

Premenstrual syndrome and management behaviours in Turkey

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KEY WORDS

Premenstrual syndrome; PMS; management; women

ABSTRACT

Objective

To reveal the ways women experience their symptoms of premenstrual syndrome and how they cope with these symptoms.

Design

This is a descriptive study using the Premenstrual Syndrome Scale (PMSS) to measurement. This scale is 5-point Likert-type and consisting of 44 items.

Setting

This study focused on the experience of menstruation cycles within a group of women aged between 15-49 years who attended the Yenişehir primary care centre in Turkey.

Subject

This descriptive study was carried out on 379 women who experienced menstruation between May and December 2006.

Result

The research data were collected by means of an introductory form and premenstrual syndrome scale. Among participants, 79% experienced moderate to high levels of PMS symptoms. The average scores of the subscales were highest regarding sleep changes, pain, fatigue and irritation.

Conclusion

There were limited numbers of women who used management methods oriented to PMS symptoms and these methods were mostly ineffective.

INTRODUCTION

PMS negatively affects the quality of life of millions of women (Barnard et al 2003; Gianetto-Berruti and Feyles 2002) and studies have shown the prevalence of PMS to range between 5% and 76% (Adigüzel et al 2006; Derman et al 2004; Deuster et al 1999; Marvan and Cortes-Iniestra 2001; Zafran et al 2007). PMS's definitive etiology and how it negatively affects women's health remains unknown; however, it is commonly believed that there are certain changes affecting the fine balance between sex steroids and central neurotransmitters in women who experience PMS (Indusekhar et al 2007; Dickerson et al 2003; Gianetto-Berruti and Feyles 2002). As a result of this change of balance, a series of symptoms may be observed including depression, emotional fluctuations, irritation, anxiety, sleep disorders, increase in appetite, sensitivity and pain in the breasts, bloating, weight gain, stomach ache, headache and fatigue (Dickerson et al 2003; Indusekhar et al 2007; Treloar et al 2002, Stearns 2001). These symptoms may be of such severity that they can disrupt interpersonal relations, social activities, work performance or quality of life (Zafrane et al 2007; Tempel 2001). Even though this is a condition seriously affecting the woman's life, it has been reported that 59.6% of women with PMS symptoms would like treatment for their complaints and only 28.8% seek medical help (Demir et al 2006). They are also reluctant to seek help for treatable PMS symptoms because of attitudinal barriers regardless of the severity of their PMS symptoms (Hylan et al 1999; Kraemer and Kraemer 1998; Robinson and Swindle 2000).

Support and consultation are imperative in assisting clients suffering from PMS (Hsia and Long 1990). Nurses play a key role in informing women about premenstrual symptoms and providing consultations on how to improve their quality of life, as well as encouraging the recognition of this common condition and in helping women cope with these symptoms (Öncel and Pinar 2006).

Previous studies have mostly focused on women's symptoms during their premenstrual period (Indusekhar et al 2007; Khaled and O'Brien 2001), however, very little is known in terms of how women cope with these symptoms during this time.

AIM OF THE STUDY

The purpose of this study is to reveal the ways women experience their symptoms of premenstrual syndrome and how they cope with these symptoms.

METHODS

Participants

This descriptive study focused on the experience of menstruation cycles within a group of women aged between 15-49 years who attended the Yenisehir primary care centre in Turkey. The research involved a randomised sample of 379 women volunteers who attended the venue between May 1 and November 25, 2006. Written permission from the relevant institutions and verbal consent from the participants was obtained to comply with ethical principles. In order to protect the rights of the individuals participating in the study, they were informed regarding the purposes of this study before study data collection commenced and were assured that individual information gathered and their identity would be kept private.

DATA COLLECTION INSTRUMENTS

Information Form

This was a questionnaire comprising eight questions seeking the women's demographic characteristics and the particulars of their menstrual cycles.

