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# Effect of spiritual care education on postpartum stress disorder in women with preeclampsia

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## Abstract:

**INTRODUCTION:** Posttraumatic stress disorder is an anxiety disorder that occurs after exposure to an event that causes injury or threat. The prevalence of preeclampsia was reported to be 28%. Considering the significant role of spiritual care in physical and psychological outcomes of patients, this study was conducted to determine “the effect of spiritual care education on postpartum stress disorder in women with preeclampsia”.

**MATERIALS AND METHODS:** In this randomized clinical trial, 72 pregnant women (36 in each group) were selected in a convenient way between the ages of 34 and 38 weeks who had preeclampsia and admitted to two public hospitals in Mashhad. The questionnaires such as Duke University Religion Index, DASS 21, the Posttraumatic Stress Disorder Checklist (PCL), and Prenatal Posttraumatic Stress Questionnaire (PPQ) were used at the beginning in two groups. In the intervention group, first, women were educated each day based on Richards and Bergin’s pattern, in three sessions, which lasted 45–60 min. The control group also received routine cares. All units completed questionnaires such as Prenatal Posttraumatic Stress Questionnaire (PPQ) at the 4<sup>th</sup>–6<sup>th</sup> postpartum period. Results were analyzed by independent *t*-test, Mann–Whitney test, Chi-square test, and SPSS version 16.

**RESULTS:** The mean change score of postpartum stress disorder in the intervention and control groups was different after intervention ( $P = 0.001$ ).

**CONCLUSION:** Providing spiritual care to pregnant mothers with preeclampsia reduces their risk of postpartum stress disorder. Therefore, this kind of care as an effective intervention is included in the routine care of this group with high-risk pregnancies.

## Keywords:

Education, posttraumatic stress disorder, preeclampsia, spiritual care

## Introduction

Attention to the health of mothers is one of the important pillars of the progress of each society because the health of mothers is related to the health of other members of the family.<sup>[1]</sup> Preeclampsia is one of the causes of maternal death and the inability to develop in mothers and infants. Every year, more than 4 million women across the world face this problem.<sup>[2]</sup> Preeclampsia

is a specific gestational syndrome with various organs’ involvement, with elevated systolic blood pressure  $\geq 140$  or diastolic blood pressure  $\geq 90$  mmHg or both, in two measurements at intervals of at least 4 h, and proteinuria after 20 weeks of gestation is defined.<sup>[3]</sup> Preeclampsia is one of the medical problems during pregnancy with a prevalence of 6%–8%, which causes maternal mortality in 15% of cases.<sup>[4]</sup> On the other hand, medical problems during pregnancy are associated with postpartum stress disorder;<sup>[4]</sup> postpartum stress

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disorder was first described by Biedlowski and Raul Duval.<sup>[5]</sup> Posttraumatic stress disorder (PTSD) is an anxiety disorder that occurs after exposure to an event that causes injury or threat.<sup>[6]</sup> This disorder is characterized by various psychological symptoms such as aggression, nightmares, accidental remorse, anxiety symptoms, and decreased trigger levels; if these symptoms last longer than 4 weeks, the correction of PTSD is said to be.<sup>[7]</sup> The prevalence of postpartum stress disorder after delivery was 1.5%–6%, and 28% was reported after preeclampsia.<sup>[4]</sup> Furthermore, preeclampsia affects physical health and mental health of the individual.<sup>[4]</sup> Moreover, mental disorder in mother affects mother's relationship with her child and her relatives; therefore, it is important to address the issue of mental health of mothers.<sup>[4]</sup> The primary treatment of preeclampsia is the termination of pregnancy, which in most cases it leads to early termination of pregnancy.<sup>[8]</sup> These premature infants require long-term admissions in the neonatal intensive care unit<sup>[9]</sup> and have anemia,<sup>[10]</sup> which is a stressful period for the mother and the baby.<sup>[11]</sup>

In the recent years, in order to increase coping power and promote mental health, spirituality has been incorporated into theoretical and research literature as important components.<sup>[12]</sup> Furthermore, certain conditions such as illness reduce individual self-esteem and sadness toward the future. In such situations, paying attention to the spirituality of patients as well as providing care in this dimension will have an effective role in coping with their problems.<sup>[13]</sup>

