

# The relationship between premenstrual syndrome with anxiety, depression and changes in social relations of women in Kerman University of Medical Sciences

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## Abstract

**Introduction:** This study aimed to investigate the relationship between premenstrual syndrome with anxiety, depression and changes in social relations in women working in Kerman University of Medical Sciences.

**Methods:** In this descriptive, correlational research, the study population included all women aged 25-45 years in Kerman University of Medical Sciences. A total of 132 participants were selected based on random sampling according to Morgan table. Premenstrual Syndrome Questionnaire, Hospital Anxiety and Depression Scale (HADS) and Social Relations Questionnaire were used in order to collect data. Data were analyzed using chi-square test.

**Results:** Results showed that there was a significant positive relationship between the symptoms of premenstrual syndrome with anxiety, depression and changes in social relations of women.

**Conclusion:** Premenstrual syndrome is considered as a complex issue in social life and a large group of women face this problem and its consequences. Therefore, the respected authorities in social policy and health care issues should pay attention to social and psychological aspects of this syndrome in social interactions.

**Keywords:** Premenstrual syndrome, Anxiety, Depression, Social relations, Women

## Introduction

Premenstrual syndrome is defined as periodic recurrence of annoying physical, psychological and behavioral changes that occur during the luteal phase of menses which interfere with job, family and social affairs (1). This syndrome is one of the most common diseases in women. Although the exact number is unknown in Iran, but US sources say that it affects 40% to 60% of women in this country (more or less the same percentage of women in other countries) between the ages of 12 and 50 years. It is most common between the ages of 25-45 (1) with higher prevalence in employed women (2). About 20% to 40% of women describe significant problems in relation to their menstrual cycle, and about 20% complain of disruption of their daily schedules (3). Although the exact cause of the syndrome is unknown, but there are several theories such as an increase in estrogen, a decrease in progesterone, fluid retention, lack of vitamin B6, hyperprolactinemia, hormone allergies and prostaglandin disorders which play a

part to make this syndrome. In general, most physicians believe that premenstrual syndrome is an abnormal reaction of the body against normal hormonal changes and biological status of the body. These reactions can cause major changes in neural regulation and homeostasis leads to the symptoms of this syndrome (1). Although many years have been passed since the diagnosis of this syndrome, but because of the involvement of women in critical positions and the outdoor jobs in recent years, attention has been focused on the complete set of symptoms. Data have shown that high levels of suicide and criminal acts such as violence committed by women occur during the four days pre-menstruation and 4 days of the menstrual cycle. Forty-five percent of women working in industrial factories who got sick and 46% of women who were admitted to psychiatric facilities were in the days leading up to menstrual cycle or during it. In addition, 54% of children's mild colds occur during the eight days before their mothers' menstruation or during it which may indicate an increase



in mothers' anxiety at this period (4). The extent is much worse for some women in which this period has an impact on their productivity in the workplace and home. By the same token their social relations, social life and physical health are affected too (1). Thus, premenstrual syndrome has widespread and major consequences. Also, by taking this matter into consideration employees can make better decisions about their female staff. As there has not been a study regarding the psychological and social aspects associated with this syndrome, the present study aimed to investigate the relationship between the symptoms of premenstrual syndrome with anxiety, depression and social behavior of women working in Kerman University of Medical Sciences.

## Methods

In this descriptive cross-sectional study women aged 25 to 45 years who worked in Kerman University of Medical Sciences entered the study. The study population consisted of 220 participants and based on Morgan table 132 women were selected through random sampling. Permission was obtained to conduct the research. In order to gather data, premenstrual syndrome questionnaire, Hospital Anxiety and Depression Scale (HADS) and Social Relations Questionnaire were used. SPSS version 19 software was used for data analysis.

### Data collection tools

Premenstrual syndrome questionnaire, HADS and Social Relations Questionnaire were used to collect data.

### Premenstrual syndrome questionnaire

This questionnaire consists of ten questions rating from 0 to 5. All participants with scores higher than two were considered as having the syndrome. Having at least three symptoms of all the signs were considered as the criteria for diagnosis. Physical symptoms included fatigue, swelling, bloating, painful breasts, and changes in mood, muscle pain, changes in sleep patterns, headaches, desire to eat and dermal lesions that were included in the questionnaire. To ensure the reliability of this questionnaire, split half method was used and the validity of the questionnaire was confirmed by experts (5).