Premenstrual Syndrome Scale (PMSS)

This 5-point Likert-type scale, consisting of 44 items, was developed by Gençdoğan (2006) who determined its validity and reliability to assess premenstrual symptoms and their severity. In Gençdoğan's study, Cronbach's alpha coefficient has been found to be 0.75 and was 0.93 in this study. The scale comprised 44 questions with nine sub-scales (Depressive affect, anxiety, fatigue, irritation, depressive thoughts, pain, appetitive changes, sleep changes, bloating). The measurements on the scale are set according to the following scoring system: the response Never was scored as "1", rarely as "2", sometimes as "3", very often as "4" and always as "5" points. In addition, the total score obtained from the sub-scales established the "PMSS total score." The scale's lowest score is 44 and highest score is 220. Where the total gathered score and subscales score reached more than 50% of the highest score possible during the PMSS result

evaluation, this determined whether or not PMS was occurring (Gençdoğan 2006). If the scale's total score reached 88 points or above, this indicates the occurrence of PMS. Increases in the scores indicate an increase in PMS severity (Gençdoğan 2006).

The women who experienced average or higher symptoms were asked, using open-ended questions, what attempts they make to cope with these symptoms. These responses were subsequently grouped within categories.

DATA ANALYSIS

The data were evaluated using the SPSS statistics program and percentage tests have been used for these evaluations.

ETHICAL CONSIDERATIONS

Ethical requirements were met during the conduction of the research and verbal consent was received from the women participating in the study. In order to protect the rights of individuals within the scope of the study, they were informed before the collection of research data about the objective of the study and that the obtained information and the identities of participants would be kept confidential.

FINDINGS

Sample characteristics

The women with menstruation cycles who participated in this study have an average age of 24.9 ± 6.8 and 25.1% completed elementary level education, 50.1% completed university and attained higher degrees, 62.5% are single, 80.7% do not work outside of their homes, and 31.4% are smokers. In addition, 43% of the participants had similar PMS histories in their families (table 1).

PMS total and sub-scales' item score averages

In this study, according to Gençdoğan's scale, the occurrence of the PMS reflects those subjects who score moderate to high levels on the total scale points (score ≥ 88). In this study, there were a total of 301 women (79%) who reported experiencing moderate to high levels of PMS symptoms. The participating women's total score average according to the scale is 108.7 ± 23.33 . The average scores of the subscales were highest in relation to sleep changes (2.76), pain

(2.75), fatigue (2.74), irritation (2.53) and the lowest ratio of depressive thoughts (1.25) (table 2).

Women's coping methods in relation to the PMS sub-scales are shown in table 3.

Table 1: Distribution of identifying characteristics of study participants (N=379)

Identifying characteristics	N	%
Educational background		
Elementary	95	25.1
High school	94	24.8
University and higher degree	190	50.1
Marital status		
Married	142	37.5
Single	237	62.5
Employment status		
Employed	73	19.3
Unemployed	306	80.7
Income status		
Income lower than expenses	33	8.7
Income equal to expenses	217	57.1
Income higher than expenses	129	34.2
Smoking status (cigarettes)		
Smoker	119	31.4
Non smoker	260	68.6
Alcohol intake		
Yes	27	7.1
No	352	92.9
Familial history of PMS		
Yes	163	43
No	216	57
	X$\pm$SS	Min.-Max.
Age	24.9 $\pm$ 6.8	15-47

Table 2: PMS total and sub-scales' item score averages

Sub-scales	X	SS
PMS Total	108.7	23.33
Depressive affect	2.48	.70
Anxiety	2.10	.65
Fatigue	2.74	.72
Irritation	2.53	.73
Depressive thoughts	1.25	.35
Pain	2.75	.98
Appetite changes	2.46	.86
Sleep changes	2.76	1.00
Bloating	1.88	.60

Table 3: Distribution of the women's coping methods in relation to the PMS sub-scales

Sub-scales	N	%
Depressive affect		
Listening to music	13	28.9
Crying	17	37.8
Resting	15	33.3
Total	45	100
Anxiety		
Stepping out of the house	32	53.3
Resting	23	38.3
Taking deep breaths	5	8.4
Total	60	100
Fatigue		
Sleeping and resting	95	94.1
Taking a shower	6	5.9
Total	101	100
Irritation		
Herbal tea	7	18.9
Taking a shower	10	27.1
Self-management of anger	9	24.3
Resting	11	29.7
Total	37	100
Depressive thoughts		
Solitude	8	100
Total	8	100
Pain		
Taking pain-killers	89	57.1
Moving around (exercise, walking and massage)	15	9.6
Taking a shower	15	9.6
Resting	19	12.2
Taking pain-killers and taking a shower	18	11.5
Total	156	100
Appetite changes		
Consuming sweets	88	100
Total	88	100
Sleep changes		
Consuming milk/yogurt	9	52.9
Taking a shower	5	29.4
Taking medication	3	17.6
Total	17	100
Bloating		
Low-sodium diet	9	100
Total	9	100

