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ORIGINAL ARTICLE

Women's experiences of fighting migraine during the menstrual cycle: A qualitative study

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ABSTRACT

Objective: To determine pain characteristics, pain intensity, and symptom changes during migraine attacks in premenstrual and menstrual women.

Material and Methods: This qualitative phenomenological study was conducted from April 1 to April 30, 2024, involving 21 women aged between 18 and 52 years who had been diagnosed with migraine. The participants presented to the neurology outpatient clinic of a training and research hospital with complaints of pain during their menstrual periods. Data were collected through individual in-depth interviews, which were audio recorded.

Results: A total of 21 female patients with migraine participated in the study. The mean age of the participants was 30.90±7.1 years, the mean age at migraine onset was 19.19±3.49 years, and the mean duration of migraine pain was 11.95±7.16 hours. Migraine pain was described as unilateral or bilateral in 12 cases (57.14%). Pain frequency was 1–4 times per month in 12 participants (57.14%), pain duration was 1–4 hours in 9 participants (42.86%), 12 participants (57.14%) took medication within 30 minutes to 4 hours after pain onset, and 18 participants (85.71%) reported difficulty concentrating due to pain. Five main themes were identified: "characteristics of migraine pain," "symptoms initiating a migraine attack," "physical findings accompanying migraine," "psychosocial findings accompanying migraine," and "coping with migraine."

Conclusion: The findings emphasize the need for better management of perimenstrual migraine attacks in all menstruating women. Patients' knowledge about the disease and its characteristics should be improved, and they should be informed that migraine is an incurable but controllable chronic disease and that its attacks can be prevented.

Keywords: Menstrual cycle, migraine, qualitative study.

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INTRODUCTION

Migraine is a common and disabling neurological disorder that affects approximately 14% of the global population, with a significantly higher prevalence in women, particularly during their reproductive years. It typically occurs in younger individuals, with a higher prevalence in women.[1,2] Hormonal fluctuations associated with the menstrual cycle have been consistently implicated as key triggers for migraine attacks. The International Classification of Headache Disorders (ICHD-3) categorizes menstrual migraine (MM) into two types: menstruation-related migraine (MRM) and pure menstrual migraine (PMM). Women diagnosed with MM often report that these menstrual attacks are more painful, longer-lasting, more disabling, and less responsive to treatment.[3]

The "estrogen deprivation hypothesis" suggests that fluctuations in estrogen levels associated with female fertility contribute to increased susceptibility to migraine in women.[4] Specifically, estrogen levels experience a sudden decrease in the days leading up to menstruation. Consequently, the highest susceptibility to migraine occurs during the premenstrual period. The years surrounding menopause can heighten the risk of severe migraine in women, largely due to significant fluctuations in estrogen levels during this period.[5,6] The influence of hormonal changes on migraine is substantial enough that menstrual migraine is classified as a distinct headache disorder in the current international classification.[7]

Despite advancements in understanding the neurobiological mechanisms, the precise pathophysiology underlying menstrual migraine remains elusive, and effective management strategies are limited. While epidemiological studies have provided valuable insights into the prevalence and clinical features of menstrual migraine, qualitative data exploring women's lived experiences during these attacks are scarce. Most existing studies focus on physiological mechanisms or treatment modalities, often overlooking the personal, emotional, and functional impact of migraine attacks coinciding with menstruation.

Understanding how women perceive and cope with menstrual migraine episodes is crucial for developing comprehensive management approaches that extend beyond pharmacological interventions. Exploring these experiences through qualitative inquiry can provide nuanced insights into symptom variability, psychosocial burden, and coping strategies employed by affected women.

The present study aims to explore women's experiences of pain intensity, symptom changes, and the impact on daily life during migraine attacks in the premenstrual and menstrual periods using a qualitative phenomenological approach. This exploration is essential to address the gap in the literature regarding the subjective experience of menstrual migraine and to inform the development of patient-centered care strategies.

MATERIAL AND METHODS

This qualitative phenomenological study was conducted from April 1 to April 30, 2024, involving 21 women aged 18–52 years who had been diagnosed with migraine. The participants presented to the neurology outpatient clinic of a training and research hospital with complaints of pain during their menstrual periods. Data were collected through individual in-depth interviews, which were audio recorded.

