

Impact of Menstrual Abnormalities on HRQoL of Women of Reproductive Age in Gujrat, Pakistan

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Abstract

Background: Although menstruation is a normal physiological process of a woman's body, there may be problems like endocrine disruption or PCOS. Teenagers and young adults may experience a decline in their health-related quality of life (HRQoL) due to menstrual cycle irregularities.

Objectives: To determine the prevalence and pattern of menstrual irregularities and their impact on health-related quality of life (HRQoL) of young adult women and teenagers in females of reproductive age in Division Gujrat (Pakistan).

Methods: A descriptive cross-sectional survey was conducted in the division of Gujrat (Pakistan) from November 2021 to January 2022. 135 female participants of reproductive age were selected by convenience sampling. A semi-structured questionnaire was used for data collection. Females with one comorbidity, like diabetes, hypertension, mood disorders, or obesity, were also included. Females suffering from menopause or age ≥ 45 years were excluded. Data were analyzed using GraphPad Prism 10.2.

Results: Of the total of 135 female participants, 104 (77.04%) were 12–30 years old. 65 (48.14%) experienced their first menstrual period at ≥ 12 , while 60 (44.44%) experienced it at ≤ 12 ; however, 10 could not recall the age of onset.

Conclusion: Childbearing age, middle-aged women. Exhibited mental health issues in their 30s and 40s, including restlessness, behavioural changes, and insomnia. Some females face difficulties associated with eating disorders and physical health issues during menstruation, including weight gain and joint discoordination. These challenges impede women's capacity to execute routine tasks and provide care for their families.

Keywords: Infertility; Menstrual cycle; Reproductive; Health-Related Quality of Life (HRQoL)

Background

Menstruation is a monthly physiological process that occurs in females. The typical duration ranges from 1 to 10 days/month. It is associated with symptoms including lower abdominal pain, pelvic cramps, food cravings, breast tightness, mood fluctuations, irritability, and intermittent fatigue. It involves both the suppression and elevation of estrogen and progesterone.

Reices et al 2025 reported that the menstrual cycle gives rise to various emotional and physical problems. Certain women and

adolescent girls experience their menstrual cycles with few or no complications [1]. Conversely, some individuals encounter various physical and psychological symptoms that may present greater challenges in management. Menstrual symptoms are categorized by Ramici et al 2025 into menstrual-related diagnoses, such as dysmenorrhea and Premenstrual Syndrome (PMS) [2]. According to Uchibori et al (2023, Many women may experience menstrual symptoms that do not align with the diagnoses mentioned earlier, which are influenced by the

quality, timing, or interpretation of their menstrual disorders [3]. Panda et al, Menstrual cycle disturbances in women across all age groups result in multiple health complications, such as endocrine disorders and polycystic ovary syndrome (PCOS) [4]. According to the WHO, middle-aged women (30-55 years) generally view their monthly bleeding as excessive [5]. Masurkar & Rege, et al (2025 found that costly hormonal medications and laboratory testing can impact the health-related quality of life (HRQoL) of women, potentially resulting in considerable financial strains related to healthcare costs [6]. This issue may affect attendance at school or work, thereby threatening academic performance and employment opportunities. Menstrual disorders are linked to nutrition and eating disorders. Vashisht et al 2018, found that factors such as physical inactivity, body mass index (BMI), stress, and chronic illnesses are also linked to menstrual disorders, as indicated in the points [7,8]. Panic attacks are sudden episodes of anxiety marked by physical symptoms such as rapid heartbeat, dizziness, trembling, chest tightness, and shortness of breath, usually lasting approximately 10 minutes.

Normal menstrual cycle: Menstrual cycles typically last 24-38 days, and bleeding during menstruation varies between 2 and 8 days. Tan et al (2025 reported that frequent menstruation is defined as cyclical bleeding that occurs at intervals shorter than 24 days [9]. Cycles were considered regular if the duration spanned from 7 to 9 days. Abnormal uterine bleeding refers to any variation in the frequency, length, regularity, and amount of menstrual flow. During infrequent menstruation, menstrual periods last ≥ 38 days. Davis et al 2024 explained that heavy menstrual bleeding as bleeding that is significant enough to influence a woman's HRQoL [10].

