

The impact of Islamic religious education on anxiety level in primipara mothers

Tahereh Mokhtaryan¹, Zahra Yazdanpanahi², Marzieh Akbarzadeh³,
Sedigheh Amooee⁴, Najaf Zare⁵

¹Department of Midwifery, School of Nursing and Midwifery, Shiraz University of Medical Sciences, ²Community Based Psychiatric Care Research Center, School of Nursing and Midwifery Shiraz University of Medical Sciences, ³Department of Midwifery, Maternal-Fetal Medicine Research Center, School of Nursing and Midwifery, Shiraz University of Medical Sciences, ⁴Department of Obstetrics and Gynaecology, Infertility Research Centre, Shiraz University of Medical Sciences, ⁵Department of Biostatistics, Infertility Research Centre, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran

ABSTRACT

Background: Anxiety is among the most common pregnancy complications. This study was conducted to examine the impact of religious teaching on anxiety in primiparous mothers referring to the selected perinatal clinics of Tehran University of Medical Sciences in 2013. **Materials and Methods:** This randomized clinical trial was conducted on the pregnant women in 20–28 weeks of gestation referring to the selected clinics of Tehran University of Medical Sciences from July 2013 to June 2014. The subjects were selected through simple random sampling and divided into religious education and control groups. To assess the individuals, a demographic questionnaire, an anxiety trait State-Trait Anxiety Inventory and a religious knowledge and attitude trait (pre- test and post-test and 1 or 2 months after the test) were filled in by the two groups. Training classes (religious knowledge and attitude trait) for the cases were held in 6 weeks, and the sessions lasted for 1½ h. **Results:** The knowledge and attitude scores showed significant differences in the controls and cases after the intervention ($P = 0.001$) and 2 months after the study ($P = 0.001$). According to the results of independent t -test, a significant difference was found in the state anxiety score ($P = 0.002$) and personal score ($P = 0.0197$) between the two groups before the intervention; however, the results were strongly significant different after the intervention and 2 months after the study ($P \leq 0.001$). **Conclusions:** The improvement in the mothers' knowledge and attitude in religious subjects will reduce anxiety in primiparas.

Keywords: Anxiety, attitude, knowledge, religious

Introduction

Anxiety is one of the most prevalent symptoms in pregnancy and has the largest share in labor.^[1] Increasing evidence has indicated the negative effects of maternal stress on the fetus. These effects include spontaneous abortion, low fetal weight,^[2] elevated levels of stress hormones, chronic increase in blood pressure,^[3] premature birth and infant mortality,^[4] change

in endocrine secretion,^[5] change in hypothalamic-pituitary axis performance, immune system suppression, and changes in the number of lymphocytes and decrease in CD4/CD8 cells.^[6] The role of prenatal stress in the etiology of childhood illnesses^[7] and adulthood disorders^[8] and maternal postpartum depression^[9] is taken into consideration. However, pregnancy and the puerperium can be stressful enough to trigger mental disorders which may reflect the recurrence or exacerbation of ex-psychiatric disorders (preexisting) or may implicate the onset of a new disorder. Chemical factors (including hormones of progesterone-estrogen-cortisol-thyroid hormones) and life

Address for correspondence: Mrs. Marzieh Akbarzadeh, Department of Midwifery, Maternal-Fetal Medicine Research Center, School of Nursing and Midwifery, Nemazee Square, Shiraz, Fars, Iran.
E-mail: akbarzadm@sums.ac.ir

Access this article online

Quick Response Code:



Website:
www.jfmpc.com

DOI:
10.4103/2249-4863.192314

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Mokhtaryan T, Yazdanpanahi Z, Akbarzadeh M, Amooee S, Zare N. The impact of Islamic religious education on anxiety level in primipara mothers. *J Family Med Prim Care* 2016;5:331-7.