Sampling

A purposive sampling method was used among individuals who met the research criteria, and maximum variation sampling was applied to recruit participants. In purposive sampling, the aim is to select individuals who can provide the most appropriate responses relevant to the aims of the research.[8] Before starting the study, women with migraine who met the inclusion criteria were identified. A total of 38 female patients with migraine who were eligible according to the research criteria were reached. A suitable outpatient clinic room was arranged to conduct one-to-one in-depth interviews. The study was completed with 21 female patients with migraine when data saturation was achieved (i.e., repetition of the same or similar data).

Inclusion Criteria

Diagnosis of migraine; being menstruating; being aged 18–52 years; having experienced migraine attacks in the last three premenstrual cycles; being able to read and write; having no communication barrier; and volunteering to participate in the study.

The researcher collected data by conducting individual in-depth interviews with women with migraine. The interviews were conducted in a private room with the participant alone, seated at the same level as the interviewer, with active listening. A semi-structured question form was used, and the interviews were audio recorded.

Participants provided written consent for involvement in the study. Audio recordings were stored on the computer hard disk. Each participant was interviewed once for approximately 30–40 minutes.

Before initiating the study, the researchers conducted a literature review and developed an information form consisting of seven questions, open-ended questions related to the topic, and 14 questions about migraine and the menstrual period. Questions about migraine and the menstrual period were asked after the open-ended questions. The open-ended questions were structured in a semi-structured format to create a general profile of the participants and identify characteristics that may be useful for future research. The interview guide covered four topics relevant to the study. The questions were as follows: (1) Can you describe the migraine pain you experience during the menstrual period? (2) What do you experience during migraine pain during the menstrual period? (3) How do you feel during migraine pain during the menstrual period? (4) What do you do during migraine pain during the menstrual period?

"The data obtained in all interviews and the findings from the analyses were reported, enabling in-depth exploration of participants' experiences and perspectives. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study methods were reported in accordance with the Consolidated Criteria for Reporting Qualitative Research (COREQ) established by Tong and colleagues in 2007.[9] The final number of participants interviewed was determined based on achieving data saturation. The research received ethical approval from the Research Ethics Committee of Maltepe University in Istanbul, Türkiye (decision number: 2024/03-01).

Table 1: Demographic characteristics of the participants (n=21)

Characteristic	n	%	Mean±SD
Age (years)	–	–	30.90±7.1
Marital status			
Single	15	71.4	
Married	6	28.6	
Occupation			
Housewife	8	38.1	
Healthcare Personnel	6	28.6	
Other (banker, teacher, academic)	7	33.3	
Working hours			
Not working	1	4.8	
5–8 hours/day	14	66.7	
9+ hours/day	6	28.6	
Mode of work			
Day shift	16	76.2	
Shift work	5	23.8	
Age at first menstruation (years)	–	–	13.29±0.78

This table summarizes the demographic profiles of the participants, including age, marital status, occupation, working hours, work shifts, and age at first menstruation. Data are presented as frequencies (n), percentages (%), and mean±standard deviation (SD) where appropriate

Statistical Analysis

The one-to-one interviews were read multiple times and coded by two research analysts using content analysis and grounded theory methods appropriate for concept elicitation for measurement development. The coded content was analyzed and exported to Excel to condense the data within each code by measuring and summarizing, identifying themes in the data and documenting instances of non-confirmation. All interviews were transcribed verbatim, and the transcripts were analyzed thematically using NVivo, a software designed for qualitative data analysis. The analysis followed the steps recommended by Braun and Clarke. Thematic analysis was selected due to its flexibility in identifying patterns of meaning (themes) within a dataset to address a research question and to "give voice" to lived experiences. Accordingly, our approach was primarily inductive, as we coded data based on participants' experiences to explore how migraine pain during the menstrual period affected them. A small degree of deductive assumption was used to elicit meaning across all aspects of the individual. Therefore, an inductive and deductive phenomenological approach was used.

