

## Is Spiritual Intelligence in Women Can Predict Psychological and Physical Symptoms of Premenstrual Syndrome?

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**Abstract:** Premenstrual syndrome is a physical-mental disorder that many women are faced with it and causes disturbances in their life and work. This study aims to evaluate the effect of spiritual intelligence on perception and expression of syndrome in order to through identifying the factors influencing the decline in symptoms, help to find appropriate solutions for the treatment and control of it. The study population consisted of women 20-40 years old who were recruited using available purposive sampling method and based on inclusion and exclusion criteria for the study. Given the current study is correlation using Morgan table, 185 subjects were selected. In this study, to collect data two questionnaires of Nasser's spiritual intelligence (includes four components of transcendental consciousness, spiritual experiences, patience and forgiveness) and Abraham-Taylor's Menstrual Symptom Questionnaire (MSQ) were used. Levene and Kolmogorov-Smirnov test were used for data normalization and then in inferential statistics for hypothesis testing, correlation and multivariate regression in the 0/05 were used. SPSS16 Software was used to analyze the data. By comparing the obtained significance level with error rate of 0.05, it can be concluded there is a strong and significant relationship between behavioral symptoms of significance PMS with spiritual intelligence. This study showed there is a significant negative relationship between the components of spiritual intelligence and PMS. High capacity of spiritual intelligence reduces the perception and expression of psychological physical symptoms syndrome.

**Key words:** Premenstrual, syndrome, religious orientation, spiritual intelligence, women

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### INTRODUCTION

Women are half the population of each country and as efficient forces can play a significant role in their community development. The family is the most important means of strengthening the moral and psychological health of human society and the most important role in preserving the sacred and intimate relationship and unifying among family members have been considered for women.

One of the problems encountered by women in child bearing age is premenstrual syndrome. According to the consensus of most performed studies based on that 80% of women suffering from symptoms of premenstrual syndrome which more appears 7-10 days before menstruation and continues till first three days of menstruation and given that the women's natural monthly cycle is once every 28 days and the recurrence of this syndrome is more common in women 25-45 years it can be said that during the 20 years of the menstrual cycle about 4/5-6/5 years of useful life of women is spent with dealing with the symptoms of this syndrome. The symptoms of this disorder can be divided into two main

groups: psychological and physical. Physical symptoms: migraines, chest pain, joint or muscle pain, body stiffness, swelling sensation, poor coordination, fatigue, increased allergies, severe loss or increase of appetite and psychological symptoms: depression, anxiety, panic, mood swings, crying spells, sudden anger, irritability, loss of interest in usual activities, difficulty in concentrate, hopelessness, insomnia or sleeping too much, etc.

These symptoms begin after ovulation (Late luteal phase: after ovulation and with effect of LH hormone, progesterone production increases and thickness of endometrium of the uterus reaches a maximum) and during the first few days of menstruation (the first week of follicular phase: FSH hormone promotes the growth of ovarian follicles within each follicle, there is an ovule at the end of follicular, only one ovule remain) is resolved (Jafarnejad *et al.*, 2013). Over 70 years of experimental study in the field of premenstrual syndrome, still a certain cause has not been reported as the cause of this syndrome. For this reason, there is no specified pharmacological and psychological treatment. Different studies which have been conducted in the field of the underlying causes on premenstrual syndrome indicating

that factors such as the characteristics and personality traits, lifestyle, cultural beliefs, attitudes and views of different people are effective on the perception of the symptoms of premenstrual syndrome. One of the cultural factors influencing the character and attitude is spirituality. Coing states that those with high spirituality have better immune function and more regular endocrine. He in explaining the relationship between spirituality and physical health, believes the spirituality effects on person's emotional and social functions and this in turn affects the immune system and endocrine. In light of the global interest in the field of religion, the researchers sought to define and identify new concepts in relation to religion and spirituality, including spiritual intelligence.

Vagman states that the active integration of spirituality in daily life and the adaptive use of abilities, values and related resources represent the expression of spiritual intelligence. This intelligence is obvious when a person, mingles his spirituality in other aspects of life and act according to moral principles. People with high spiritual intelligence with any change in life, don't confuse and are realistic and control these changes. In the face of injuries respond to treatment better and better and will deal with injury and illness more appropriately. Sagharvany (2010) believes that spirituality can be discussed as a form of intelligence because spiritual intelligence predicts not only spiritual but also the adaptability of people and gives capabilities to the individual that enables him/her to solve problems and achieve goals (Sagharvany, 2010).

