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## RESEARCH ARTICLE

# A Survey on Men's Awareness of Premenstrual Syndrome and Marital Satisfaction in Married Women in Tehran, Iran

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### Abstract:

#### Background:

The Premenstrual Syndrome (PMS) is a major clinical disorder with a number of temporary behavioral changes that is greatly affecting female population. Available information about PMS and marital satisfaction remains unclear, especially among women suffering from symptoms of PMS. The link between spousal supports has also been found to be related to marital satisfaction while no literature exists scrutinizing the effect of men's awareness of PMS on marital satisfaction. This study intended to examine men's awareness of PMS as a predictive factor for marital satisfaction among married women affected by PMS.

#### Aim:

To scrutinize the effect of men's awareness of Premenstrual Syndrome (PMS) on marital satisfaction among married PMS-affected women.

#### Methods:

The sample for this cross-sectional survey comprised of 277 married 19-49 years old women who registered at gynecological outpatient clinics in Tehran, Iran. Data were collected following a multistage random cluster sampling approach in 2015. Main research variables were demographic data, an adapted Premenstrual Syndrome Scale (PMSS), Enrich Marital Satisfaction Scale as well as men's awareness of the Premenstrual Syndrome.

#### Results:

This study found that the men's awareness of PMS and having PMS symptoms were correlated to, and at times anticipated, the likelihood of marital satisfaction among PMS-affected women.

#### Conclusions:

The results can assist frontline health workers and health promotion strategists seeking to improve women's health by providing visions into personal, relationship, and socio-cultural factors and offering consultation services for PMS issues in primary health care facilities in Iran.

**Keywords:** Female population, Marital satisfaction, Men's awareness, Premenstrual syndrome, Women's health, Survey.

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## 1. INTRODUCTION

In the modern time when women are further focused on continuing their education programs and taking various positions in the job market, the so-called Premenstrual Syndrome (PMS) can keep them from having a high-quality life and efficiently performing their responsibilities. Changes that occur in menstrual cycle also affect marital life and sexual desire resulting in lack or shortage of desire for sexual activity.

Many feminist critics have debated that premenstrual change is a normal part of women's experience, which is only placed as PMS because of negative cultural constructions and psychological disturbances, particularly in North America, Western Europe and Australia [1 - 6]. However, in countries such as Hong Kong [7], China [8], or India [9, 10], where menstruation is always treated as a natural event, women report premenstrual water retention, pain, fatigue, and increased sensitivity to cold, but rarely report negative premenstrual moods, or PMS. It is understandable that culture shapes the physical and psychological changes that are supposed to be symptom of PMS [1, 11].

Prior studies have specified that certain premenstrual symptoms can influence women's partners, largely through the relational disturbances that occur during the period. A woman's experience of her premenstrual changes, particularly undesirable fluctuations in the effect, is negotiated within an interpersonal context and marital life. The premenstrual distress is relational and notably illustrated by the finding that the most commonly reported symptom of PMS given by heterosexual women is feeling out of control and unable to tolerate negative effects raised in situations where there are overwhelming demands from the partner or children [6, 12].

Marital studies have found that reports of PMS are related to the level of conflict as well as couple cohesion and intimacy. In fact, premenstrual changes are experienced and negotiated within an interpersonal context, proposing a need for further research on the impact of partners' knowledge of PMS on women's premenstrual distress, ways to cope the distress, and quality of the communication in between the couple [6, 11, 13 - 18].

When assessing marital satisfaction in relation to PMS, we must consider that the earliest effect of this syndrome is imposed on women's performance in life, which in turn is associated with psychological effects thereby influencing the couple's marital health. In other words, physiological changes in woman's mood may cause cognitive errors in her husband's interpretation of her behaviors.

One of the most important ways for preventing such cognitive errors is to enhance men's awareness of their partner's physiological and hormonal changes during this period, especially for PMS-affected women. Nevertheless, it is clear that both men's and women's awareness of changes in the period and their mutual support are necessary for a satisfactory married life.