For quality control, the first author employed a two-stage review process in collaboration with co-authors with expertise in various fields. Initially, themes were organized into categories based on the data collection questions (initial codes). As familiarity with the data increased, the themes were reviewed against the coded data and reorganized into new themes (code sets) that articulated the narrative in alignment with the research question. Ultimately, the Critical Appraisal Skills Programme (CASP) checklist for qualitative studies was used as a standardized tool to critically evaluate the process undertaken.

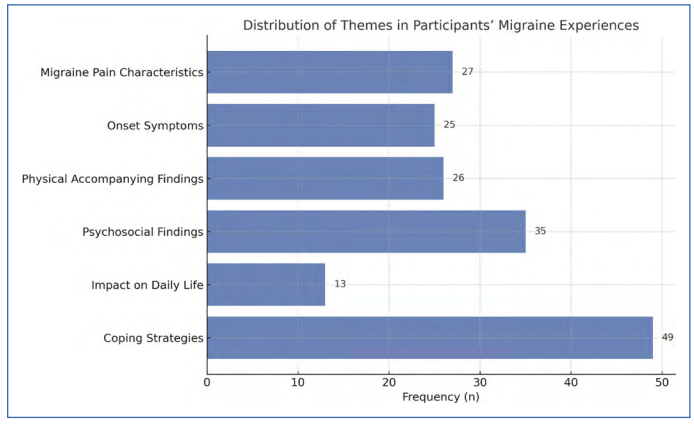

Figure 1: Distribution of themes in participants' migraine experiences.

RESULTS

In this study, 21 female patients with migraine participated. The demographic characteristics of the participants are presented in Table 1. The mean age of the participants was 30.90±7.1 years. The majority were single (71.4%) and housewives (38.1%). The mean age at menarche was 13.29±0.78 years.

Table 2 summarizes the migraine characteristics. Pain was predominantly unilateral or alternating between sides (57.1%), with attacks occurring 1–4 times per month in more than half of the participants (57.1%). The majority (66.7%) described their most recent migraine attack as mild. Notably, 85.7% reported difficulty concentrating at home or work during migraine attacks. A family history of migraine was present in 42.9% of participants.

The distribution of themes derived from the qualitative data is presented in Figure 1.

Figure 1 illustrates the frequency distribution of the six main themes derived from the qualitative analysis of participants' experiences with migraine. Coping Strategies were the most frequently mentioned theme (n=49), followed by Psychosocial Findings (n=35), Migraine Pain Characteristics (n=27), Physical Accompanying Findings (n=26), Onset Symptoms (n=25), and Impact on Daily Life (n=13). The horizontal bar chart visually demonstrates the prominence of coping mechanisms and psychosocial impacts among the participants.

Detailed themes, sub-themes, frequencies, and sample expressions are summarized in Table 3.

In the qualitative analysis, six main themes and associated sub-themes were identified regarding participants' experiences with migraine. The most frequently mentioned theme was Coping Strategies (n=49), in which participants described various methods, such as taking medication, resting in a dark and quiet room, applying cold compresses, and increasing water intake, to alleviate migraine symptoms.

The Psychosocial Findings theme (n=35) reflected the emotional and social impacts of migraine, including irritability, tension, despair, social withdrawal, and perceptual disturbances. Participants

Table 2: Clinical characteristics of migraine in participants (n=21)

Variable	n	%
Pain side		
Unilateral	5	23.8
Bilateral	4	19.0
Alternating (unilateral/bilateral)	12	57.1
Frequency of pain		
<1 per month	6	28.6
1–4 times per month	12	57.1
Several times a week/day	3	14.3
Duration of pain		
1–3 days	3	14.3
1–4 hours	9	42.9
5–8 hours	4	19.0
9–24 hours	5	23.8
Time to take medication after pain onset		
Within 30 min	8	38.1
30 min – 4 hours	12	57.1
4–24 hours	1	4.8
Pain severity (last attack)		
Mild	14	66.7
Moderate	7	33.3
Impact on home/work life		
Difficulty concentrating	18	85.7
No impact	2	9.5
Cancelling activities	1	4.8
Family history of migraine		
First-degree relative	3	14.3
First/second-degree relative	6	28.6
None	9	42.9
Control visit frequency		
More than 1 year	15	71.4
6 months – 1 year	4	19.0
1–6 months	2	9.5
Previous pain treatment methods		
Medication only	15	71.4
Medication + alternative (physio, massage)	6	28.6

This table outlines the migraine-related clinical features reported by participants, including the laterality of pain, frequency and duration of attacks, timing of medication intake, severity of pain, impact on daily life activities, family history of migraine, frequency of medical follow-ups, and previous pain management strategies. Results are expressed as frequencies (n) and percentages (%)

expressed feelings of helplessness, isolation, and emotional vulnerability during migraine attacks.