According to Ramezani *et al.*, spiritual care is a mental, dynamic, interactive, and collaborative concept. In terms of spiritual care, being with the patient is an art; some of the measures taken in the spiritual care include helping the patient using from personal spiritual strategies, creating excellent relationships with oneself, friends, and family, encouraging self-care, doing religious practices, emphasizing positive aspects in all circumstances, respecting personal dignity of patients, listening actively to the patient, and promoting trust in the patient. The soul is related to the nurse and the patient and expresses unconditional love for the patients, which consists of seven dimensions. The objective effects of spiritual care in the presence of healing, self-healing, intuitive comprehension, exploring the spiritual perspective, patient morality, meaningful therapeutic interventions, and the creation of a spiritual healing environment appear in the nurse–patient interaction in the care process.<sup>[14]</sup> Meaningful therapeutic intervention as one of the main components of the comprehensive spiritual care program has four dimensions: expansion of meaningful communication, positive thinking induction, spiritual

intervention, and complementary interventions.<sup>[15]</sup> In this study, according to the characteristics of the studied samples, spiritual intervention was considered. Regarding the pattern of Richards and Bergin, spiritual care was taught. Richards and Bergin take care of spiritual prayer and encouragement to pray, talk about divine issues, and use of sacred books in the treatment of the use of techniques of relaxation and illustration, persuading people to forgive and sacrifice, help describing the patrons for harmony and consistency with spiritual values, falsifying spiritual beliefs and experiences, consulting religious leaders, and using religious books. In addition, in spiritual care, you must: (1) Respect deep self-reliance and freedom of the users and (2) feeling and empathy with the spiritual and religious beliefs of the users and flexibility and responsiveness to the values and needs of the clients.<sup>[16]</sup> Richards and Bergin's researches show that some psychiatric disorders are caused by the damage to the spirituality of the individual, and by addressing the spiritual dimension, their psychiatric disorders, such as anxiety, depression, and stress, are also reduced.<sup>[17]</sup> In Richards and Bergin's view, spirituality is associated with divine beliefs, deeds, and feelings.<sup>[17]</sup> According to Akhbardeh (2011), spiritual beliefs and religious practices, such as repeating a word or phrase in prayer, taking calm states during religious practices such as prayer, vow, and alms, and placing in a calm and spiritual setting like a mosque enhance one's ability to adapt to stress.<sup>[18]</sup>

Furthermore, spirituality, by targeting individual beliefs, helps people to better assess the negative events in a better way and have a stronger sense of control than the present conditions.<sup>[19]</sup> And, feelings of control make people more powerful in their livelihoods and consequently, promote their mental health and reduce stress.<sup>[20]</sup>

In this regard, in the study by Bryant-Davis and Wong, spiritual and religious care led to the reduction of PTSD in survivors of war and raped children.<sup>[21]</sup> In the study of Hawthorne, spiritual activities in mothers who were bereaved due to child death reduced PTSD.<sup>[22]</sup> In the study by Hourani *et al.*, military soldiers with higher levels of spirituality were less likely to report PTSD.<sup>[23]</sup> In Berg's study, those with a higher intrinsic religion had a lower rate of PTSD and depression so that Religion and spirituality played an important role in reducing PTSD.<sup>[24]</sup> However, the results of Tuck's study, indicate limited effects of spiritual care and its interventions on individuals.<sup>[25]</sup> Also, the study of Hart *et al.* showed a small and limited effect of spiritual interventions in patients.<sup>[26]</sup> In the study by Ghahari *et al.*, spiritual care did not have a significant effect on anxiety, depression, and stress in patients with

cancer.<sup>[27]</sup> From the abovementioned facts, the greatest stress in every woman's life is pregnancy, which makes these stressful conditions prone to diseases such as preeclampsia. Moreover, despite scientific advances in the treatment of pregnancy problems, mental problems are still an important issue in women's health.<sup>[28]</sup> On the other hand, many studies have shown that the existence of spiritual beliefs and participation in religious gatherings reduces depression, stress, and anxiety among different individuals.<sup>[29,30]</sup> There were controversial studies in this regard. On the other hand, the important role of spiritual care on the physical and psychological consequences of patients<sup>[31]</sup> is to address the issue of spiritual care. Perhaps, the best reason to address the spiritual aspects of the disease is that many of our patients are religious and have spiritual needs. And, spiritual beliefs overlap with attitudes and other cultural beliefs, making patients' decision-making under conditions of severe illness.<sup>[32]</sup> Therefore, observance of the spiritual principles and creation of the necessary facilities to meet the spiritual needs of patients when they are sick and admitted to the hospital are necessary and also there are many complications of preeclampsia for mother and infant. Therefore, the researcher attempted to investigate the effect of spiritual care education on postpartum stress disorder in women with preeclampsia.