DISCUSSION

The purpose of this study was to find out how the women aged 15-49 experience PMS and the methods they use to cope with this syndrome. In this study, 79% (301) of subjects were found to show moderate and high levels of PMS symptoms. Demir and colleagues (2006) have found that 91.7% of the women in their study experienced some symptoms during their premenstrual cycles. Through various studies, PMS's prevalence ratio is found to be in the range of 5-76% (Adıgüzel et al 2006; Akyılmaz et al 2003; Daugherty, 1998; Derman et al 2004; Deuster et al 1999; Marvan and Cortes-Iniestra 2001; Yücel et al 2009; Zafran et al 2007). As can be seen, the prevalence of the premenstrual signs in this study differs from previous research. These differences may be because of variation in the scales used, as well as the variations in the women's ages, marital status, occupations, educational backgrounds, race and other characteristics.

The total average score of the women included in this study is 108.7 ± 23.33 . Within the study by Yücel and colleagues (Yücel et al 2009) the scale's total score average was 129.62 ± 33.71 .

Within the PMSS sub-scales, item score averages were highest for changes in sleeping, pain, fatigue and irritation and the lowest was for depressive thoughts.

In Taşçı's study (2006) examining the premenstrual symptoms experienced by nursing students, 39.4% of participants expressed having pain/fullness in breasts, 44.3% having irritation, 47.5% lower back pain and 54.9% stated experiencing fatigue at all times. In Adıgüzel and colleagues' study (2007), the most common symptoms were determined to be discomfort and irritation (72%), anxiety (67.3%), abdominal pain or bloating, lack of energy or easily getting tired (66.6%) and tiredness in the legs (65.5%). Derman and colleagues (2004) have reported that PMS's most common symptoms were negative mood, particularly indicated as stress (87.6%) and irritation (87.6%). Demir et al (2006) observed the symptoms of tiredness in 50% of

the women, symptoms of depression in 21.3%, insomnia in 18.3% and change in appetite in 48.5% of their study cohort. More than 150 symptoms and signs have been attributed to PMS (Deuster et al 1999). In the literature, the most frequently experienced psychological and behavioral symptoms of PMS are reported to be irritability, anxiety, tension, easily crying, mood changes, depression,

sudden anger, confusion, absentmindedness, hypersomnia-insomnia and social isolation. The most commonly experienced physical symptoms of PMS are tiredness, abdominal pain, fullness of the breasts, headache, edema in limbs, joint and muscle pain, acne, increase in the appetite-increase in food intake (Braverman 2007; Dickerson et al 2003; Indusekhar et al 2007; Treloar et al 2002).

Table 4: PMS prevalence and various characteristics of some studies

Study	Age	Marital status	Education	Working outside the home	Scale	Prevalence
Derman et al (2004) in Turkey	10-17	single	< high school	student	DSM-IV	61.40%
Yücel et al(2009) in Turkey	22±1.8		high school	student	Premenstrual Syndrome Scale (PMSS)	62.50%
Demir et al (2006) in Turkey	19-49	57.5% married 40.9% single 1.6 % divorced	> high school	working	DSM-IV	51%
Adıgüzel et al (2007) in Turkey	15-49	88.6% married 9.4% single 2.0% divorced	96.8%< high school 3.2% > high school	87.6% employed 12.4% unemployed	DSM-IV Premenstrual Evaluation Form (PEF)	6.10%
Deuster et al (1999) in Virginia, USA	18-44	59.7% married	36.8%< high school 63.2% > high school		Scores on Menstrual Distress Questionnaire	8.30%
Takeda et al (2006) in Japan	20-49	43.8% married			“The Premenstrual Symptoms Questionnaire” PSQ	95%
Bakhshani et al (2009) in Iranian	18-27	14.3% married	university	student	DSM-IV	98.20%
Sadler et al (2010) in the United Kingdom	20-34		21%> high school 79%< high school		Moos Menstrual Distress Questionnaire	24%
Tschudin et al (2010) in Switzerland	15-54	48.5% married	28.3%> high school 71.7%< high school		Premenstrual symptoms screening tool (PSST)	91%
Vichnin,et al (2006) in USA	13-18	single	adolescents	student	Retrospective symptom questionnaire (RQS)	86%