Migraine Pain Characteristics (n=27) included descriptions of unilateral or bilateral pain, continuous pain sensations, and increased pain severity during menstruation. Participants frequently reported throbbing, intense headaches localized to one side of the head, which sometimes persisted throughout the day.

The Onset Symptoms theme (n=25) highlighted hypersensitivity to light, sound, and odors as prominent warning signs of an impending migraine attack. These sensitivities often served as early indicators, prompting participants to take preventive actions.

Under the Physical Accompanying Findings theme (n=26), participants described symptoms such as nausea, vomiting, visual disturbances (e.g., blurred vision, black spots), sleep disorders, persistent fatigue, and loss of appetite, which exacerbated the burden of migraine attacks.

Finally, the Impact on Daily Life theme (n=13) captured how migraine affected work productivity, social life, emotional well-being, and the ability to perform daily activities. Many participants reported canceling plans, struggling with concentration, and experiencing a significant reduction in functional capacity during migraine episodes.

These findings reveal the multifaceted nature of migraine experiences, encompassing not only physical symptoms but also significant psychosocial and functional impacts on individuals' daily lives (Table 3).

DISCUSSION

Our interviews showed that migraine pain is prominent during the premenstrual and menstrual periods, that women try to cope with migraine pain in their own ways, and that their daily life activities are affected during this period. First, our findings showed that the age of migraine onset was low and the duration was long. Participants mostly described their pain as unilateral, prolonged, and severe, and reported that they experienced intense pain especially in the premenstrual period, even considering migraine pain as a warning that the menstrual period would begin. Menstrual migraine is a significant condition characterized by recurrent migraine attacks during the menstrual period. It is defined as migraine attacks occurring within a 5-day window, beginning 2 days prior to the onset of menstruation and continuing until the third day of bleeding. Studies indicate that migraine attacks occurring near menstruation tend to be more intense, persist for a longer duration, and are less responsive to treatment compared with those occurring at other times.[7,10] In their systematic review in 2021, Ornello et al.[11] showed that menstrual migraine affects 3% of young women, with a peak of 22% in women aged 30–34 years. In a case-control study involving 12,618 Danish individuals with migraine, a significant association was found between menstrual migraine and more severe migraine attacks.[12] In a migraine diary study conducted by van Casteren et al.[13] in 2021 with 500 participants, perimenstrual migraine attacks were shown to last longer and have a higher risk of recurrence compared with non-perimenstrual attacks. In a meta-analysis conducted by Wang et al.[14] in 2023 comparing the characteristics of menstrual and non-menstrual migraine attacks, menstrual migraine

Table 3: Main themes and sub-themes derived from qualitative analysis

Themes	Sub-themes (summary)	n	Sample expressions
Migraine pain characteristics	Unilateral/bilateral pain, continuous pain, pain severity related to menstruation	27	'Severe one-sided headache, more intense during menstruation'
Onset symptoms	Light, sound, odor sensitivity	25	Light and sound sensitivity before attacks
Physical accompanying findings	Nausea, vomiting, visual impairment, sleep disorder, fatigue	26	Nausea and blurred vision, severe fatigue
Psychosocial findings	Irritability, tension, despair, social isolation, perception disorder	35	Feelings of helplessness, avoiding communication
Impact on daily life	Loss of workforce, social life disruption, unhappiness, inability to perform tasks	13	Cancelling plans due to migraine pain
Coping strategies	Medication use, sleep, dark & quiet room, cold application, water intake	49	Taking medication and resting in a dark room