## Materials and Methods

### Participants and procedures

The present study is a randomized clinical trial with control group. This study was performed on 72 women with gestational age of 34–38 weeks and with preeclampsia admitted to two public hospitals in Mashhad (Ghaem and Imam Reza Hospitals), in 2017.

Sample size according to similar articles available. According to Soltani *et al.*, the prevalence of postpartum stress disorder in women with preeclampsia was 26%.<sup>[4]</sup> Sample size with a decrease of 20% in each group of 36 people, and in total, 72 were calculated in two groups.

Inclusion criteria included women with preeclampsia: Singleton pregnancy, live births, gestational age of 38–34 weeks, Iranian citizenship and residency in Mashhad; reading and writing literacy; satisfaction with participation in the study; and having a call number. Exclusion criteria were having medical conditions; having nonpreeclamptic midwifery; using tobacco and drugs; committing suicide or thinking about suicide over the past year; a history of mental illness or taking psychosocial drugs; history of infertility; history of two abortions and more; absenteeism in one session; unwillingness to cooperate; and not participated in the posttest.

### Measures

Data were collected by questionnaires including demographic and midwifery questionnaire, postpartum stress disorder questionnaire, Posttraumatic Stress Disorder Questionnaire, Religious index of Duke University questionnaire, DASS questionnaire 21, and spiritual care checklist.

#### *The Duke Religious Index Questionnaire*

The Duke Religious Index Questionnaire has 5 items. The first two items are questions about the religious practices of individuals and are ranked in a 6-point grading scale; the sum of its points varies from 2 to 12. And, the next three items are questions about the religious beliefs of individuals classified as 5-point Likert grades, and the sum of the points in these three items varies from 15 to 45. This questionnaire has been validated in the study by Hafizi *et al.* (13932013).<sup>[33]</sup> Its reliability was also confirmed in the study by Baljani *et al.* (2011), with the reliability of its Persian version and with the Cronbach's alpha value of 0.93.<sup>[34]</sup> Furthermore, a study by Koenig (2010) confirmed its reliability.<sup>[35]</sup> In this study, its reliability was achieved with Cronbach'  $\alpha = 0.91$ .

#### *Prenatal Posttraumatic Stress Questionnaire*

This questionnaire includes 14 questions that measure the magnitude of stress disorder during and after birth. Questions are answered yes and no. The scoring range is 0–14. The cutoff point for PTSD detection is  $\geq 6$ . In the study of Feeley (2011) in Canada, its validity has been confirmed and its reliability was confirmed by a reexamination method ( $r = 0.92$ ).<sup>[36]</sup> In the study of Soltani *et al.* (2012), its reliability was 0.82 by Cronbach's alpha on ten people.<sup>[4]</sup> In the present study, the reliability was  $\alpha = 0.85$ , with Cronbach's alpha.

#### *Posttraumatic Stress Disorder Questionnaire*

This questionnaire includes 17 questions that are scored based on a 5-point Likert scale as follows: very low (1), low (2), medium (3), high (4), and very high (5). The total score of the questionnaire is between 17 and 85. The cutoff point for PTSD detection is 50 points. For use in Iran by Goodarzi, its validity has been confirmed.<sup>[37]</sup> Moreover, its reliability has already been confirmed in the study by Weathers with the Cronbach's alpha 0.97.<sup>[38]</sup> In the present study, Cronbach's alpha has achieved  $\alpha = 0.95$ .

#### *The DASS 21 questionnaire*

The DASS 21 questionnaire also has three subscales, each of which has seven questions. Each question has 0–3 scores and the final scores of each subscale are obtained from the total score of the questions related to it. Its reliability was confirmed in the study by Henry and Crawford (0.82).<sup>[39]</sup> The reliability of this questionnaire in this study was confirmed by Cronbach's alpha test

for subscales of depression (0/7), anxiety (0/75), and stress (0/85).

The spiritual care checklist was made by the researcher. Its validity was confirmed through content validity and its reliability was assessed by agreement of evaluators.