stressors can have a significant impact on mental health. Hence, logically it seems that pregnancy is supposed to have an impact on the number of concurrent psychiatric disorders. Women in a variety of ways respond to the environmental stressors and ongoing concerns about fetus health, child care, lifestyle changes, or fear of labor pain.^[10] In a study, negative effects of high antenatal maternal anxiety related to impulsivity during a performance on cognitive tasks in 14 and 15 years old subjects were mentioned.^[11] The results of Austin *et al.*'s study has shown that maternal trait anxiety, depression, and life event stress during pregnancy are associated with the incidence of complications in infant temperament at 6–4 months after birth.^[12] Furthermore, the results of Robertson's study on 14,000 samples have shown that antenatal depression, anxiety, and life event stress in pregnancy can develop postpartum depression.^[13]

In this respect, religion is supportive for people encountered with problems, and religious beliefs and activities such as prayer, worship, trust and appeal to God are defined as religious resources to increase tolerance. Moreover, religious practices such as prayer, honesty and faith and also study of religious books in developing hope, encouragement and positive attitudes toward depressive conditions and helping the one to get out of the depressive crisis would create a kind of inner peace.^[14]

Some studies have shown that intrinsic religious orientation is among the organized psychological behavior of great importance

in the treatment of diseases and plays basic roles in the treatment of pain, anxiety, depression, and stressors.^[15]

Since the late 20th century, the studies have revealed the effects of religious interventions for improving psychological suffering. Furthermore, the effects of praying and reciting to control the psychological disorders are considerable. Studies not only show the positive relationship between religion and mental health but also reflect the influence of religion on health status.^[16]

The current study has been designed to investigate the religious teaching impact on the religious knowledge and attitudes of primiparous women referring to the selected prenatal clinics of Tehran University of Medical Sciences in July 2013 up June 2014. This study aimed at reducing antenatal maternal anxiety with religious education and use and improving mental health in pregnant women in pregnancy and postpartum periods.

Materials and Methods

Setting and design

The present randomized clinical trial was conducted in the selected prenatal clinics of Tehran University of Medical Sciences in 2013. According to the statistical consultation, considering $\alpha = 0.05$, $\beta = 0.2$, $d = 2$, and power = 95%, and using the following formula, an 84-subject sample size (42 in each group) was determined for the study [Figure 1]:

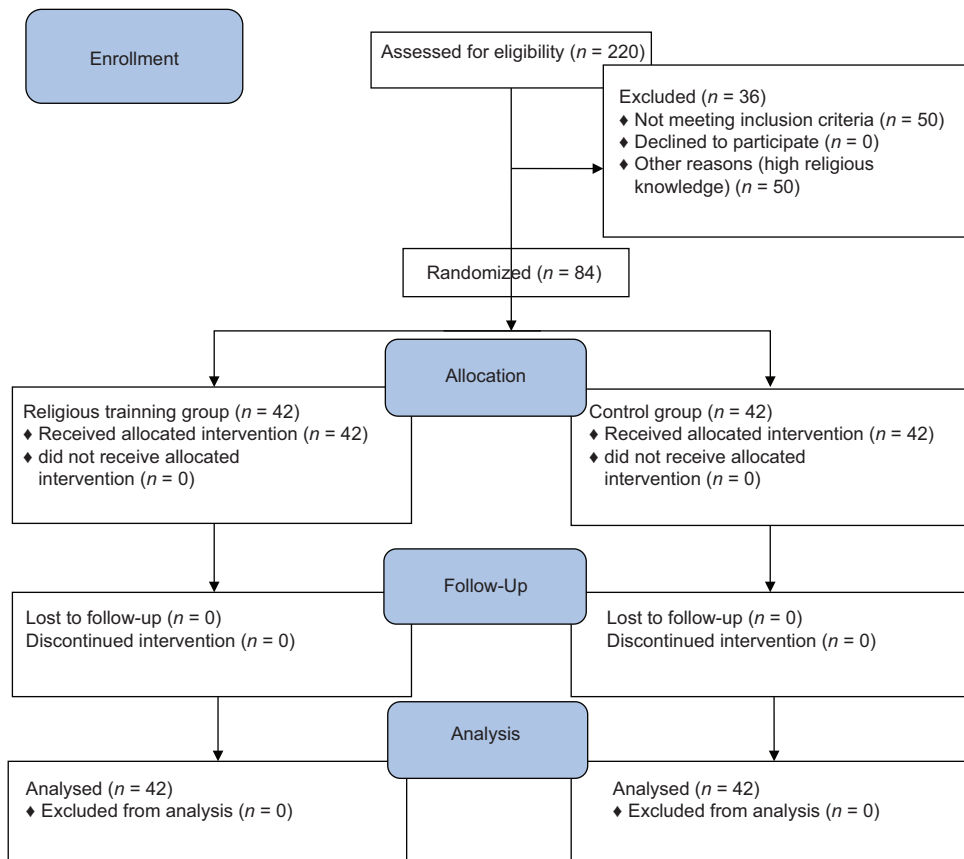


Figure 1: The study Research community protocol consort diagram

$$n = \frac{(Z_{1-\alpha/2} + Z_{1-\beta})^2 \times (p_1 \times [1 - p_1] + p_2 \times [1 - p_2])}{(p_1 - p_2)^2}$$

After signing written informed consents, the individuals, based on the inclusion criteria, were enrolled in the study. Sequence sampling was as follows. Without the knowledge of researchers from mother's attitude the final sample was selected in several stages: (1) 220 individuals were selected among those referring to the clinics affiliated with Tehran University of Medical Sciences by purposive sampling. (2) They were randomly divided into a control and an intervention group using the table of random numbers. In doing so, the first qualified individual was allocated to the intervention group and the second one was allocated to the control group (each group with 110 patients). (3) The final sample was obtained after the completion of the two scales (knowledge assessment questionnaire and revised attitude scale-religious (RAS-R)). (4) Initially, 110 samples, 42 participants in each group, with average or weak religious knowledge and attitude were enrolled in the study, while those with high religious knowledge and attitude were excluded. The educational classes were held by selection of each 14 participants.

Both groups completed the demographic questionnaire, Spielberger's anxiety scale, knowledge questionnaire, and RAS-R before and immediately and 2 months after the intervention.

The State-Trait Anxiety Inventory is a common and important construct in the study of the human experience of health and illness.^[17,18] Various studies have shown that it is a sensitive scale for evaluation of the severity of anxiety.^[19,20]

Spielberger's scale which is used for assessment of state and trait anxiety (20 items for each) includes 40 items giving 80 scores. It is scored using a Likert scale, and scores of 0–19, 20–40, 41–60, and 61–80 are assigned to normal, mild, average, and severe anxiety, respectively. The reliability of this scale was obtained as 0.97. The reliability and validity indexes reported by Aghamohammad (2007) are the basis of the present study.^[21]

RAS-R was made by Khodayarifard *et al.*^[22] RAS-R includes 25 items in 6 dimensions of pray, ethics and values, the effect of religion on life and behavior (praying and fasting), social issues, world view and beliefs, and science and religion. This questionnaire is scored through a Likert scale in such a way that scores of 4–5, 1–2, and 3 are given to the options with a positive attitude, options with a negative attitude, and those in between, respectively. The maximum score of this scale is equal to 125. Scores >100, 50–100, and <50 represent high, average, and low religious attitude, respectively. The correlation coefficient of the score of each item and the whole questionnaire score was reliable at 0.0001 level. The reliability of the questionnaire was obtained as 0.948 and 0.933 using Spearman–Brown and Guttman methods, respectively. Besides, its Cronbach's alpha coefficient was computed as 0.954. The reliability and validity indexes reported in Ebrahimi's study were the basis of the current study.^[23]

