

Investigating the Relationship of Spiritual Wellbeing with Perceived Stress and Perceived Social Support among Women with Preeclampsia

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Abstract

Background and Objectives: Preeclampsia is a multifactorial disease which is the main cause of maternal and neonatal morbidity and mortality in many countries. Spiritual wellbeing plays a vital role in coping stress and has a positive effect on improving the individuals' health. The present study aimed to investigate the relationship of spiritual wellbeing with perceived stress and perceived social support in women with preeclampsia.

Methods: This descriptive study was carried out using convenience sampling on 112 pregnant women with preeclampsia referring to selected hospitals in Shiraz within 2018. Demographic and midwifery questionnaire, spiritual wellbeing questionnaire, and stress and perceived social support questionnaire were used in the current study. In addition, Pearson correlation test, one-way ANOVA and independent t-test were used for data analysis. P-value less than 0.05 was considered statistically significant.

Results: Based on the obtained results, 60.7% of women had high spiritual wellbeing score. There was a significant inverse correlation between spiritual wellbeing and perceived stress ($P < 0.001$). In addition, there was a positive and significant correlation between spiritual wellbeing and social support ($P < 0.001$).

Conclusion: With an increase in the spiritual wellbeing score, perceived stress was significantly reduced and social support score directly and significantly increased. Therefore, the positive role of spiritual wellbeing and social support in pregnancy guidelines should be considered.

Keywords: Spiritual Wellbeing, Preeclampsia, Perceived Stress, Perceived Social Support.

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Introduction

Preeclampsia is defined as increase in hypertension after 20 weeks of gestation with proteinuria which resolves after the delivery (1) and occurs with a prevalence rate of 4-5%. Symptoms of preeclampsia causes worries about the condition of the mother and fetus and often pregnancy is terminated to prevent these problems (2,3). Around 15% of maternal deaths occur due to preeclampsia (4). Hypertension in pregnancy is the leading cause of maternal and neonatal death in developed and developing countries (5).

According to Cohen, increase in stress causes psychological and biological changes that put the person at risk (6). Stress in pregnancy and during the delivery can be associated with adverse pregnancy and postpartum outcomes, such as preterm labor, low birth weight, attention deficit hyperactivity disorder, and maternal depression (7-9). During this period, the person experiences numerous stressors, such as the fear of accepting the maternal role, changes in the body, anxiety about the delivery process, and proper fetal growth (10).

Another important factor in pregnancy is social support. People with higher social support also benefit from better health. Studies have shown that physiological responses to stress are affected by social support (11). Researchers suggest social support plays a major role in the process of stress reduction (12). In a study conducted by Hard et al., it was revealed that there is a relationship between stress and hypertension with social support (13). It is believed that social support reduces stressors that lead to high blood pressure (14). As a result, it is possible that stress during pregnancy and poor social support increase the incidence of preeclampsia (15).

Some studies have shown that belief in healing by God is one of the well-organized psychologically-based approaches to treat illnesses and alleviate pain, anxiety, depression, and stress in patients (17,16). Spiritual wellbeing plays a vital role in coping with stress and has a positive effect on improving health (18). In a study carried out by Jesse et al., it was found that higher levels of spiritual and religious wellbeing in pregnant women were significantly associated with an increase in satisfaction and reduction of risky behaviors (19).

Spiritual wellbeing is one of the fundamental concepts which helps to deal with the problems and stresses caused by illness. Moreover, spiritual wellbeing as one of the dimensions of health, integrates other dimensions (e.g., existential and religious). Religious wellbeing is defined as an attachment to a particular religious belief and existential health means to discover the meaning of life and how to attain perfection (20). Religion is a source of support for people in trouble. Religious behaviors, such as pray, faith in God, and say prayers creates a kind of inner peace through hope and a positive view of the situation (21).

In a study by Price et al., the results of interviews with pregnant women with pregnancy complications showed that most of them believed that spirituality is an important part of their existential dimensions and spiritual beliefs can be used to relax and relieve fear and anxiety (22). Spiritual

wellbeing has a positive effect on enhancing life satisfaction (23). The relationship of hypertension with various illnesses raises concerns in hypertensive patients and causes drastic reduction in their quality of life (24). Amar et al. reported that high blood pressure is affected by all important events of life and has impacts on the quality of life of the patients (25).