### Intervention

Then, the pregnant mothers who satisfied the criteria for entering the study were selected in an accessible form and were randomly divided into two intervention and control groups. Therefore, two bags were selected and two envelopes were put in each bag, and then the name of Imam Reza Hospital and Ghaem Hospital were inserted in the first bag and the names of intervention and control groups were inserted in the second bag on the envelopes. Then, randomly, we take an envelope from the first bag and an envelope from the second bag. This will determine which hospital is the intervention group and which hospital will be the control group. Before the training, both intervention and control groups completed the midwifery and individual questionnaires. The Religious Index Questionnaire at Duke University was filled up by mothers to examine religious beliefs each of the mothers (both multiparous and nulliparous) scored more than 50 in PTSD questionnaires, they were excluded from the study. Also, all mothers who scored more and equal intense in the DASS 21 questionnaire (Depression less than 20 score, Stress less than 25 score and Anxiety less than 14 score) were excluded from the study.

After completing the questionnaires, the intervention group was trained. The training was facial in the intervention group; therefore, before the training, the privacy of the patient was maintained. In the intervention group, a researcher was initially trained in spiritual care education based on the Richards and Bergin's pattern<sup>[40]</sup> (focusing on the religion of Islam, and after confirmation of the curriculum by religious experts) at three sessions per day for 45–60 min, face-to-face education.

Face-to-face education in the health care system provides more opportunity for discussion.<sup>[41]</sup>

### Session contents

#### *At the first session*

- A. Meeting people and assessing the knowledge, attitudes, and beliefs of patients and listening to patients' views on spiritual issues, religion, and existential issues (separately)
- B. The role of reading holy book in felling calm
- C. Positive statements based on the holy book.

#### *At the second session*

- a. Repent and seek forgiveness
- b. Story of religious people

- c. Participating in religious and recreational programs
- d. Addressing God and accept the current situation
- e. Trust, resort, patience, charity (kindness and forgiveness), and focus on the blessings of God.

#### *At the third session*

- A. Explaining the experience of spiritual care and its effects
- B. Using the consequences of this care and summarizing the past sessions.

During the sessions, the following spiritual care was also provided:

1. Trust, empathy, and honesty between the nurse and mothers to establish a proper communication during the sessions
2. Listening carefully to the physical and mental problems and worries and fears of patients
3. Providing psychological support from patients
4. Strengthening individuals' inner hope and powers
5. Using positive energy sentences and strengthening healthy and constructive thoughts
6. Helping the patient find the meaning of life and understanding that none of the life events is beyond the destiny; who believes in God over the whole world could be saved from the feelings of pessimism, emptiness, and frustrated
7. Providing the necessary facilities for religious practices
8. Encouraging the patient to read holy books
9. Touching the hands of patients in order to provide them with mental support
10. Encouraging the patient to express their religious beliefs
11. Encouraging patients to visit religious clerics
12. Encouraging patients to refer to people who feel comfortable with them
13. Encouraging patients to enjoy entertainment and do light sports activities according to their physician's opinion
14. Assuring the patient that the nurse is always available to her clients for mental and psychological support
15. Seek forgiveness from past sins and forsaking anger against the perpetrator and guilty person
16. Encouraging the mothers to enjoy music, singing, theater, cinema, art, etc.
17. Encouraging the patients to establish a friendly relationship with others
18. Encouraging the patients to laugh and do their favorite hobbies
19. Encouraging the patients to participate in religious services and social gatherings.

Then, the intervention pack on a compact disk, along with the spiritual care checklist, was given to mothers to perform at home. And, the researcher maintained and



strengthened his contact with research units through telephone calls. The mothers referred to the midwifery unit of the mentioned hospitals every 2 weeks, for the purpose of providing a spiritual care checklist. And, if the mother did not attend her presence, the researcher would go to her home in coordination with her home and receive checklists. In case the research units did not go to the hospital, the researcher visited their home and delivered the checklist to them. This checklist of spiritual care programs was completed daily by research units (after spiritual care). Telephonic follow-up was done in the middle of the week. The control group also received routine care. Then, all units were asked to visit the obstetric clinic at the 4<sup>th</sup>–6<sup>th</sup> week after delivery to control the blood pressure. Of course, during the phone call, the next referral date was also reminded and people were checked for exclusion criteria during the study. Prenatal Posttraumatic Stress Questionnaire (PPQ) was completed by mothers in the control and intervention groups at the 4<sup>th</sup>–6<sup>th</sup> week after delivery. The results were analyzed by using SPSS version 16 software (IBM, SPSS Inc, Chicago, Illinois, USA).

In this study, all ethical principles related to human research include obtaining a license from the university’s research deputy, presenting a letter to the relevant educational and therapeutic centers, providing adequate explanations to the research units and obtaining written consent, assuring the units of research in the field of confidentiality, maintaining the information and providing them in general, and ensuring that research units were excluded from the study at any time.