There were 45 subjects who utilised coping methods for depressive mood swings in the PMS's sub-scale. Within this group, 28.9% preferred listening to music, 38.8% crying, and 33.3% resting. When experiencing PMS symptoms such as depression, anxiety, irritation or similar psychological signs, lifestyle changes such as exercising, stress management techniques, massage, relaxing exercises as well as cognitive-behavioral therapy may help reduce or relieve PMS symptoms (Dickerson et al 2003; Hsia and Long 1990; Lurie and Borenstein 1990; Tempel

2001; Ugarriza et al 1998). Also Calcium treatment resulted in an approximately 50% reduction in total mean symptom scores with a significant improvement of symptoms such as depression, mood swings, headache and irritability (Derman et al 2004). The women included in this study attempted to reduce their stress levels using such methods as listening to music, breathing deeply, or stepping outside of their homes, however, they did not report achieving a desired level.

Among the total of 101 subjects who have tried coping with the state of fatigue shown in the fatigue sub-scale, 94.1% preferred sleeping and resting and 5.9% taking showers. This indicates that women experience fatigue quite often and are significantly affected by it.

There were 156 women in the study who use a coping method for pain. Within this group, 57.1% stated they preferred taking painkillers and 9.6% used moving around (exercise, walking, and massages) to control their symptoms. The number of women who tried to get rid of pain during their premenstrual period was higher in comparison to other symptoms. These women preferred pharmaceutical methods more often in the case of physical symptoms such as pain. The number of women who prefer non-pharmaceutical methods such as exercising was significantly low (Khaled and O'Brien 2001). This may be because women are not knowledgeable regarding the positive effects of this method in getting rid of pain. It can be recommended to provide educational programs arranged by nurses for women to address coping with PMS.

A total of 88 subjects used a coping method to deal with appetite changes and all in this group indicated that they consumed desserts. During their premenstrual period, women often have the desire to consume sweeter foods. Nonetheless, there are various results indicating that excess consumption of sweeter food has an effect on the PMS symptoms during this period (Demir et al 2006; Sayegh et al 1995).

Only nine subjects used a coping method to deal with bloating and indicated that they used a low-sodium diet to cope with this symptom. This involves a restriction of sodium intake due to the bloated feeling of the body, which is linked to water retention during the premenstrual period due to sodium having the ability to retain water in the body (Daugherty 1998). In addition, given that magnesium and calcium lower water retention, there must be other changes made in the diet to increase the intake of these minerals (Indusekhar et al 2007; Steiner 2000).

There were only 17 women who tried to cope with their sleep changes, a significantly low number. Most of these women consumed milk and yogurt in order to deal with this symptom (table 3). In various studies, calcium consumption showed different effects on the symptoms of PMS (Braverman 2007; Derman et al 2004; Frackiewicz and Shiovitz 2001). In Derman et al's study (2004) it was found that the patients consumed more than 200 ml of milk, 300 ml yoghurt and more than 50 g of cheese per day, the frequency of PMS was less. In Bertone-Johnson et al's study (2005) high-level calcium and vitamin D intake showed a lowering of the risk of PMS. Thus these few women in this study may have had the right approach; however, they applied this method only for their sleep-disorder complaints despite its ability to prevent other symptoms.

CONCLUSION

It can be concluded that coping methods for PMS symptoms are not frequently implemented. These results show that women, who are highly affected by PMS, must be more educated in terms of dealing with these symptoms. As a result of these studies, it is determined that the symptoms of PMS can be lowered significantly when nurses educate women about them (Min 2002; Morse 1999).

RECOMMENDATIONS

The following steps are recommended for women suffering from PMS symptoms:

- assessing women in relation to their PMS symptoms;
- guiding women who show severe symptoms of PMS; and
- suggesting women make journal entries regarding their menstrual cycles.

Consequently, these steps will improve recognition of the symptoms and aid assessment of causes contributing to their increase. In order to lower PMS incidences and to improve the women's quality of life, more attention must be paid to this subject and necessary precautions can be suggested.

LIMITATIONS OF THE STUDY

Exclusion criteria for the study were determined as: 1. pregnancy, 2. having undergone over or total abdominal hysterectomy operation, 3. being in postmenopausal period, 4. having a physical or mental condition that may prevent giving healthy answers to questions.

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