In recent decades, many researchers have acknowledged the need to consider a broader role for psychological interventions to improve the quality of life of the patients with hypertension (26). Stressors that a person is unable to cope with are one of the main causes of anxiety, hypertension, and decrease in the quality of life (27). Consequently, spirituality seems to play an important role in reducing anxiety and stress (29,28).

In a study, the prevalence of postpartum stress disorder after preeclampsia has been reported at 28% (30). There was a relationship between the preeclampsia incidence with anxiety and depression. Therefore, there are different ways to deal with the disease and its complications, one of which is spiritual wellbeing (31). When spiritual wellbeing is compromised, a person may feel lonely, which results in aggravation of stress caused by illness and pregnancy. Accordingly, seeking help from God is necessary to reduce mental health disorders (32).

Considering the role of maternal stress on pregnancy outcomes and preeclampsia, as well as the importance of spiritual wellbeing on maternal and neonatal health during pregnancy, hypertension control, and since limited studies on the spiritual wellbeing of pregnant women has been conducted the present study aimed to investigate the relationship of spiritual wellbeing with perceived stress and perceived social support in patients with preeclampsia.

Methods

In the current descriptive study, the relationship of spiritual wellbeing, with perceived stress and perceived social support in 112 patients with preeclampsia referring to Shooshtari, Hafez, and Hazrat Zeinab hospitals

in Shiraz, Iran, within 2018 was investigated. The sample population was based upon similar studies (20) and opinions of the professors of the statistics department. A sample size formula in descriptive correlation studies with $\alpha=0.05$ and $\beta=0.1$ and $r=0.3$ was used. The samples were selected through convenient sampling and entered the study after obtaining written consent.

Inclusion criteria were: 1) Iranian nationality, 2) Islamic religion, 3) 18-45 years old, 4) pregnant women with preeclampsia, 5) 20-42 weeks gestational age, 6) single pregnancy, 7) no history of pre-pregnancy hypertension, 8) no history of neonatal mortality in previous pregnancies, 9) less than four deliveries, 10) lack of chronic diseases such as: diabetes, severe obesity, kidney disease, cardiovascular disease, anemia, and no sign of mental illness.

Exclusion criteria were: 1) exacerbation of the disease leading to eclampsia and death of the patient, 2) a history of mental illnesses, such as depression or diseases that disables patients to perform their daily activities, such as disability and failure to respond fully to the questionnaires. The pregnant women with preeclampsia, based on the sample size and after explaining the aims and methods of the research were selected. After the subjects' written consent on willingness to participate in the study was obtained and they were assured about the confidentiality of the information, they completed the questionnaires.

The research tools included demographic information questionnaire, spiritual wellbeing questionnaire, perceived stress questionnaire and perceived social support questionnaire. The researcher referred to the hospitals and filled the demographic information forms and other questionnaires.

The midwifery demographic questionnaire consists of two parts. The first part included items, such as age, pre-pregnancy weight, height, body mass index, employment status, education level, and family income. The second part included midwifery information, such as number of pregnancies, gestational age, history of abortion, preterm labor, preeclampsia, and hypertension in previous pregnancies. Spiritual wellbeing was assessed

using the Ellison and Paloutzain 20-item spiritual wellbeing questionnaire. The 10 items measure religious wellbeing and the other 10 items measure existential health. The items are scored on a six-point Likert scale. Grades from one to six are rated as "strongly disagree, disagree, slightly disagree, slightly agree, agree, and strongly agree".

In addition, 9 items were scored reversely. The overall spiritual wellbeing score was divided into three levels of high (100-120), medium (41-99) and low (20-40). In a study carried out by Seyyed Fatemi et al., the validity of the spiritual wellbeing questionnaire was determined through content validity and its reliability was determined by Cronbach's alpha coefficient of 0.82 (33). The Cronbach's alpha was measured at 0.97 in the present study.

The perceived stress questionnaire was first developed by Cohen et al. in 1983 to measure perceived general stress one month prior to the study. In this questionnaire, thoughts and feelings about stressful events, control, overcoming, coping with stress, and experienced stress are measured.

In the present study, a 14-item version was used. The subject responses were scored on a 5-point Likert scale ranging from "never" (score 1) to "often" (score 5). This questionnaire includes 7 negative items indicating disability to cope with stress and 7 positive items indicating good compliance with stressors, with the lowest score being zero and the highest score being 56. The Cronbach's alpha for this scale ranged from 0.84 to 0.86 (6). In the current study, the Cronbach's alpha was achieved at 0.98.