This table presents the main themes, sub-themes, frequencies (n), and sample expressions derived from the qualitative analysis of participants' experiences with migraine. Themes were categorized under six main headings: Migraine Pain Characteristics, Onset Symptoms, Physical Accompanying Findings, Psychosocial Findings, Impact on Daily Life, and Coping Strategies. Sub-themes reflect specific aspects of each theme, while frequencies indicate the number of participants who expressed opinions within that category. Sample expressions illustrate representative statements summarizing participants' experiences.

patients were shown to have more migraine attacks per month than non-menstrual migraine patients, a higher rate of migraine in family history, greater migraine aggravation with physical activity, a younger age at migraine onset, and a higher risk of concomitant symptoms. However, the quality of evidence was reported as low according to GRADE evaluation. Although our findings are consistent with the literature, further studies are needed to strengthen the level of evidence on migraine, especially in the perimenstrual period.

Our second finding showed that participants had prodromal symptoms such as sensitivity to light, sound, and smell at the onset of migraine. The International Headache Society defines migraine without aura as recurrent headache attacks lasting 4–72 hours that are unilateral, pulsating, and range from mild to severe. These attacks are aggravated by routine physical activity and are often accompanied by nausea, photophobia, and phonophobia. Menstrual-associated migraine is characterized as a type of migraine without aura occurring during the perimenstrual period.[15] van Casteren et al.[13] compared perimenstrual migraine attacks with those occurring at other times in the cycle and found that premenstrual migraine attacks were more sensitive to light and sound.

Our third finding showed that migraine was accompanied by symptoms such as nausea, vomiting, insomnia, visual disturbance, and fatigue. In the literature, there are few studies focusing specifically on the physical symptoms experienced by women with migraine during the premenstrual period. However, studies examining symptoms experienced during the premenstrual period report neurological and vascular conditions, including headache, dizziness, numbness, increased sensitivity of the arms and/or legs, palpitations, and gastrointestinal and ocular symptoms, all of which may disrupt daily life and functioning.[16] In a large survey of 238,114 Flo mobile application users from 140 countries aged 18–55 years, the most common premenstrual symptoms were food cravings (85.28%), mood swings or anxiety (64.18%), and fatigue (57.3%). Symptoms such as absent-mindedness, low libido, sleep changes, gastrointestinal complaints, weight gain, headache, sweating or hot flushes, fatigue, hair changes, rashes, and swelling were shown to increase with age.[17,18] In a study conducted by Böttcher et al.,[18] which evaluated the relationship between pubertal status, menstrual cycle, migraine attacks, and accompanying symptoms in girls with migraine, a significant difference in migraine frequency was observed between pre- and post-pubertal girls, whereas no significant difference was found in headache characteristics. In light of these data, premenstrual syndrome appeared to be experienced more intensely in women diagnosed with migraine in our study, and visual impairment, which is rarely reported in the literature, was more common in our cohort.

Our fourth finding included irritability, tension, unhappiness, helplessness, communication disorders, perceptual disturbances, loneliness, loss of workforce participation, deterioration in social life, self-harm, feelings of violation, and impairment in daily life activities. Premenstrual syndrome (PMS) is a process in which mood changes include symptoms affecting the psycho-emotional, physical, and behavioral responses of women during menstruation. In the literature, psycho-emotional symptoms are reported as anger, irritability, and depression, whereas behavioral symptoms include social withdrawal, reduced social activity, absenteeism, poor work or academic performance, and increased libido.[19] In a study conducted by Fernández-Martínez et al.[20] in 2021 involving 269 female university students, nearly half of the participants reported experiencing menstrual migraine pain. A higher proportion of menstrual migraine was observed among women with dysmenorrhea, irritability, dizziness, oral contraceptive use, and daily cola consumption. Wang conducted a study in which a headache diary was kept by 75 women with menstrual migraine and 54 healthy women who underwent functional magnetic resonance imaging to investigate the pathophysiology of migraine pain, while also assessing migraine frequency, pain intensity,