Provided men understand these cyclic changes in women's moods thoroughly, they may start supporting them in this period and this empathy brings satisfaction to many aspects of life including marital life. Besides, women tend to feel more relaxed in such an emphatic situation wherein symptoms of premenstrual syndrome decrease in severity.

Studies revealed that misunderstanding represents one of the most important root causes of problems raised in marital and human relations. In affective interactions, when an individual gets angry, her/his interpretation of others' feelings and thoughts is more likely to be based on her internal feelings, anxieties and expectations rather than a logical evaluation of them. Cognitive therapy increases individual's awareness of their assuming methods and thereby encourages them to consider all aspects of a behavior before ending up with a conclusion [15, 18]. Therefore, couples' awareness of the premenstrual symptoms can enhance a mutual understanding among them and decrease the likelihood of the aggressiveness disrupting the couples' interpretation of each other's behavior, misunderstandings, and cognitive errors.

To the best of our knowledge, there are only limited reports on men's awareness of premenstrual syndrome and marital satisfaction in women, especially in the Middle Eastern population.

From hereafter, the term "women" in this paper represents a number of married participants who were randomly selected at gynecological outpatient clinics in Tehran, Iran, to engage in the study; they were affected by PMS without clinical presentation. The terms "men" or "mates" in this paper refers mainly to the husbands of the married women.

## 2. RESEARCH QUESTION

This study proposes that men's awareness of PMS and having PMS symptoms may influence marital satisfaction among Iranian women.

The researchers anticipated the following hypotheses:

$H_1$ : Men's awareness of PMS is positively related to and predicts likelihood of PMS-affected women's marital satisfaction.

$H_2$ : Having PMS symptoms is negatively related to and predicts likelihood of PMS-affected women's marital satisfaction.

### 3. MATERIALS AND METHODS

Required data were collected using a random cross-sectional design in Tehran, Iran in 2015. A multistage cluster random sampling technique was used to select the participants. The research population was composed of all women who have been married for at least two years at the time of data collection. Of this population, 277 married 19-49 years old women who had registered at gynecological outpatient clinics in Tehran, Iran, as they felt PMS symptoms agreed to participate in the study. The participants were asked to complete a multi-dimensional questionnaire in omnipresence of well-trained data collectors. A well-designed questionnaire was developed after preparing the preliminary questionnaire and pre-test. The value of the Cronbach's alpha coefficient was found to be greater than 0.70 in both the pilot and actual studies. Besides, most of the items in the developed questionnaire were adopted from previous literatures with proven high reliability coefficients. Data analysis was completed using SPSS version 20.0 (SPSS, Inc., Chicago, IL).

#### 3.1. Questionnaire and Measurement

Most of the items for the instrument were adapted, improved, and modified from previous studies where those were illustrated to be of high reliability. A set of questionnaires was interpreted and translated by two health care professionals and social scientists who were fluent in both English and Persian. After designing the tool, a study was piloted to ensure its applicability by the intended respondents. The modified instrument was reviewed for content and face validity by an expert panel [19].

The questionnaire consisted of four parts: Socio-demographic characteristics, Enrich Marital Satisfaction Scale (47 items), adapted Premenstrual Syndrome Scale (PMSS), and also mates' awareness of the Premenstrual Syndrome.

##### 3.1.1. Socio-demographic Characteristics

The questions in this part asked for the participants' age, level of education, occupational status, length of marriage, number of children, husbands' age, husbands' educational level, husbands' occupational status, and income level.

##### 3.1.2. Enrich Marital Satisfaction Scale

As a dependent variable, marital satisfaction was assessed based on a short form of Enrich marital satisfaction questionnaire. Standardized by Soleimani (1994) [20], the enrich questionnaire included 47 questions. Mirkheshti (1996) [21] also validated the shortened form by a Cronbach's alpha coefficient of greater than 0.90. Each subject in this tool might end up with a score between 47 and 235 [22, 23].