Menstrual disorders were defined as follows [13, 14] (Table 1).

Methodology

Study Design, Setting & Duration of Study

A cross-sectional survey-based study was conducted, including females of reproductive age in Division Gujrat from November 2022 to January 2023 at Aziz Bhate Hospital Gynae OPD clinics. It was ensured that no participant provided false or fraudulent information on the questionnaire. After hearing the study's purpose, many women wanted to participate, but the inclusion criteria required all women between 12 and 45 who had visited the gynecology clinic in OPD for menstrual

irregularities to meet the WHO reproductive age requirements. 135 reproductive-age females (12–45) were selected via convenience sampling. Women over 45 and minor girls under 10 were excluded. Women with a history of malignancy, hormonal contraception, pregnancy, ovarian cancer, UTIs, or antidepressants were excluded. Hospital ethical committee approval and informed written consent from the OPD Gynae clinic director were acquired. Women gave verbal consent before the questionnaire. All participants were told to answer questions as best they could. A patient information form was handed to all selected female participants to fill out their demographic information, like name, age, occupation, education, and marital status.

Data Collection: The Menstrual Health Symptom Questionnaire by the NHS was adopted to assess dysmenorrhea symptoms. A better knowledge of menstruation symptoms has led to the designation of certain symptoms as separate illnesses, including PMS and dysmenorrhea. It is a 24-item self-report questionnaire consisting of relevant data regarding menstrual cycle pain and symptoms [18]. The MHS Questionnaire was delivered in English, and it took about 15-30 minutes to complete. The pharmacy students at the University of Chenab, Gujrat, explained the purpose and objectives of the study. The study also assessed the impact of the MHS Questionnaire on the HRQoL of female participants in the survey [19]. Menstrual cycle-related mood symptoms, like symptoms of depression, anxiety, and agitation, were assessed through a Likert scale, and their impact on the work and social life of female participants was assessed. The questionnaire was slightly modified and divided into three sections. In Part 1, demographic information like name, age, social & marital status, and past medical history of each female participant was noted; moreover, 8 questions regarding timing, duration, and length of menstrual cycle were also asked by female participants. Primarily, the study divided PMS into two components. A major part is psychological distress during the menstrual cycle. The 2nd part of the questionnaire consisted of 29 questions regarding the impact of PMS on the mental health of females, under the main headings of anger/irritability/tension, tearfulness/increased sensitivity to rejection, depression/hopelessness, fatigue/lack of energy, insomnia/hypersomnia (needing more sleep), Difficulty in concentration, Weird behaviour towards others, Feeling overwhelmed or out of control, The symptoms include an

Table 1: Types of Menstrual Disorders.

Types of Menstrual Disorders	Description
Secondary amenorrhea	Absence of menstruation for the past 3 months [11]
Uniform menstruation	Cycle recurs every 28–32 days, lasting 5–7 days [9].
Oligomenorrhea	A menstrual cycle occurs approximately every 32 days or longer [12].
Poly-menorrhea	A menstrual cycle occurs approximately every 21 days or less [13].
Hypo-menorrhea	menstrual duration of less than 3 days with minimal blood loss (utilizing fewer than 1 pad) [14].
Hyper-menorrhea	Characterized by a menstrual duration of 7 days and a blood loss exceeding 80 mL, typically indicated by the use of 5 or more pads [15].
Dysmenorrhea	refers to painful menstruation, which can be classified as mild, moderate, or severe [16]
Premenstrual Syndrome (PMS)	It is characterized by the presence of at least three common symptoms that emerge 10 days before menstruation and resolve at the onset of menstruation. These symptoms include breast pain or tenderness, abdominal bloating or swelling, mood fluctuations, and depressive symptoms, among others [17].

eating disorder, physical manifestations, and panic episodes. The questions are related to symptoms of anxiety, depression, irritability, and mood swings that occur during Premenstrual Syndrome (PMS). Responses were graded as 0. Not at all, 1. Rarely, 2. Less than half the time, 3. About half the time, 4. More than half the time, 5. Always. 3rd part of the questionnaire was more concerned with physical pains in the body due to menstruation, such as bleeding, vomiting, abdominal pain, vaginal irritation, dryness, UTI infections, coordination and balance issues, and acne. 14 subqueries further elaborated on

all these symptoms. Responses were graded as Not at all (0), Rarely (1), Less than half the time (2), or about half the time (3).