and anxiety and depression levels using standardized scales. Structural and functional abnormalities in the right anterior cingulate cortex identified by magnetic resonance imaging were shown to be significantly associated with pain intensity and pain-related emotional disturbances in patients with menstrual migraine.[21] The Global Burden of Disease study conducted by GBD 2015 Disease and Injury Incidence and Prevalence Collaborators.[22] in 2016 classified migraine as the fourth leading cause of years lived with disability (YLD) among women. In another study using the Migraine Disability Assessment (MIDAS) questionnaire, women were 1.34 times more likely than men to report fourth-degree migraine-related disability within the previous 3 months. Women were also more likely to report inability to perform housework, participate in social or family activities, and reduce work or school activity by at least 50% for at least 1 day due to migraine. It was further reported that most women with migraine require an average of 2 hours of bed rest and are unable to fully resume daily activities for 3–6 days after a migraine attack, even if they continue work or school during this period.[23] In our study, in addition to findings consistent with the literature, participants' reports of self-harm and feelings of violation indicate that menstrual migraine should also be evaluated from this broader psychosocial perspective.

Our fifth finding showed that participants used various coping methods for perimenstrual and menstrual migraine, including taking medication, sleeping, staying in a dark and quiet room, adjusting ambient temperature, cold application, massage, drinking plenty of water, and postponing all plans. The literature indicates that the primary pharmacological approach to menstrual migraine involves acute therapies aimed at rapid relief of headache attacks and associated symptoms, with triptans being particularly prominent. Medical treatment strategies include daily use of a long-acting nonsteroidal anti-inflammatory drug or triptan for 5 days, starting 2 days before the expected onset of menstruation.[24,25] To avoid being directive, specific medications used by participants were not queried in this study. Non-pharmacological management strategies described in the literature include behavioral therapy, biofeedback, education, relaxation, mindfulness, and weight loss, while sleep hygiene, regular exercise, balanced nutrition without skipping meals, and stress management are emphasized as healthy lifestyle behaviors.[11] Behavioral interventions have been shown to significantly reduce headache frequency and positively influence patient-reported outcomes such as disability, quality of life, depression, anxiety, self-efficacy, and medication use.[26] Bagherzadi et al.[27] demonstrated that heat and cold therapy were effective in reducing nitroglycerin-induced migraine pain in a randomized controlled study involving 75 cardiac patients in 2021. In a study conducted in South India with 172 nursing students who reported headaches within the previous year, sleep, head massage, and taking breaks from work were identified as relaxing strategies.[28] Consistent with the literature, women in our study reported using similar coping methods while managing migraine.

CONCLUSIONS

These findings emphasize the need for improved management of perimenstrual migraine attacks in all menstruating women. Patients' knowledge about the disease and its characteristics should be enhanced, and they should be informed that migraine is an incurable but controllable chronic condition and that its attacks can be prevented.

Statement

Ethics Committee Approval: The Maltepe University Clinical Research Ethics Committee granted approval for this study (date: 01.02.2024, number: 2024/03-01).

Informed Consent: Participants provided written consent for involvement in the study.

Conflict of Interest: The authors declare that there is no conflict of interest.

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REFERENCES

1. Burch RC, Buse DC, Lipton RB. Migraine: epidemiology, burden, and comorbidity. Neurol Clin 2019;37:631–49.
2. Steiner TJ, Stovner LJ, Jensen R, Uluduz D, Katsarava Z; Lifting The Burden: the Global Campaign against Headache. Migraine remains second among the world's causes of disability, and first among young women: findings from GBD2019. J Headache Pain 2020;21:137.
3. Cupini LM, Corbelli I, Sarchelli P. Menstrual migraine: what it is and does it matter? J Neurol 2021;268:2355–63.
4. Delaruelle Z, Ivanova TA, Khan S, Negro A, Ornello R, Raffaelli B, et al. Male and female sex hormones in primary headaches. J Headache Pain 2018;19:117.
5. MacGregor EA, Frith A, Ellis J, Aspinall L, Hackshaw A. Incidence of migraine relative to menstrual cycle phases of rising and falling estrogen. Neurology 2006;67:2154–8.
6. Ripa P, Ornello R, Degan D, Tiseo C, Stewart J, Pistoia F, et al. Migraine in menopausal women: a systematic review. Int J Womens Health 2015;7:773–82.
7. Headache Classification Committee of the International Headache Society (IHS) The International Classification of Headache Disorders, 3rd edition. Cephalalgia 2018;38:1–211.
8. Aziz A. Sosyal bilimlerde araştırma yöntem ve teknikleri. 9.Baskı. Ankara: Nobel Akademik Yayıncılık; 2014. [In Turkish]
9. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care 2007;19:349–57.
10. Vetvik KG, MacGregor EA. Menstrual migraine: a distinct disorder needing greater recognition. Lancet Neurol 2021;20:304–15.
11. Ornello R, De Matteis E, Di Felice C, Caponnetto V, Pistoia F, Sacco S. Acute and preventive management of migraine during menstruation and menopause. J Clin Med 2021;10:2263.
12. Chalmer MA, Kogelman LJA, Ullum H, Sørensen E, Didriksen M, Mikkelsen S, et al. Population-based characterization of menstrual migraine and proposed diagnostic criteria. JAMA Netw Open 2023;6:e2313235.
13. van Casteren DS, Verhagen IE, van der Arend BWH, van Zwet EW, MaassenVanDenBrink A, Terwindt GM. Comparing perimenstrual and nonperimenstrual migraine attacks using an e-diary. Neurology 2021;97:e1661–71.