Amram states that spiritual intelligence is a set of abilities to practice and express of resources, values and spiritual features to increase performance and well-being in daily life.

Top of form: In general, the results of studies about spiritual intelligence and physical and mental health indicate a positive relationship between these two variables. Here some of these researches are referred.

Syboldohil in a study entitled the role of religion and spirituality in the physical and mental health concluded that the relationship between religion and spirituality and health is complex and indicating the beneficial influence of religion and spirituality on physical and mental health.

In a study by Saad *et al.* (2010) entitled the effect of spiritual intelligence on the health of older people in Malaysia it is found that spiritual intelligence is positively associated with general health. Their study concluded that there is a significant negative correlation between spiritual intelligence and perceived stress, anxiety and depression that is with increasing spiritual intelligence, perceived stress, anxiety and depression are reduced in students. Samiari *et al.* (2015) in a study found that between spiritual intelligence and public health in general

and in all aspects there is a positive and significant relationship. And it is expected that the promotion of spiritual intelligence enhance the overall health. Ali (2011) in a study stated, spiritual intelligence of people as a positive correlation with mental and physical health. This means that the higher spiritual intelligence the higher level of mental and physical. Due to the fact that PMS has physical and mental aspects and considering spiritual intelligence impact on physical and mental health, it seems that spiritual intelligence can be used as predictor of emergence and the severity of premenstrual syndrome. This study, by considering the recent definition of the world health organization that defines the human a biological, psychological, social and spiritual creature and considering that in our society because of cultural issues, the PMS has been low-interested by researchers and the comprehensive study and conclusive solution has not been provided for that this study aimed to investigate the relationship between spiritual intelligence and the prevalence PMS in women, in response to the negligence and lack of attention to women.

## **MATERIALS AND METHODS**

This study has been done to investigate the correlation between two variables of premenstrual syndrome and spiritual intelligence. The research population consisted of all women with premenstrual syndrome referred to cultural centers of Eshragh and Mahallati in Tehran. A sample of 185 persons using Morgan table and purposive available sampling and based on the criteria of inclusion and exclusion were recruited.

Inclusion criteria include: premenstrual syndrome, being in Tehran, being aged 20-40 years, non-consumption of hormonal drugs, no exposure to a specific event (death of loved ones, surgery, divorce, etc.) over the past three months, not being pregnant or pregnancy. The Abraham and Taylor's questionnaire which contains three parts was used. This questionnaire has been developed in Iran. The questionnaire consists of three parts. The first part consists of nine questions about the selection or remove criteria of samples such as subject age, age at menarche, menstrual cycle length, the distance between the two periods, physical condition or mental illness in subject, taking certain medications, incidents such as the death of someone close, marriage, divorce, surgery.

The second part of the questionnaire consists of five questions related to sample characteristics include: birth order, marital status, field of education, educational level and pain during menstruation.

In the third part of questionnaire presence and severity of symptoms is determined based on the symptoms of last 3 months and includes 17 symptoms (11 behavioral, cognitive and psychological symptoms and 6 physical symptoms). In the front of symptoms a column has been provided to record symptoms in which severity of each symptom has been divided into four grade rating from zero to three based on the increasing severity. The record sheet also is provided to record the recent menstrual of subjects during the study. This sheet contains a 30 days calendar to record daily symptoms and the severity of it, along with is a column consists of 11 behavioral, cognitive and emotional symptoms and 6 physical symptoms like the questionnaire.

And at the end of this form 3 questions about the criteria for the removal of medication have been posed. The questions are based on Likert scale with four options. This questionnaire also has been used in the study inside the country and has been approved several times. The reliability of the test has been measured by the researcher and reliability coefficient of scale has been obtained 0/89 using Cronbach's alpha.

Nasseri's spiritual intelligence questionnaire which contains 97 questions with four components of transcendental consciousness, spiritual experiences, patience and forgiveness was used to measure spiritual intelligence. The number of questions for each component: self-awareness component: 55 questions, component of spiritual experiences; 16 questions, patience: 19 questions and forgiveness 7 questions. This questionnaire is scored using a Likert method. Each phrase has four options and follows the pattern 1-4. If the subject chooses almost always option the score 4 will be given to him/her with the option often, the score 3 with an option rarely, score 2 and with the option never, score one. Reliability and validity of the questionnaire is measured by Cronbach's alpha coefficient that its reliability coefficient equal to 0/95. In this study, ethical considerations and confidentiality of information such as the anonymous questionnaires have been observed.