Data Analysis: Data was analysed using GraphPad Prism 10. **Ethical Considerations:** The data were stored in the personal computer and were password protected; tangible copies were also kept in the office in the locked cabinet of the principal investigator. Participants were told their data would be kept private and used only for research.

Table 2: Responses of female participants regarding timing, duration, and length of menstrual cycle.

1	How old (years) were you when you had your first menstrual period?	≥12years	≤12years	Didn't remember	
		65(48.14%)	60(44.44%)	10(7.40%)	
2	During your first year of menstruation, did you have regular monthly periods? (By regular periods, we mean that your first day of menstruation was predictable within 10 days.)	Regular	Irregular		
		35(25.9%)	100(74.1)		
3	At what age did they become regular?	12 to 20yr	after 20 yr		
		40(29.6%)	65(48.14%)	30(22.22%)	
4	Hypermenorrhea and Hypomenorrhea				
5	How long is your average menstrual cycle? (Days)	≥3 days	1 to 7 days	≤10 days	
		3/100	88/100	9/00	
	Menstrual Status	No period during the last 3 months.	Menstrual cycle repeats about once every > 32 days	The menstrual cycle repeats about once every ≤ 21 days	
		18/100	52/100	16/100	
6	At what age did you first experience premenstrual symptoms? _	≥12	≤12	Didn't remember	
		50(37.03%)	60(44.44)	25(18.5%)	
7	Was there a time in your life when these symptoms were worse than others? If so, between what ages?	Before Marriage	Post Marriage	Always remained worse	A l w a y s remained Normal
		30(22.22%)	30(22.22%)	50(37.03%)	25(18.5%)
8	Do you get PMS symptoms consistently every month? If no, please indicate how frequently you get them:				
	About 75% of the time (approximately 9 months per year)	30(22.22%)			
	About 50% of the time (approximately 6 months per year)		45(33.33%)		
	About 25% of the time (approximately 3 months per year)			30(22.22%)	
	Only occasionally or rarely (1-2 months per year)				30(22.22%)
9	How long do your PMS symptoms last, on average (days)?				
	1	0			
	2-3	0			
	4-5	30(22.22%)			
	6-7	40(29.6%)			
	>8	65(48.14%)			
	Total Number of Participants: females	135			

Table 3(a): Symptoms of PMS among Participants.