##### 3.1.3. Premenstrual Syndrome Scale (PMSS)

PMS has many forms, in general, and many patients visit health care professionals/doctors with a unique combination of symptoms that vary in severity and duration. Some of the most common symptoms of premenstrual syndrome include mood and affective symptoms like sadness, anxiety, anger, irritability, reasonless weeping, and impatience; moreover, the syndrome may be associated with neural symptoms like insomnia, oversleeping, loss of appetite, passion and desire for certain foods, and fatigue, physical symptoms like headache, breast tenderness, joint and muscle pain, weight gaining, cognitive symptoms like poor concentration and memory, reduction of decision-making power, paranoia and suspicion, weakness, agitation, changes in sexual desire, autonomous symptoms like nausea, diarrhea or constipation, palpitations, sweating, and finally, dermal symptoms like acne, and hair grassing [24].

In this study, Premenstrual Syndrome (PMS) has been recognized by a number of psychological, autonomic, neurological, affective, and physical symptoms occurring to women episodically in the luteal phase of their menstrual cycle. Having at least three symptoms of Premenstrual Syndrome (PMS) in the week before menstruation was considered as a threshold for having PMS through the researcher-made and self-assessment questionnaire. This independent variable was assessed using a five-item scale asking about daily menstrual symptoms, to which the respondent might attribute a score within the range of 0 to 4 (0='never'; 1='mild'; 2='moderate'; 3='severe'; 4='very

severe'), with higher score representing more severe symptoms.

### 3.1.4. Men's Awareness of the Premenstrual Syndrome

This was about the men's awareness of premenstrual syndrome and its psychological, physical, autonomic, mood and affective, and neurological symptoms, with each set of symptoms been itemized and calculated separately (Table 1). This independent variable was evaluated using a five-item scale asking about mates' awareness /knowledge of understanding women's PMS symptoms happening in the week before the menstrual cycle. The scores ranged from 0 to 112, with higher scores indicating better awareness of the symptoms of PMS in women.

**Table 1. Cronbach's alpha for the independent variables.**

Variable	Pre-test	Cronbach's Alpha	Variable	Pre-test	Cronbach's Alpha
Psychological Symptoms	0.718	0.718	Affective Symptoms	0.818	0.815
Physical Symptoms	0.743	0.744	Neurological Symptoms	0.781	0.703
Autonomic Symptoms	0.706	0.704	Premenstrual Symptoms	0.923	0.913
Mates' Awareness of Psychological Symptoms	0.742	0.732	Mates' Awareness of Affective Symptoms	0.807	0.807
Mates' Awareness of Physical Symptoms	0.713	0.712	Mates' Awareness of Neurological Symptoms	0.707	0.709
Mates' Awareness of Autonomic Symptoms	0.705	0.7	Mates' Awareness of Premenstrual Symptoms	0.913	0.913

## 4. RESULTS

With an average age of 34, a total of 277 PMS-affected women responded to the survey. On average, their husbands were 39 years old. Of the 277 women, 78% had at least one child, and 60% had a high school diploma or higher academic degree. Results demonstrated that 17.2% and 10.8% of the women were suffering from severe/very severe psychological and autonomic symptoms, respectively. Moreover, of the 277 participants, 27.4% of women were suffering from severe/very severe physical symptoms while 19.6% and 29.4% were suffering from severe/very severe neurological and affective symptoms, respectively. The results also exposed that 32.8% of the respondents had never felt PMS symptoms, even though 54.4% and 12.8% of the respondents had felt mild/moderate and severe PMS symptoms, respectively.

Descriptive statistics showed that 7.1%, 20.9%, and 72% of the men had, respectively, high, moderate, and little awareness of psychological symptoms before menstruation. In addition, 1.5%, 22.8%, and 75.7% of the men had, respectively, high, moderate, and little awareness of autonomic symptoms before menstruation. Further, 5.2%, 43.4%, and 51.5% of the men had, respectively, high, moderate, and little awareness of physical symptoms before menstruation. Moreover, 2.2%, 29.4%, and 68.4% of the men had, respectively, high, moderate, and little awareness of neurological symptoms before menstruation. Investigations showed that 3.7%, 41.2%, and 55.1% of the men had, respectively, high, moderate, and little awareness of affective symptoms before menstruation. Finally, 1.6%, 25.5%, and 72.9% of the men had, respectively, high, moderate, and little awareness of premenstrual syndrome.