Comparison of means was performed by independent *t*-test in two independent groups, comparison of mean quantitative variables was performed with abnormal distribution in two dependent groups (before and after intervention) with Wilcoxon test, and comparison of quantitative variables was performed with abnormal distribution or rank quality in two groups independently with the Mann–Whitney test. The significance level was considered to be  $P < 0.05$ .

## Results

The findings of this study showed that before the intervention, the two groups in terms of maternal education variables ( $P = 0.783$ ), maternal occupation ( $P = 0.394$ ), husband’s education ( $P = 0.599$ ), wife’s occupation ( $P = 0.068$ ), family income ( $P = 0.685$ ), preeclampsia ( $P = 1.000$ ), satisfaction with marriage ( $P = 0.090$ ), satisfaction with marital relationship ( $P = 0.069$ ), prediction of preeclampsia ( $P = 0.80$ ), pregnancy tendency ( $P = 0.743$ ), satisfaction with the gender of the fetus ( $P = 0.306$ ),

religion ( $P = 0.957$ ) were homogeneous and there was no significant difference between the two groups ( $P > 0.05$ ).

Table 1 shows the mean score of postpartum stress disorder in both intervention and control groups after intervention. Using the Kolmogorov–Smirnov test, the normality of the variable was investigated. Given the probability value obtained, these variables had an abnormal distribution. According to the amount of probability obtained by Mann–Whitney test, the intervention and control groups had a significant difference in postpartum stress disorder after the intervention. In the intervention group after intervention, postpartum stress disorder in women with preeclampsia decreased significantly ( $P = 0.001$ ).

## Discussion

This study was conducted with the general purpose of “Determining the effect of spiritual care education on postpartum stress disorder in women with preeclampsia.” The results show the effect of spiritual care education on postpartum stress disorder. The mean score of this disorder was  $65.14 \pm 95.2$  in the control group and  $3.14 \pm 1.50$  in the intervention group, which was significant in comparison with the two groups ( $P = 0.001$ ).

Although research has been done on the cause and effects of PTSD, to a large extent, the spiritual aspect of this disruptive disorder has been overlooked. Achieving a better understanding of the multidimensional relationship between spirituality and PTSD may be a key factor in prevention and advanced therapeutic protocols.<sup>[42]</sup> In the study of Hawthorne spiritual activities in mothers who were bereaved due to child death reduced PTSD.<sup>[22]</sup> In the study by Hourani *et al.*, military soldiers with higher levels of spirituality were less likely to report PTSD.<sup>[23]</sup> A study by Watlington and Murphy (2006) aimed at the role of religion and spirituality on 65 African-American women surviving domestic violence showed that women with a higher

**Table 1: Mean and standard deviation of postpartum stress disorder score after the intervention in two groups**

Variable: Postpartum Stress Disorder	Mean (SD)		Intergroup test result
	Control	Intervention	
After the intervention	5.14 (95.2)	3.14 (1.50)	$U=308.0$ $Z=-3.396$ $P=0.001$ Mann–Whitney test
Kolmogorov–Smirnov test	0.002	0.085	Abnormal

SD=Standard Deviation

level of spirituality and religion had lower symptoms of depression and PTSD.<sup>[43]</sup> This study was in line with the present study; however, it was correlational; and despite a lot of searches in foreign and domestic articles, a study of the kind of clinical practice that provided spiritual care education on PTSD in women with preeclampsia is not found. The lack of consistency of the results of this study with the present study can be due to the nonhomogeneity of the conditions of the patients such as age, education level, socioeconomic status, support of spouses and relatives, and the number of children, and this difference can be related to the community surveyed so that the participants of the two studies differed culturally and socially.

Despite the similarity of the findings of these studies with the present study, there is little difference in methodology, but it is said that spiritual and religious interventions create a positive attitude toward themselves and the environment and the future, and thus, they did not consider themselves vulnerable and feel relaxed in the environment.<sup>[44]</sup> Even negative events gain a greater sense of control of the existing conditions.<sup>[45]</sup> These training exercises enhance the ability of people to live up to their livelihoods and enhance their mental health.<sup>[46]</sup> The study of Kalthornia-Golkar *et al.* (2014), which was performed on thirty people with chronic blood pressure, showed that spirituality in posttest was associated with anxiety and systolic blood pressure.<sup>[47]</sup>

Current research supports the importance of spirituality in reducing stress and increasing the health aspects. For example, Smith (2005) has shown that spirituality is required to adapt to the environment, including working conditions, and those who have a higher spirituality, have a higher tolerance to stress and the pressures of life.