	Symptoms of PMS	Not at all 0	Mild 1	Moderate 2	Severe 3
1	Anger/irritability/tension and Tearful/Increased sensitivity to rejection	<i>n</i> (%)			
	Do you have little interest or pleasure in doing things that you enjoyed before?	0	5(3.7)	30(22.2)	100(74.1)
	Do you feel guilty about yourself or feel that you are worthless?	0	10(7.41)	25(18.5)	100(74.1)
	Have you been less confident than before?	15(11.1)	20(14.8)	50(37.0)	50(37.0)
2	Depressed Mood/Hopelessness				
	Have you been feeling sad or depressed?	5(3.7)	20(14.8)	0	110(81.5)
3	Fatigue/lack of energy	0	0	0	0
	Have you been feeling tired or having little energy?	0	15(11.1)	0	120(88.8)
4	Insomnia/Hypersomnia (needing more sleep)				
	Do you have problems sleeping too little or sleeping too much?	0	0	10(7.41)	125(92.5)
5	Difficulty concentrating				
	Do you have trouble with attention and concentration while doing day-to-day activities in life?	15(11.1)	0	20(14.8)	100(74.1)
	Have you been anxious, restless, or have multiple worries and doubts in mind more than usual?	15(11.)	30(22.2)	20(14.8)	70(51.9)
6	Weird Behaviour towards others				
	Have you been having thoughts that you would be better off dead or of hurting yourself in some way or thoughts of suicide?	70(51.9)	30(22.2)	0	35(25.9)
	Do you hear voices not heard to others?	110(81.5)	15(11.1)	0	10(7.41)
	Have you become more suspicious to people than usual or feel insecure for yourself?	100(74.1)		0	35(25.9)
	Recurrent, unwanted, intrusive ideas, images, or impulses that seem silly or horrible	50	25(18.5)	25(18.5)	35(25.9)
	Feelings of elation; having periods of increased activity; or needing less sleep.	100(74.1)	10(7.41)	20(14.8)	5(3.70)
	Feeling the need to check things over and over, or repeat actions over and over, to prevent bad things from happening.	90(66.6)	25(18.5)	0	20(14.8)
7	Feeling overwhelmed or out of control				
	Do you feel happier or angrier than your usual self?	90(66.6)	10(7.41)	0	35(25.9)
	Do you have to wash your hands repeatedly, check something repeatedly or have a repeated thought in mind?	100(74.1)	0	0	35(25.9)
	Do you use alcohol or other substance that is causing problem in your daily life	1(0.7)	0	0	0
8	Eating Disorder				
	Do you have poor appetite or have problems overeating?	80(59.3)	5(3.7)	0	50(37.0)
9	Physical symptoms:				
	Breast tenderness,	5(3.7)	30(22.2)	0	100(74.1)
	Headaches,	5(3.7)	30(22.2)	0	100(74.1)
	Joint/muscle pain,	5(3.7)	30(22.2)	0	100(74.1)
	Bloating,	5(3.7)	30(22.2)	0	100(74.1)
	Weight gain	5(3.7)	30(22.2)	0	100(74.1)
10	Panic attacks (Physical symptoms last for 10 minutes)				
	Rapid heartbeat	100(74.1)	0	0	35(25.9)
	Feeling faint	100(74.1)	0	0	35(25.9)
	Lightheaded	100(74.1)	0	0	35(25.9)
	Trembling	85(62.9)	0	0	50(37.0)
	Chest tightness	80(59.3)	0	0	55(40.7)
	Shortness of breath	50(37.0)	35(25.9)	0	50(37.0)
	Mean±Std.Dev	46.03±42.9	14±12.7	7.4±11.4	61.89±36.8

Results

Current Menstrual Status: Among 135, 100 (74.1%) females had irregular periods, and 35 (25.9%) had regular periods. **Secondary amenorrhea:** Among those 100 (74.1%), 11 females have a 33–35-day interval (≥ one month), and 7 (5.2) have an interval (≥ 2 or 3 months) between two periods, which may indicate secondary amenorrhea (**Table 2**).

Oligomenorrhea: Data collection showed that 52 women were suffering from oligomenorrhea. 33 women (63.2%) have a 24- to 26-day interval, and 19 women (36.5%) have less than a 24-day interval. **Poly-menorrhea:** 16 out of 100 women were suffering from poly-menorrhea. **Hyper-menorrhea and Hypomenorrhea:** Among 100 women, only 6 experienced 9 days of bleeding, indicating hyper-menorrhea, and 3 women experienced 2 days of bleeding, indicating hypo-menorrhea. Five women (3.703%) reported experiencing mild, moderate, or severe pain during menstruation due to dysmenorrhea. Premenstrual symptoms are typically associated with dysmenorrhea; however, in this study, the majority of women (95%) reported

experiencing PMS even when they did not have dysmenorrhea, while only 5% reported no such symptoms. Women were also asked about PMS symptoms in parts 2 and 3 of the questionnaire. Their responses about different PMS symptoms were graded as 'Not at all,' 'Mild,' 'Moderate,' and 'Severe.' Most responses fell into grade 5, indicating high severity of PMS. Women aged 30-45 years were more prone to insomnia. A total of 125 participants (92.5%) reported experiencing restlessness, irritability, and difficulty concentrating, while 100 participants (74.1%) reported these symptoms. Additionally, women aged 30-45 reported high levels of breast tenderness, joint pain, and weight gain, all at grade 5 severity. One-way ANOVA and Tukey's multiple comparisons test were applied, revealing statistically significant results with a p-value < 0.0001. **Table 3(a)**. A statistically significant comparison was identified between responses, not at all (0) vs moderate (2), mild (1) vs severe (3), and moderate (2) vs severe (3) (**Table 3(b)**).