14. Wang M, Zhu G, Song Z, Kong F. Clinical differences between menstrual migraine and nonmenstrual migraine: a systematic review and meta-analysis of observational studies. J Neurol 2023;270:1249–65.
15. Chaudhary A. Migraine associated with menstruation an overlooked trigger. JNMA J Nepal Med Assoc 2021;59:611–3.
16. Dilbaz B, Aksan A. Premenstrual syndrome, a common but underrated entity: review of the clinical literature. J Turk Ger Gynecol Assoc 2021;22:139–48.
17. Hantsoo L, Rangaswamy S, Voegtline K, Salimgaraev R, Zhaunova L, Payne JL. Premenstrual symptoms across the lifespan in an international sample: data from a mobile application. Arch Womens Ment Health 2022;25:903–10.
18. Böttcher B, Kyprianou A, Lechner C, Kößler M, Heinz-Erian E, Neururer S, et al. Manifestation of migraine in adolescents: Does it change in puberty? Eur J Paediatr Neurol 2020;26:29–33.
19. Ojezele MO, Eduviere AT, Adedapo EA, Wool TK. Mood swing during menstruation: confounding factors and drug use. Ethiop J Health Sci 2022;32:681–8.
20. Fernández-Martínez E, Onieva-Zafra MDMD, Abreu-Sánchez A, González-Sanz JD, Iglesias-López MT, Fernández-Muñoz JJ, et al. Menstrual migraine among Spanish university students. J Pediatr Nurs 2021;56:e1–6.
21. Wang ZW, Yin ZH, Wang X, Zhang YT, Xu T, Du JR, et al. Brain structural and functional changes during menstrual migraine: Relationships with pain. Front Mol Neurosci 2022;15:967103.
22. GBD 2015 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet 2016;388:1545–602. Erratum in: Lancet 2017;389:e1.
23. Allais G, Chiarle G, Sinigaglia S, Airola G, Schiapparelli P, Benedetto C. Gender-related differences in migraine. Neurol Sci 2020;41(Suppl 2):429–36.
24. Ansari T, Lagman-Bartolome AM, Monsour D, Lay C. Management of menstrual migraine. Curr Neurol Neurosci Rep 2020;20:45.
25. Eigenbrodt AK, Ashina H, Khan S, Diener HC, Mitsikostas DD, Sinclair AJ, et al. Diagnosis and management of migraine in ten steps. Nat Rev Neurol 2021;17:501–14.
26. Raggi A, Grignani E, Leonardi M, Andrasik F, Sansone E, Grazzi L, et al. Behavioral approaches for primary headaches: recent advances. Headache 2018;58:913–25.
27. Bagherzadi A, Emani R, Ghavami H, Khalkhali HR, Ebrahimi M. Comparing the effect of heat and cold therapy on the ıntensity of nitrate induced migraine type headache in cardiac inpatients: a randomized controlled trial. Agri 2021;33:148–54.
28. Mosleh R, Hatem G, Navasardyan N, Ajrouche R, Zein S, Awada S. Triggering and relieving factors of migraine among university students: A cross-sectional study in Lebanon. Headache Med 2022;13:257–64.