Perceived social support questionnaire was designed by Sarason et al. (1983) and its internal consistency was calculated with Cronbach's alpha coefficient of 0.97 and translated to Persian by Naseh et al. (2012). The Cronbach's alpha coefficient was estimated at 0.95. This questionnaire contains 12 items on a Likert scale ranging from "strongly disagree" (zero score) to "strongly agree" (six score). The min and max scores were 0 and 72, respectively (34-35). In the

Table 1. Relationship between total spiritual wellbeing score and demographic factors

Factors	Categories	Number	Mean	Standard deviation	Statistical index	P-value
Maternal education level	Illiterate	3	107	3	10.82=F	0.001<P
	Under diploma	19	90.63	21.5		
	Diploma	54	100.65	16.3		
	Graduate	36	74.17	29.6		
Mother's job	housewife	84	94.8	22	3.17=T	0.002
	Employed	28	78.14	29.2		
Income	Under 1 million	71	94.5	22.2	2.18=T	0.03
	Over 1 million	41	83.95	28.2		
Gestational age	Second trimester	31	97.7	17.6	1.88=T	0.06
	Third trimester	81	87.9	26.8		

F=One-way ANOVA, T=T-test

present study, the Cronbach's alpha was measured at 0.98.

The collected data were analyzed in SPSS software (version 23). Inferential analysis was used to examine the correlation between the two quantitative factors by Pearson correlation test. In addition, one-way ANOVA and independent t-test were used to compare the mean scores. P-value less than 0.05 was considered statistically significant.

An introduction letter was presented and the necessary permission was obtained from the hospital authorities. Full details of the aim and method of the design were explained for the sample population and their written consent was obtained. There was the possibility of withdrawal at any stage.

Result

In this study, 112 individuals were included. The sample was with the age range of 19 to 40 years old with the mean was estimated at 28.75 ± 6.44 (mean \pm SD). Most women had a diploma and the mean age of gestation weeks was measured at 31.28 ± 4.12 . Most women were in the third trimester of pregnancy 72.3% (Table 1).

The results showed that (60.7%) of women had a high level of spiritual wellbeing (Table 2).

Table 2. Frequency of different levels of spiritual wellbeing

Spiritual wellbeing	Score	Frequency (percent)
low	20-40	1(0.9%)
moderate	41-99	43(38.4%)
high	100-120	68(60.7%)

The mean score of spiritual wellbeing, perceived social support, and perceived stress

were measured at (90.61 ± 24.9 , 65.63 ± 22.3 , 14.5 ± 16.15), respectively (Table 3).

Table 3. Mean score of descriptive indices of the variables under study

variables	Dimensions	SD \pm mean
Spiritual wellbeing	Total	90.61 ± 24.9
	Religious wellbeing	45.4 ± 11.6
	Existential health	45.19 ± 13.5
Perceived social support	Total	65.63 ± 22.3
	Special person support	20.75 ± 7.3
	Friends support	19.08 ± 6.63
	Family support	25.78 ± 8.95
Perceived stress	-	14.5 ± 16.15

The results of the Pearson correlation test showed a significant and inverse relationship between spiritual wellbeing and perceived stress ($P < 0.001$). Therefore, by the increase in spiritual wellbeing score perceived stress was significantly reduced. However, there was a positive and significant relationship between spiritual wellbeing and social support ($P < 0.001$). Thereby, with an increase in the spiritual wellbeing score, social support score will increase significantly (Table 4).

Table 4. Examination of the correlation of spiritual wellbeing with perceived stress and perceived social support

Related factor		Perceived stress	Total perceived social support	Special person support	Friends support	Family Support
Spiritual wellbeing	Total	$r = -0.96$ $P < 0.001$	$r = 0.97$ $P < 0.001$	$r = 0.95$ $P < 0.001$	$r = 0.89$ $P < 0.001$	$r = 0.96$ $P < 0.001$
	Religious wellbeing	$r = -0.96$ $P < 0.001$	$r = 0.97$ $P < 0.001$	$r = 0.95$ $P < 0.001$	$r = 0.89$ $P < 0.001$	$r = 0.96$ $P < 0.001$
	Existential health	$r = -0.96$ $P < 0.001$	$r = 0.96$ $P < 0.001$	$r = 0.96$ $P < 0.001$	$r = 0.9$ $P < 0.001$	$r = 0.96$ $P < 0.001$

r= Pearson correlation, P= P-value

Discussion

The results of the present study showed that spiritual wellbeing was higher in most women

with preeclampsia. In most studies on women's spiritual wellbeing in Iran, spiritual wellbeing has been reported as moderate and high (36-37), which is consistent with the results of the present study.

