects 25–50% of adult women and 75% of adolescents in developing countries, with 5–20% reporting severe dysmenorrhoea that prevents them from participating in daily activities (Sultana et al., 2017). The cognitive, behavioral, and

physical symptoms of premenstrual syndrome (PMS) occur during the luteal phase of the menstrual cycle (Kwan & Onwude, 2009). PMS has an aetiology that is unknown (Frackiewicz & Shiovitz, 2001). However, it is thought that PM is caused by a gonadal profile or a decreased amount of serotogenic function in the luteal phase (Yonkers et al., 2008). Dysmenorrhea and premenstrual syndrome can be caused by a variety of reasons. These include factors like lifestyle, socioeconomic position, family history, smoking, BMI, pelvic infection, and parity, among others (Gamit et al., 2014). According to an epidemiological assessment, more than 80% of women of childbearing age suffer from one or more PMS (premenstrual syndrome) symptoms (Freeman, 2003). Another epidemiological study discovered that 14–88% of people have PMS, with 5–10% having severe symptoms, with PMDD (premenstrual dysphoric disorder) being a severe type of PMS (Bakhshani et al., 2009; Ortiz, 2010). Dysmenorrhoea affects 28–89.5% of women (Polat et al., 2009). 75 percent of adolescent women in underdeveloped countries such as Indonesia, Bangladesh, India, Pakistan, Afghanistan, the Philippines, Bhutan, and Turkey suffer from dysmenorrhea, with 5–20% reporting severe dysmenorrhea that prevents them from participating in daily activities (Harlow & Campbell, 2004). A research discovered a link between PMS and dysmenorrhea (Issa et al., 2010). According to the literature, in West Africa, in Mali, Ganvie, and Qualata, around 80% of the population used natural medicinal plants. Many herbal medicines have traditionally been used to treat reproductive issues. Only a few have been pharmacologically tested for menstrual problems. In most countries, a substantial number of ethnobotanical studies on medicinal plants used for reproductive health have been conducted in recent years (Van Andel et al., 2014)

Since then, just a few infrequent studies have been conducted in our country. The current study aims to assess the prevalence of dysmenorrhoea related to premenstrual syndrome and the management techniques used to address this disease, which is now common and has major repercussions on patients' daily activities.

METHODOLOGY

The cross-sectional study took place from January to March 2024. A questionnaire was created and delivered to willing individuals from private University. A total of 320 girls (n = 320) were recruited for the study, and they were informed of the inclusion and exclusion criteria. If a female between the ages of 16 and 35 had a normal abdomino-pelvic ultrasonography, regular menstrual cycles, and consented to give informed consent to participate in the study, she was considered to be eligible and vice versa. The female volunteers were guaranteed complete anonymity, and the information gathered was only used for research purposes. Participants were also eliminated if they were using corticosteroids, antispasmodics, antipsychotics, sedatives, hypnotics, antidepressants, or any other drugs recommended by a physician. Females who refused to participate or who had a chronic condition such as hypertension or diabetes were excluded from the research.

Participants were instructed to complete surveys properly, and they were assured that their information would be kept private. Questionnaires were created based on prior research (Balbi et al., 2000). The first section of the survey provides personal information such as name, father/husband name, age, residence, contact number, date, and CNIC number, while the second section covers PMS and dysmenorrhea features. The pain rating is determined using the Visual Analogue Scale (VAS). The second section contains information on your family, your background, and your drug use. The third section includes the accompanying symptoms, such as nausea, vomiting, headaches, and pelvic pain. The fourth portion of the questioner includes herbal remedy management techniques, dose, manner of use, and timing, and the last part of the questioner includes a general physical scrutiny.

The Microsoft Excel 2016 version was used to examine the data. The mean and standard error of the mean were used to represent the data. The Chi-square test was used to compare the patients' data. Statistical significance is defined as p 0.05.

RESULTS

Participants in the study had a mean weight, age, height, and BMI of 54.25.2, 22.011.25, 149.33.8, and 23.11.6, respectively. 170 (53%) women who experienced dysmenorrhea and PMS were reported

and, of those, 117 (69%) were those who ate fast food and 53 (31.25%) were those who ate basic, home-cooked meals (Table 1). 161 (94.7%) women experiencing back and stomach discomfort, 164 (96%) having nausea, 145 (85%) possessing both sadness and anxiety, 158 (93%) being irritable and experiencing pelvic pain, 115 (68%) with breast tenderness, 111 (66%) with headache, 98 (58%) feeling vomiting (Table 2). 149 (88%) girls used medicinal herbs to solve this issue. While 20 (or 7%) required further medical assistance (allopathic drugs), such as brufen, ponstan, Synflex, etc. From 88%, 82 (55%) cures were achieved with common herbal treatments like Melaleuca alternifolia, 27 (18%) used Foeniculam vulgare, 15 (10%) used Trachyspermum ammi, 8 (5%) used Zingiber officinalis, 12 (8%) used Cinamoum verum, 2 (1%) used Elateria cardamom, and 4 (3%) Cocos nucifera (Table 3).

Table 1. Participant's features in the study.