The third part of the questionnaire focused on physical symptoms in women. participants post- or during menstruation

Table 3(b): Statistically significant Comparison between different grades.

Tukey's multiple comparisons test	95.00% CI of diff.	significance	P Value
Not at all (0) vs. Mild (1)	8.2 to 59	**	0.0062
Not at all (0) vs. Moderate (2)	16 to 66	***	0.0007
Not at all (0) vs. Severe (3)	-53 to 25	ns	0.7656
Mild (1) vs. Moderate (2)	-2.1 to 16	ns	0.1787
Mild (1) vs. Severe (3)	-66 to -29	****	<0.0001
Moderate (2) vs. Severe (3)	-74 to -35	****	<0.0001

Table 4(a): Assessment of the extent of discomfort experienced by participants about the physical effects of menstruation on the body.

	Not at all	Rarely	Less than half the time	About half the time	More than half the time	Always
	0	1	2	3	4	5
Bleeding or Period Symptoms. Over the past 3 months, have you noticed any of the following symptoms?	<i>n (%)</i>					
Bleeding interferes with your physical & emotional wellbeing.	10(7.4)	20(14.8)	20(14.8)	5(3.7)	50(37.03)	30(22.22)
Clots. e.g. clumps of blood on wiping, or on pads or in the toilet?	2(1.48)	3(2.2)	2(1.48)	3(2.2)	100(74.1)	25(18.5)
Flooding. Bleeding that flows quickly and runs down your legs or hits the floor	5(3.7)	5(3.7)	2(1.48)	3(2.2)	90(66.6)	30(22.22)
Do you have to change your clothes or bedding After stand up?	50(37.03)	30(22.22)	50(37.03)	0	5(3.7)	0
Do you have Vomiting?						
nausea (feeling sick) vomiting (being sick) during your period or mid-way through your cycle?	5(3.7)	10(7.4)	10(7.4)	10(7.4)	90(66.6)	10(7.4)
Do you have Pain?						
Cramping pain, abdominal pain, pelvic pain, or pain in the back or down the legs	0	0	0	0	20(14.8)	115(85.2)
Vulva or vaginal symptoms.						

Over the last 6 months, have you experienced any irritation, dryness, soreness, pressure feeling or discharge in the vulva	2(1.48)	3(2.2)	0	0	0	130(96.2)
Do you have headaches? Headaches						
Are they worse at any time during your cycle?	5(3.7)	0	0	0	95(70.3)	35(25.9)
Do you have migraines with aura-like tingling, visual changes, or nerve symptoms, often before the headache.	5(3.7)	10	0	0	100(74.1)	20(14.8)
Painful intercourse or bleeding	5(3.7)	20(14.8)	2(1.48)	3(2.2)	90(66.6)	15(11.1)
Gastrointestinal Symptoms. Over the last three months, have you experienced any of the following?						
Constipation, bloating or gas	5(3.7)	10	2(1.48)	3(2.2)	75(55.5)	40(29.6)
Pain in the pelvic area or lower back	5(3.7)	5(3.7)	2(1.48)	3(2.2)	80(59.3)	40(29.6)
Rectal bleeding while menstruating	1(0.74)	1(0.74)	2(1.48)	3(2.2)	80(59.3)	40(29.6)
Extreme pain during a bowel movement	0	0	0	0	115(85.2)	20(14.8)
Abdominal pain	0	3(2.2)	2(1.48)	3(2.2)	70(51.9)	57(42.2)
Skin and body hair. Have you experienced changes to your skin? For example:						
Acne	0	2(1.48)	2(1.48)	1(0.74)	50(37.03)	80(59.3)
Changes to having dry or oily skin.	0	2(1.48)	2(1.48)	3(2.2)	53(39.3)	75(55.5)
Increased body or facial hair	0	2(1.48)	5(3.7)	3(2.2)	60(44.4)	65(48.14)
Joint, coordination, and balance issues. Have you noticed any of the following?						
Feeling clumsy	20(14.8)	10(7.4)	0	0	5(3.7)	100(74.1)
Off balance	10(7.4)	10(7.4)	0	0	25(18.5)	90(66.6)
Increased injuries or falls.	20(14.8)	2(1.48)	0	0	40(29.6)	50(37.03)
UTIs						
Do you have any changes to how to pass urine? Is this more often than usual? Any pain or burning symptoms? Do you experience any difficulty getting started when going to the toilet or difficulty controlling your urine?	20(14.8)	10(7.4)	10(7.4)	5(3.7)	40(29.6)	50(37.03)
Mean &SD Dev	7.7±11.2	7.182±7.56	5.13±10.83	2.27±2.3	61.0±33.78	50.5±33.9