In a study conducted by Zarei Poor et al. (2016), improvement in spiritual wellbeing leads to self-efficacy development in pregnant women (20). However, the results of the present study showed that there was no significant difference between the religious health score and existential health score. Accordingly, our findings were not in agreement with the results of the aforementioned study; this may be due to cultural and religious differences in urban and rural societies.

There was a significant and inverse correlation between spiritual wellbeing and perceived stress and a significant and positive correlation between spiritual wellbeing and social support. In a study performed by Jesse et al. (2004), it was found that high levels of spirituality during pregnancy have a strong relationship with high levels of social support and self-esteem. Furthermore, these factors can reduce stress and high-risk behaviors (19), which were consistent with the present study.

Another study revealed that providing spiritual care reduces the risk of postpartum stress disorders in women with preeclampsia (38), which is in line with the findings of the present study. Improvement of the spiritual well-being and reduction in stress during pregnancy can improve the health-related outcomes in pregnancy. A study carried out by Aziato et al. (2018) demonstrated the positive effects of spiritual beliefs during pregnancy and delivery. In addition, another study conducted by Mokhtarian et al. showed the effects of spiritual beliefs in the postpartum period (39-40).

In a study conducted by Moeini et al., after teaching spiritual care programs to patients with leukemia, their anxiety score was significantly reduced in the intervention group (41). Spiritual wellbeing plays a pivotal role in coping with stress and anxiety. Moreover, it has a positive impact on people's health (18). The results of a study by Badaghi et al.

showed that anxiety, depression, and stress in pregnant women were inversely related to spirituality and social support (42), which is in line with the results of the present study. In a study carried out by Tuck et al., spirituality interventions had no positive impact on stress (43), which is inconsistent with the results of the present study. This may be due to cultural and religious differences in different societies.

The ways of coping with stressors, the need for social support and its diverse forms, and different beliefs across cultures vary in each country. Therefore, the results of studies performed in different countries cannot be generalized due to the cultural differences and it is important to conduct similar studies in the target culture.

In a study performed by Surajakol et al., it was concluded that spirituality has a huge impact on mental health (44). The majority of fundamental studies have shown a significant positive relationship between increase in spirituality and greater physical and mental health outcomes (45-46). Therefore, spiritual consultation can control perceived stress and anxiety in pregnant women. Additionally, spiritual consultation is recommended as an effective therapeutic intervention in controlling the psychological problems of pregnant mothers.

Another finding of this study was that spiritual wellbeing score was not significantly correlated with the age variable, which is in line with the results of the studies by McCobery et al. (47) and Zarei Pour et al. (20). On the other hand, in the present study, spiritual wellbeing score was statistically related to the educational level, in a way that illiterate mothers had the highest spiritual wellbeing score. This finding is not in agreement with the results of the study by McCobery et al.

Nowadays, cultures are more than just classical medical treatments. They are organized methods which are used to deal with physical and mental illnesses. In these methods, therapy occurs through meaning, spirituality, faith, and religious belief. Regarding that healing through believing in God as the almighty, has a long history among

followers of different religions. Various studies showed that the relationship between religious beliefs and the health of the body and soul has been confirmed not only in the Eastern countries but also among all religions around the world (49-48).

One of the limitations of the study was cultural diversity between the subjects and the use of three different centers for sampling. In addition, the present study was limited to Shiraz and its suburbs; therefore, the generalizability of the results is limited.

Conclusion

Based on the obtained results of the present study, the majority of women had high spiritual wellbeing score. Moreover, there was a significant and inverse correlation between spiritual wellbeing and perceived stress. Therefore, considering the effectiveness of spiritual wellbeing on stress in mothers with preeclampsia, it is recommended to include the spiritual interventions and educational classes based on spiritual-cultural teachings in the pregnancy guidelines of the pregnancy care programs. Accordingly, due to the high efficiency and low cost, these interventions will be applicable and helpful.

There was a positive and significant relationship between spiritual wellbeing and social support. Therefore, the medical team, especially midwives and health professionals, focus their attention on the psychological aspects of motherhood during the pregnancy in order to provide appropriate supportive strategies to reduce maternal stress. Since maternal stress is an important health necessity, its importance is emphasized by the World Health Organization.

Conflict of interest

The authors declare no conflict of interest.

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