Features (n=320)	**Results**
Age	22.01±1.24
Height	149.3±3.8
Weight	54.12±5.2
BMI	23.1±1.5
PMS with dysmenorrhea in females	170 (54%)
women who don't have PMS or dysmenorrhea	150 (46%)
Frequently eating fast food	118(69%)
standard hostel fare cooked at home	52 (31%)

Table 2. The signs and symptoms of dysmenorrhea

Characteristics	**Mild**	**Moderate**	**Severe**	**Total**
Irritability and pelvic discomfort	126 (74%)	17 (10%)	15 (9%)	158 (93%)
Backache and lower abdominal pain	103 (60%)	41(24%)	17(10%)	161 (94 %)
Breast tenderness	65 (38%)	42(25%)	8 (5%)	115 (68%)
Nausea	132 (78%)	22 (13%)	10 (6%)	164 (96%)
Vomiting	63 (37%)	24(14%)	11 (7%)	98 (58%)
Headache	92 (54%)	11 (7%)	8 (5%)	111(66%)
Depression and anxiety	113 (66%)	22(13%)	10 (6%)	145(85%)

Table 3: Adopted management strategies.

Plants that are used as medicines	**Participants used**
Melaleuca alternifolia	82 (55%)
Foeniculam vulgare	27 (18%)
Trachyspermum ammi	15 (10%)
Cinamoum verum	12 (8%)
Zingiber officinalis	8 (5%)
Cocos nucifera	4 (3%)
Cinamum Cardamom	02 (1%)
Others medical aid	
Allopathic Medicine	20 (12%)

DISCUSSION

Women's health is now a primary goal, as well as an indicator of social and economic growth (Taylor, 2005). PMS and dysmenorrhea are prevalent public health concerns among women across the world, and they are a wide-ranging source of absenteeism from university, college, and work, as well as a negative impact on quality of life. These hardships have a negative impact on educational output.

Social relationships are harmed (Dorn et al., 2009). PMS is a collection of mental and physical symptoms that occur before menstruation begins. Dysmenorrhea is a group of unpleasant symptoms that occur after menstrual bleeding begins. Dysmenorrhea is a painful menstruation that is often accompanied by additional symptoms such as nausea, vomiting, backache, irritability, lower abdomen pain, and pelvic discomfort (Durain, 2004). dysmenorrhea and PMS are two of the most common women's public health issues, affecting both their quality of life and productivity in both developing and developed countries. All studies have shown that the highest occurrence of both PMS and dysmenorrhea is seen in people of various ages and ethnicities, and that this leads to greater use of medical health services (Pinar et al., 2011).

The goal of this study was to determine the prevalence of PMS and dysmenorrhea, as well as the management strategies used by Hostelized females in the Karachi region.

The study's goal was to provide literature about this suffering in order to improve health quality in the future. And the goal of our research was to close the literature gap. Previous research found that the prevalence ranged from 43 to 90 percent (Kennedy, 1997).

In this cross-sectional study, the prevalence of PMS and dysmenorrhea was found to be 54 percent in the age category of 22.01±1.3 years, indicating that it is a common condition among female students (n = 170). Those who were not reported to have suffered from this (n = 150) account for 46% of the total.

Similar findings were discovered in Anati's research at Calabar University, which revealed an 85.5 percent prevalence of PMS in people aged 16 to 31 (Antai et al., 2004).

In Turkey, the prevalence of dysmenorrhoea ranged from 23.4 percent to 89.5 percent (Chan et al., 2009). Dysmenorrhoea was also found in Australian research was shown to be prevalent in 93 percent of women. Dysmenorrhea affects approximately 67–90% of women between the ages of 17 and 24 (Parker et al., 2010). Previous research has found that the prevalence of PMS varies and can be as high as 75–85 percent (Reddish, 2006). With no specific aetiology and no definitive therapy, PMS accompanied by dysmenorrhoea affects a huge section of women, necessitating the creation of this study. The research was also done to see how it related to other aspects. Our findings reveal a link between eating choices and PMS and dysmenorrhea. Females who consume more fast food are more likely to suffer from these ailments.

In our study (n = 118), 69 percent of women who were suffering from the condition had a favorable history of eating fast food. While (n = 52) 31.25% used simple homemade food but had PMS and dysmenorrhea. Those may be due to other etiological factors.

Fast eating and junk food are significant risk factors in this study. The managerial approach used by females is also investigated in this cross-sectional research.

Results showed that 88 percent of people were able to manage illness by utilizing traditional medicinal plants, while just 12 percent needed extra medical assistance (allopathic medication). Using tea tree (Melaleuca alternifolia), which contains anti-inflammatory and antinociceptive active ingredients 1, 8-cineole, terpinen-4-ol, alpha-terpineol, and gamma-terpinene, 93 percent (n =82) of the females were managed (Pazyar et al., 2013). The soybean (Foeniculum vulgare), which contains mefenamic acid, has a n = 27 (18%) response rate. anything that acts as an analgesic. Mefenamic acid is an anethol and an antispasmodic (Mills et al., 2004). The findings demonstrate that the use of medicinal herbs is becoming more popular every day. In this research, PMS and dysmenorrhoea have a high prevalence (54%). So, now is the time to organize a workshop and distribute materials about methods of prevention, such as modifying one's lifestyle and eating habits, utilizing simple foods to alleviate miseries, and using traditional medicinal herbs to reduce symptoms.

CONCLUSION

According to the study, which found a link between food habits and PMS and dysmenorrhea symptoms, there is a prevalence of primary gynecological concerns among females. PMS and dysmenorrhea are more common in people who eat fast food or junk food instead of homemade or simple cuisine. Changing one's eating habits, such as switching from fast food or junk food to basic homemade meals, can help to alleviate needless pain. According to the findings, 93 percent of

individuals were able to control their symptoms with medicinal plants (home remedies), with only 7 percent requiring medical intervention.

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