monthly, with 130 (96.2%) suffering vaginal irritation, dryness, or about half of the time, discharge **Table 4(a)**. Significant P-value < 0.0001 comparisons between different responses regarding the extent of discomfort experienced by participants in **Table 4(b)**.

Impact of menstrual abnormalities on HRQoL in women of reproductive age via comparison of PMS, extent of bleeding, and UTIs

Responses of female participants were compared based on different age groups (years): 20-29, 30-40, and 40-45, and correlated with social and work-related activities, use of painkillers, hormonal products in case of menopausal symptoms, and contraceptive product usage (**Table 5**).

Discussion

The current study was a cross-sectional survey conducted in the

DHQ hospital with 135 participants. Michael et al 2020 also reported in their study that in Pakistan, between 6.7% and 48% of women experience heavy monthly bleeding, which affects their physical, social, mental, and financial health [20]. In his study, Sanigorska reported that, female participants were suffering mostly from heavy bleeding (59.25%), which interferes with their physical and emotional well-being [21]. Howard et al. (2025 identified a connection between menstrual diseases and their negative effects on women's mental health and overall quality of life [22]. Hopkins et al. (2025 also focused on secondary amenorrhea in their study [23]. Itani et al. 2022 have found that mental health and dysmenorrhea can disturb mental health and the quality of life among women [24]. Quraishi et al. (2015) and John et al (2025 also claimed that stress affects women's menstrual cycles and that these problems are linked to mental health disorders [25,26]. Tawakoli et al. (2025 confirmed in his study that 100 (74.1%) participants suffered se-

Table 4(b): Comparison of the extent of discomfort experienced by participants about the physical effects of menstruation on the body.

Tukey's multiple comparisons test	95.00% CI of diff.	Summary	P Value
Not at all vs. More than half the time	-81 to -26	****	<0.0001
Not at all vs. Always	-69 to -17	***	0.0006
Rarely vs. More than half the time	-79 to -29	****	<0.0001
Rarely vs. Always	-69 to -18	***	0.0004
Less than half the time vs. More than half the time	-82 to -30	****	<0.0001
Less than half the time vs. Always	-73 to -18	***	0.0004
About half the time vs. More than half the time	-81 to -36	****	<0.0001
About half the time vs. Always	-72 to -24	****	<0.0001

Table 5: Comparison of PMS, extent of Bleeding, and UTIs between women aged 20-29,30-39 and 40-45years and their impact on social and work activities.