Amram (2009) in his study considers stress management to be one of the most important skills that results from spirituality. He believes that spiritual people use religious beliefs to solve their problems and pressures. In general, it seems that spiritual values can be transcendental and enhance the daily functioning and physical and mental health of the individual. It can be said that spirituality works in opposition to life stress and thus increases the health.<sup>[48]</sup>

Zohar *et al.* argue that spirituality Protection him/her against events, life events, hardships, and individual problems. In fact, it enables the person to face life stresses with patience and to deal with them and to find solutions to them. In other words, spirituality is the basis of one's beliefs and influences his/her performance.<sup>[49]</sup>

Eckins and Kavandh (2004) argue that spirituality makes a person more comfortable looking at problems, more effort to solve problems, better tolerance of life difficulties, and more fluid and more effective in life.

In this regard, King sees spirituality as a set of mental capacities based on self-knowledge and deep-thinking thinking. He refers to the existential critique of these individuals, which reflects the ability to think critically of the truth of being, the universe of existence, time, and death. He also referred to the spread of self-awareness as a component of spirituality. In fact, the critical thinking of existentialism and the increase of self-awareness, which are the two basic components of spirituality, are a major reason for the reduction of anxiety because, as we see it, the person receives more and more than worries and anxieties by receiving existential truth and gaining personal values and self-awareness. And, this is an acceptable outcome for spirituality.<sup>[50]</sup> Also, when a person is distant from spirituality, he faces some kind of inappropriate and worthless life,<sup>[51]</sup> which in turn leads to disability, weakness, and fatigue. In addition, the sense of meaninglessness, loneliness, worthlessness, and purposelessness of an individual are subject to existential anxiety. This existential anxiety is what can be the main cause of sleep disorders, irritability, confusion, and tension headaches. Therefore, as it is seen, the reduction of spirituality with the effects on one's personality and worldview can be considered as one of the main causes of anxiety, stress, and blood pressure. In addition to the above, it seems that spirituality creates a sense of self-satisfaction, which affects the sense of satisfaction, individual's attitude, and assessment of his/her life and environment. In fact, it is the attitude that confronts individuals with environmental stressors. Since people with positive attitudes can more effectively manage their surroundings, now, if this stress is controlled, the person will experience less anxiety, stress, and blood pressure.<sup>[52,53]</sup>

When a person experiences a high, continuous, and uncontrolled stress in a living environment, the demand for his/her environment is too much for the individual's ability, and he/she cannot achieve his/her goals, and over time, he/she experiences anxiety and physical problems.<sup>[47]</sup>

### Limitations

Among the limitations of this research, some of them included: (1) Despite the emphasis of the researcher, telephonic follow-up, awarding prizes, and paying the costs due to air warming and crowding of the hospital's obstetric clinic, the patient did not refer to the completion of the questionnaire and delivery of the checklist at due time. In order to reduce the drop in the research samples, the researcher referred himself

to the door of the house in the research samples, which made the sampling time longer. Responsiveness in the different settings of the clinic and home could also be effective in responding to the research units, (2) The individual differences of research units on the learning style and spirituality of individuals were randomly selected under relative control, (3) On the other hand, small daily stresses in the family and community environment, and the impact of other sources and media, were beyond the full control of the researcher, and (4) In the event of PTSD, there is also a need for genetic predisposition, which is beyond the control of the researcher.

## Conclusion

Despite extensive medical advances in the treatment of preeclampsia, treatment has always been considered to improve the physical aspect of these patients. While patients with preeclampsia, more afflicted to psychiatric disorders (such as PTSD). On the other hand, about two-thirds of people with PTSD experience at least two other disorders. Problems and physical illnesses such as cardiovascular or neurological disorders are common in PTSD. In addition, psychiatric disorders such as physical impairment, depression, bipolar disorder, anxiety, substance abuse disorder, degradation disorders, personality disorders, and high suicide risk are common in these patients. In particular, about two-thirds of these people develop depression. It also has a negligible effect on the relationship between mother and baby, which should seek interventions to reduce the psychological effects of the disease. Moreover, the research showed that spiritual care, as an easy, affordable, nonpharmacological, and cost-effective program, has a positive effect on the reduction of this disorder. It is suggested that educational interventions are recommended because of low cost and more efficacy for women with preeclampsia.

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## Conflicts of interest

There are no conflicts of interest.

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