## RESULTS

Levin test and Kolmogorov-Smirnov tests were used for data normalization and then in the inferential statistics to test hypotheses correlation and multivariate regression were used in level 0/05. For this purpose SPSS Software was used. In current study, the relationship between spiritual intelligence subscales with PMS has been studied in individually. The calculated coefficient of

**Table 1: Significance of regression model**

F-statistics (p-value)	Coefficient of determination R <sup>2</sup>	R
1.123	0.387	0.622*
0.347		

**Table 2: Examine the necessity of the variables in the model**

Models	Standardized coefficients		Non-standardized coefficients		Significance level
	Line slope	SD	beta	t-statistics	
y-intercept	54.1200	4.614	-	11.527	0.000
Transcendental self-awareness	0.0178	0.053	-0.258	-3.388	0.001
Spiritual experiences	-0.4500	0.062	-0.437	-7.220	0.000
Patience	-0.1640	0.103	-0.124	-1.588	0.648
Forgiveness	-0.0920	0.200	-0.031	0.648	0.114

**Table 3: The correlation between variables**

Syndrome symptoms	Spiritual self awareness	Spiritual experiences	Patience	Forgiveness
Correlation coefficient	0.424	0.496	0.347	-0.190
Significance level	0.010	0.010	0.050	0.050
Number	185.000	185.000	185.000	185.000

**Table 4: The amount of the correlation between variables**

Variables	PMS
<b>Spiritual intelligence</b>	
Correlation coefficient	0.615
Significance level	0.050
Number	184.000

determination also in Table 1 shows a percentage of dependent variable changes which is expressed by given independent variables.

As seen in the Table 1 the amount of p-value of the F-statistic affirmed the significance of goodness of fit model (<0/05). The amount of coefficient of determination is equal to 0.387 indicating 39% of the changes of behavioral symptoms variability are expressed by the assumed independent variables. It is very good.

The significance level of intended hypotheses test as shown in the Table 2 is calculated and is compared with an assumed error rate (0.05). Thus, the significance of y-intercept, spiritual experiences and spiritual self-awareness variables are affirmed concurrently (the obtained significance level is <0.05) (Table 3).

By comparing the obtained significance level with error rate of 0/01 (<0/01) it can be concluded there is a significant relationship between psychological and physical symptoms of premenstrual syndrome and transcendental self-awareness and this relationship is reversed. The amount of correlation coefficient is -0.424. It is also with the same error rate, there is a significant relationship between psychological and physical symptoms of premenstrual syndrome with patience,

indicating effective relationship between variables. Due to the negative correlation coefficient -0.347, the relationship is indirect.

By comparing the obtained significance level with error rate of 0/05 (<0/05) it can be concluded there is a reversed and significant relationship between psychological and physical symptoms of premenstrual syndrome and spiritual experiences. The amount of correlation coefficient is higher than -0.496, indicating an effective relationship between variables. With the same error rate there is a significant relationship between psychological and physical symptoms of premenstrual syndrome with forgiveness but this relationship is at 0/05 level and the relationship is weak.

By comparing the obtained significance level with error rate of 0/05 (<0/05) it can be concluded there is a significant and strong relationship between behavioral symptoms of PMS with spiritual intelligence.

## DISCUSSION

The results of study separated subscales of spiritual intelligence questionnaire and the relationship of each of them with psychological and physical symptoms of premenstrual syndrome has been expressed.

Before presenting the results show short definition of spiritual intelligence subscales of this questionnaire is necessary.

**Transcendental self-awareness:** Report the existence of a transcendent soul people in their lives and feel its presence in everywhere and believe that the universe and all beings haven't come into existence accidentally and all the creatures have a common creator.

**Spiritual experience:** People with spiritual beliefs are constantly in touch with their understanding of life experiences that include spiritual and divine intervention and these interventions can alter the life events and human thought and behavior and gainfully affect on the person coping with life events.

**Patience:** Having patience lead to no loss of control in the face of stressors in life and these people have a special ability to deal with their problems and with any hardness do not feel helpless.

**Forgiveness:** This means that when the person is oppressed or is treated unfairly, he/she use it. Due to lack of or unavailability to the research that evaluate the relationship between physical and mental health with

subscales of spiritual intelligence to examine the relationships close and similar to current research has been used. There is a relationship between psychological and physical symptoms of premenstrual syndrome with transcendent self-awareness in women.

The obtained results with error rate of 0/01 showed there is a significant and reversed relationship between psychological and physical symptoms of premenstrual syndrome and the transcendent self-awareness which means the higher transcendental self-awareness the less perception and expression of psychological and physical symptoms of premenstrual syndrome menstruation in person.