Following with the research, Pearson correlation analysis was conducted to examine relationships between men's awareness of the premenstrual syndrome, which included the domains of psychological, autonomic, affective, physical, neurological symptoms, in one hand, and marital satisfaction in PMS-affected women on the other hand. As shown in Table 2, men's awareness of the premenstrual syndrome was found to be very weakly and negatively correlated to marital satisfaction in women ( $r = -0.081$ ,  $p < 0.01$ ). However, men's awareness of the physical symptoms was seen to be strongly yet negatively correlated to marital satisfaction in women ( $r = -0.092$ ,  $p < 0.01$ ). Moreover, there were very weak and negative associations between the psychological ( $r = -0.113$ ,  $p < 0.010$ ), autonomic ( $r = -0.160$ ,  $p < 0.01$ ), and neurological symptoms ( $r = -0.003$ ,  $p < 0.01$ ) in one hand and marital satisfaction in women on the other hand. No significant relationship was observed between affective symptoms and marital satisfaction in women ( $r = -0.001$ ,  $p = 0.986$ ). Last but not the least, a weak and positive relationship was found between respondent's age and her husband's age in one hand and marital satisfaction on the other hand.

The summary of ANOVA results in Table 3 shows the multiple regression model of marital satisfaction in women with PMS. The results of the multiple linear regression analysis as a whole was proved to be significant ( $F(4, 252) = 27.930$ ,  $P = 0.000$ ). That is, the model fits the data and the proposed hypothesis is confirmed; *i.e.* the estimated linear regression model resembles a non-zero sloping line.

**Table 2. Pearson correlation between mates' awareness of premenstrual syndrome and the attributes and marital satisfaction.**

Variable	Women's Marital Satisfaction	Sig.
Mates' awareness of premenstrual syndrome	-0.08	0
Mates' awareness of psychological symptoms of premenstrual syndrome	-0.113	0
Mates' awareness of autonomic symptoms of premenstrual syndrome	-0.16	0.009
Mates' awareness of physical symptoms of premenstrual syndrome	-0.092	0.004
Mates' awareness of affective symptoms of premenstrual syndrome	-0.001	0.986
Mates' awareness of neurological symptoms of premenstrual syndrome	-0.003	0
Respondent's age	0.264	0
Mates' age	0.241	0
Marital Satisfaction	1	0

**Table 3. Summary of ANOVA results.**

Model	Sum Squares	df	Mean Square	F	Sig.
Regression	20305.115	4	5076.279	27.930	.000 <sup>a</sup>
Residual	45801.787	252	181.753	-	-
Total	66106.903	256	-	-	-

a) Predictors (Constant): Couples' awareness of PMS-mean, Having PMS symptoms-mean, Respondent's age-mean, Mates' age -mean,

b) Dependent Variable: Marital satisfaction in women with PMS-mean.

The analysis showed that, two independent variables, namely men's awareness of PMS ( $\beta = 0.175$ ,  $t = -3.006$ ,  $p = 0.003$ ) and having PMS symptoms ( $\beta = -0.552$ ,  $t = 9.347$ ,  $p = 0.000$ ) had significantly contributed to marital satisfaction. However, women's age ( $\beta = 0.108$ ,  $t = 0.822$ ,  $p = 0.412$ ) and men's age ( $\beta = 0.012$ ,  $t = 0.094$ ,  $p = 0.925$ ) were found to be of no significant linkage with marital satisfaction. Explaining 30% ( $p < 0.01$ ) of variation in the marital satisfaction, men's awareness of PMS had the highest value of beta coefficient (Table 4).

**Table 4. Multiple linear regressions to predict marital satisfaction among the participants.**

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta ( $\beta$ )	t	Sig.
Constant	118.403	5.975		19.818	0.000
Mates' Awareness of PMS	0.179	0.060	0.175	-3.006	0.003
Having PMS symptoms	-0.414	0.044	-0.552	9.347	0.000
Respondent's Age	0.185	0.225	0.108	0.822	0.412
Mates' Age	0.019	0.200	0.012	0.094	0.925

$R^2 = 0.307$ , adjusted  $R^2 = 0.296$ .