### Hospital Anxiety and Depression Scale

HADS is a valid instrument to assess a wide range of emotional disorders, mood disorders, depression symptoms and physical abnormalities. This questionnaire can be used for severity and borderline symptoms of depression and anxiety and depression in patients with physical problems. In addition, patients with psychiatric disorders who need primary care can be the target population. It has high sensitivity to the changes in disease status, response to treatment and psychological adjustment (6). Statistical data have shown that the questionnaire can be useful for Iranian researchers who deal with patients in need of psychological interventions. The questionnaire includes two independent subscales for anxiety (7 questions identified

by A) and depression (7 questions identified by D). Each question has four options – 0, 1, 2, 3 – that show the severity of disorder. Patients describe their emotional states by selecting these options. The minimum score of emotional state for anxiety and depression is (0 score) and maximum score is (21 score). This questionnaire is more convenient for patients in comparison to other anxiety and depression questionnaires. For reliability and validity purposes, the questionnaire was tested on 46 patients before and after surgery and the validity and internal consistency was measured by Cronbach alpha coefficient at 0.81 for anxiety and 0.84 for depression (7).

### Social Relations Questionnaire

This questionnaire consists of 10 questions and there are two groups of questions. Odd numbers represent a person's behavior in formal and informal relationships and even numbers represent the same behavior 1 or 2 weeks before menstruation. By comparing the two groups of odd and even numbers, possible changes can be identified. To ensure the reliability of this questionnaire, half split method was used and validity of the questionnaire was confirmed by a number of experts (5).

## Results

The relationship between premenstrual syndrome and anxiety are shown in Table 1.

Since the *P* value obtained from the independent *t* test (0.047) was less than the significance level, therefore, there was a significant correlation between the physical symptoms of premenstrual syndrome and anxiety.

The relationship between premenstrual syndrome and depression are shown in Table 2.

Since the *P* value obtained from the independent *t* test (0.003) was less than the significance level, therefore, there was a significant correlation between the physical symptoms of premenstrual syndrome and depression.

Table 3 shows the relationship between premenstrual syndrome and changes in social relations.

Since the *P* value obtained from the independent *t* test (0.003) was less than the significance level, therefore, there was a significant correlation between premenstrual syndrome and changes in social relations.

**Table 1.** The independent *t* test

Statistics	12.8
<i>P</i> value	0.047

**Table 2.** The independent *t* test

Statistics	13.58
<i>P</i> value	0.003

**Table 3.** The independent *t* test

Statistics	14.29
<i>P</i> value	0.003

## Discussion and Conclusion

The aim of this study was to investigate the relationship between premenstrual syndrome with anxiety, depression and changes in social relations in women in Kerman University of Medical Sciences. The results showed that there was a significant positive relationship between the physical symptoms of premenstrual syndrome with anxiety, depression and changes in social relationship. Our results are consistent with Tamjidi (8), Safavi Naeini (9), Kiani et al (10) and Bakhshani et al (11) findings. Concerning the relationship between anxiety and depression in women with premenstrual syndrome, it can be said that individual behavior is the function of compliance and environmental compatibility according to Levine's theory. Due to premenstrual physical symptoms and hormonal changes, patient compliance is decreased that can lead to anxiety and depression as the result. Regarding the relationship between the social relations of women with premenstrual syndrome it can be pointed out that, according to Levine a state of balance between the individual and the environment is required and if this balance is disturbed it creates tension. Since the premenstrual problems can disrupt this balance they can cause changes in a person's social relationships.

## Suggestions

Premenstrual syndrome is considered as a complex issue in social life and a large group of women face this problem and its consequences. Therefore, the respected authorities in social policy and health care issues should pay attention to social and psychological aspects of this syndrome in social interactions. Also it is better the women to be allowed to choose their hard and stressful shifts based on their menstrual cycle when employing in shift works or intermittent jobs. Because, premenstrual relaxation is very useful in controlling the symptoms of the syndrome.

## Ethical issues

No applicable.

## Authors' contributions

All authors equally contributed to the writing and revision of this paper.

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