The obtained results of the study are consistent with McDonald and Gorsesh which states that thinking style that lead to person submit to God and his quite associated with spiritual and psychological well-being and also is consistent with Alexander *et al.* (1989)'s research which according to its results, increased transcendental self-awareness in people associated with reduced physiological stress. And is consistent with other studies that have pointed to adaptive function of these components with coping with depression and AIDS (Sohrabi, 2013).

There is a relationship between psychological and physical symptoms of premenstrual syndrome with spiritual experiences in women with PMS. The results with error rate of 0.05 indicate a significant negative relationship between variables, the higher one's spiritual experiences the less syndrome symptoms. This finding is inconsistent with Emmons (2000)'s research which states that those who have spiritual tendencies, when dealing with injuries, better response to this situation and better run stressors and have less depression.

There is a relationship between psychological and physical symptoms of premenstrual syndrome with patience in women with PMS. The results with error rate of 0.01 indicate a significant reversed relationship between psychological and physical symptoms of premenstrual syndrome with patience indicating the higher one's patience the less syndrome symptoms. This finding is consistent with Akbarizadeh *et al.* (2011)'s research which same Nasseri's questionnaire is used to assess the relationship between spiritual intelligence and mental health in nurses and a high positive relationship between the component of patience and mental health has been reported.

Also, Olmaria in a study entitled the role of characteristics and personality traits in experience of premenstrual syndrome showed that negative affect is emerged before the premenstrual period. Introverts who

have a higher tolerance and patience, experience fewer symptoms and more have setbacks and internal mode, extroverts that are more aggressive and invasive and in the face of adversity have less tolerance and patience, have less control over their actions during this period and their complaints in this period is greater.

There is a relationship between psychological and physical symptoms of premenstrual syndrome with forgiveness in women with PMS. The results with error rate of 0.05 indicate a significant relationship between psychological and physical symptoms of premenstrual syndrome with forgiveness. But this relationship is weak. Weak obtained significant relationship between these two variables is consistent with the results obtained by the Spill-Ka indicating there is significant relationship between reduced the subjective and objective indicators of stress, lower blood pressure, hostility and depression and anxiety by increased the component of forgiveness (Sohrabi, 2008).

There is a relationship between psychological and physical symptoms of premenstrual syndrome with spiritual intelligence in women with PMS. By comparing obtained significance with error rate of 0/05 it can be concluded that there is a significant and strong relationship between psychological and physical symptoms of premenstrual syndrome and spiritual intelligence which is consistent with the results of other following studies. The studies conducted in relation to relationship between spiritual intelligence and psychological-physical health of recruited people indicating a significant and positive relationship meaning with increasing the levels of spiritual intelligence in people, physical and mental health also will be increased (Ali, 2011).

Also Bayrami and Movahhedi in their study entitled the role of spiritual intelligence in predicting perceived stress, anxiety and depression in Lorestan University of Medical Sciences stated that spiritual intelligence has a significant negative relationship with perceived stress, anxiety and depression. Samiari *et al.* (2015) in their study reported a significant positive relationship between spiritual intelligence and general health. King showed that spiritual intelligence has a negative correlation with depression, aggression, anxiety and self-delusion and has a positive relationship with social sensitivity, satisfaction with life, energy and activity. Finally, it can be pointed to Amini *et al.* (2015)'s study that examined the effectiveness of spiritual intelligence training on depression by performing quasi-experimental design and showed a significant negative correlation between spiritual intelligence and depression. Also with follow-up sustainability of spiritual intelligence training two months after the training was showed.

## CONCLUSION

The obtained overall results from the research is in line with similar research that has already been done and shows that symptoms of PMS like other mental and physical problems are under the influence of people spirituality. This finding can be used as a way to further research on teaching spiritual intelligence promotion in people and evaluation of the effectiveness of this training on the perception and expression of symptoms of premenstrual syndrome. This training also can be used as a way to control the intensity of PMS symptoms.

## SUGGESTIONS

Considering the influence of PMS on women's social and personal life, it is better researchers work on different aspects of this issue to provide appropriate control and treatment options to the public.

In this study, the resiliency of people against the syndrome and its relationship with existing variables was not measured that to continue research examining the relationship of resilience and coping styles with syndrome with different variable is recommended.

Given that there is a significant relationship between PMS and spiritual intelligence and considering high spiritual intelligence reduce the symptoms, work on training and promotion of women spiritual intelligence and evaluating its effect is recommended.

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