Somers' D was run to determine the association between the participants' marital satisfaction, in one hand, and women's educational level, men's educational level, family income, and the number of children, on the other hand. Reported in Table 5, the results showed that none of these four variables were significantly related to marital satisfaction.

**Table 5. Chi square coefficients between marital satisfaction and background variables.**

-	-	Respondent's Educational Level	Mates' Educational Level	Family Income	Number of Children
Marital satisfaction	Sig.	0.566	0.352	0.79	0.09
	Scope	8	8	8	8
	Amount	260	260	258	261
	Summer's D	0.002	0.003	0.018	0.062

## 5. DISCUSSION

This study is the first of its kind to explore how independent variables of men's awareness of the Premenstrual Syndrome (PMS), having PMS symptoms, and demographic factors can predict self-reports of marital satisfaction among Iranian women.

Being a major health problem for women, PMS negatively affects women's marital life and relationship with their partners. The adverse impact of PMS on the partners within heterosexual couples has been mainly evidenced within marital studies where both husband and wife reported the negative impact of PMS on the relationship value [16].

Consistent with prior behavioral studies on PMS among women, this study further showed that having PMS symptoms could have negative impacts on many aspects of women's life, such as marital satisfaction. Correspondingly, the premenstrual change can impose influences upon the woman's intimate partner, largely through the relational interruptions that occur before the period [13, 25].

Women's experience of tension (*e.g.* argumentativeness, irritability, anxiety, nervousness, frustration, and agitation) appeared to alter the interpersonal exchanges among family members and create roughness within the relationship [26]. Similar results were reported by Berglund (1997), with symptomatic couples reporting a decrease in dyadic adjustment during the premenstrual phase, but an increase in dyadic adjustment during the post menstrual phase.

To be specific, the present study found that men's awareness of PMS and having PMS symptoms were associated with, and at times could predict the likelihood of marital satisfaction among married women while the men's awareness of PMS attributes did not specifically predict marital satisfaction. We showed that the men's awareness of PMS increased marital satisfaction scores in PMS-affected women. Therefore, awareness of PMS represents a demanding scope for future research concerning women's health and marital relationships.

Similar to other cross-sectional studies, this study suffered from several limitations. First, the participants in this study might not represent entire Iranian female population. Future surveys should further discover whether the findings are consistent across other urban and rural Iranian populations. Second, the participants were randomly designated and engaged in self-report measures; therefore, accuracy could be an issue [19]. Third, other underlying pathologies were not examined to avoid misdiagnosis of PMS [27 - 29]. Forth, the men's awareness of the Premenstrual Syndrome (PMS) in this study denotes women's perception of their husbands' knowledge and response.

## CONCLUSION

Women are important members of families as well as communities. Besides, their health and wellbeing depend heavily on links with marital satisfaction and their mates' awareness of health issues.

When considering these multiple meaning structures (individual, relationship, community and societal), premenstrual syndrome is seen to be an important health issue. In fact, it is not solely a health issue; it is rather influenced by women's health, mental wellbeing, and relationships as well as cultural/societal norms [19].

Findings of this study revealed that the men's awareness of PMS and having PMS symptoms among women, women's age, and husbands' age are significant factors contributing to marital satisfaction among Iranian female population, so that the factors have the potential to impact tailored communication interventions for addressing spousal support.

These results suggest that health promotion interventions can help increase marital satisfaction among Iranian women, especially in younger females with PMS. We also believe that PMS issues can impact marital satisfaction and couples' wellbeing, especially in religiously conservative Middle Eastern countries where individual, interpersonal, cultural, and societal factors are valued.

## ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

## HUMAN AND ANIMAL RIGHTS

No animals/humans were used for studies that are the basis of this research.

## CONSENT FOR PUBLICATION

Informed written consent was obtained from all the participants.

## CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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