Age-groups				ANOVA Summary			
Šidák's multiple comparisons test	95.00% CI of diff.	Summary	P value	F	P value	P-value summary	R squared
20-29 years							
Symptoms of PMS vs. the ability to work,	0.00074 to 0.34	*	0.0484	782	<0.0001	****	0.95
Symptoms of PMS vs. affect my relationships	-1.0 to -0.66	****	<0.0001				
Symptoms of PMS vs. affect my enjoyment of life	1.0 to 1.3	****	<0.0001				
Bleeding vs. the ability to work	0.83 to 1.2	****	<0.0001				
Bleeding vs. affects my enjoyment of life	1.8 to 2.2	****	<0.0001				
Symptoms of PMS vs. Painkillers	-3.0 to -2.7	****	<0.0001				
UTIs vs. Painkillers	-3.0 to -2.6	****	<0.0001				
30-39 years							
Symptoms of PMS vs. the ability to work,	-0.87 to -0.63	****	<0.0001	5091	<0.0001	****	0.98
Bleeding vs. the ability to work	0.0027 to 0.24	*	0.0413				
UTIs vs. the ability to work	0.074 to 0.31	****	<0.0001				
Symptoms of PMS vs. affect my enjoyment of life	-1.1 to -0.82	****	<0.0001				
Bleeding vs. Painkillers	1.8 to 2.0	****	<0.0001				
Bleeding vs. Hormonal Products	4.8 to 5.0	****	<0.0001				
Symptoms of PMS vs. contraceptives	3.9 to 4.2	****	<0.0001				
UTIs vs. Painkillers	1.9 to 2.1	****	<0.0001				
40-45 years							
Symptoms of PMS vs. Hormonal Products	0.71 to 3.4	***	0.0004	14	<0.0001	****	0.98
Symptoms of PMS vs. Contraceptives	0.71 to 3.4	***	0.0004				

verely from anger/irritability/tension and tearfulness/increased sensitivity to rejection, while 30 (22.2%) suffered mildly due to PMS [27]. Ezadi et al., 2025 found a strong correlation between PMS and insomnia (125 (92.5%)) and fatigue/lack of energy (120 (88.8%)) in our study, which indicates a strong linkage of mental health problems and low quality of life in women who have problems with their periods (p<0.01). 17.

These results are in line with what other studies have found like Mighani et al, 2025 reported that most of the women who complained about PMS had a strong link between their menstrual disorders and their quality of life [28,29]. Anto-Ocrah et al. (2025 reported that dysmenorrhea can lead to severe bleeding, making life challenging for women [30] Du Plessis et al. 2025 his study that 100 (74.1%) women aged 20-40 years suf-

ferred from clotting most of the time, and 80 (59.2%) suffered from heavy bleeding [31].

Conclusion

The focus of the current study was on menstrual irregularities that may exacerbate physical and mental health issues in women of childbearing age, particularly among middle-aged women, as the majority of participant women in their 30s and 40s exhibited mental health issues, including restlessness, behavioral changes, and insomnia [32]. Some individuals may experience eating disorders and physical health issues, including weight gain and joint discoordination. Hambleton et al, 2022 found in his results that participants experiencing menstrual issues frequently report poorer mental health and higher levels of depression, anxiety, and stress [33]. Menstrual irregularities and disorders can hinder interpersonal connections and relationship development due to associated pain, discomfort, and mental strain, which impact the ability of women, hindering their ability to carry out routine tasks and care for their families.

Recommendations:

Menstruation can hinder daily activities and social interactions. Engaging in positive communication with family, friends, and a spouse may reduce anxiety and depression in women.

Socioeconomic factors can affect access to healthcare and resources about menstrual health. Promoting awareness of menstrual health and hygiene is crucial for facilitating early detection and treatment.

Enhanced accessibility to healthcare is essential for the effective management of menstrual disorders, requiring that women have access to suitable reproductive healthcare services in the region.

Limitations: A large-scale study should be designed with all applicable research tools to find solutions to improve mental health issues among women related to menstrual irregularities. Acknowledgement: We extend our sincere gratitude to the house officer and the duty-in-charge professor of gynaecologists at Aziz Bhatti Hospital, Gujrat, for their invaluable assistance in arranging resources for data collection and facilitating our search for participants experiencing menstrual irregularities.

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Conflict of Interest: Ms Sofia Habib , Ms Shumaila Bashir and Dr AQNA MALIK co-authored the research article. This manuscript has not been published elsewhere in part or entirety and is not under consideration by another journal. The appropriate institutional review board approved the study design, IRB No. 0041UCH. We have read and understood the policies of your journal. There are no conflicts of interest to declare.

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