Knowledge assessment questionnaire was a researcher-made instrument including 41 items in 6 dimensions of pray, ethics and values, the effect of religion on life and behavior (praying and fasting), social issues, world view and beliefs, and science and religion. This questionnaire is scored through a Likert scale in such a way that scores of 4–5, 1–2, and 3 are given to the options with a positive attitude, options with a negative attitude, and those in between, respectively. The maximum score of this scale is equal to 205. Besides, scores >164, 82–164, and <82 represent high, average, and low religious knowledge, respectively. To determine the validity of the questionnaire, it was given to 10 expert professors of schools of nursing and midwifery of Shiraz and Tehran Universities of Medical Sciences. After application of the professors' recommendations, the questionnaire's validity was confirmed. To evaluate the questionnaire's reliability, it was given to 30 pregnant women in a pilot study and its reliability was assessed. In doing so, Cronbach's alpha coefficient was separately computed for different sections of the questionnaire revealing its internal consistency. In addition, the whole questionnaire's reliability was confirmed by Cronbach's alpha = 81%.

In the intervention group, instruction of religious doctrines was started from the 20th to 28th weeks of gestation. The educational classes were held through 6 weekly 60–90 min sessions. The first three sessions were conducted by the researcher, whereas the last three ones were managed by a clergyman. After the end of the classes, the educational content was practiced through role play and group discussion. The content of the educational classes was as follows: First session: Problems during the pregnancy period, importance of pregnancy period in Islamic culture, and recommendations for the pregnancy period (praying, dietary recommendations, and advices for after delivery), second session: Breastfeeding, breastfeeding in Quran, infant's right for breastfeeding, and reward of breastfeeding, third session: Individual ethics (trust, sincerity, gratefulness), importance of mother's characteristics such as good-temperedness, cheerfulness, kindness, modesty, forgiveness, and mental health in pregnancy, fourth session: Collective ethics, good-temperedness, and showing empathy with others, fifth session: Emotional feeling toward God including love of God, fear from God's unhappiness, emotional feeling toward others, emotional feeling toward parents, positive emotion toward one-self, and positive emotion toward the world, and sixth session: Doing one's religious duties, praying (individual praying, fasting), and importance of collective prayers.

Ethics

This research project was approved by the local Ethics Committee of Shiraz University of Medical Sciences and written informed consents were obtained from all the participants. The research proposal no was 92-01-86-6947 and it was financially supported by endocrine and metabolism research center, Shiraz University of Medical Sciences. The research in Iranian Registry of Clinical Trial was registered with registration number: IRCT: 2014030414041N3.

Statistical analysis

After all, the data were analyzed in SPSS statistical software (Version 16.0. Chicago, SPSS Inc); to evaluate the homogeneity of age (independent sample *t*-test), education and level of income, Chi-squared test was used. In addition to comparing the level of knowledge, attitude, and anxiety in the two groups, Independent Sample *t*-test were used.

Results

The results of the demographic data analysis in Table 1 show that the subjects in the cohorts of Intervention and control are homogeneous regarding demographic characteristics and some variables.

To evaluate the religious knowledge and attitudes in pregnant women, *t*-test results [Table 2] indicated that there was no difference in religious knowledge score between the intervention

Table 1: Demographic characteristics of primiparous women in intervention and control groups

Demographic variable	Groups n (%)		P
	Intervention	Control	
Age (year)			
<20	2 (6.1)	8 (22.9)	0.1
21-25	15 (45.5)	18 (51.4)	
26-30	10 (30.3)	8 (22.9)	
>31	6 (18.2)	1 (2.9)	
Education			
Less than diploma	6 (14.3)	12 (30)	0.4
Diploma	22 (52.4)	24 (60)	
BA and higher	14 (33.3)	4 (10)	
Family income (rail)			
<5,000,000	7 (70)	12 (30)	0.7
5,100,000-10,000,000	2 (20)	24 (60)	
>11,000,000	1 (10)	4 (10)	

Table 2: Comparison of religious knowledge scores before and after the intervention and 2 months after completion of the study in the intervention and control groups

Intervention groups score	Groups		PV (between groups)
	Mean±SD		
	Intervention group	Control group	
Before	144.20±17.30	149±12.62	P=0.1, df=82, t=-1.4
Immediately after	195.35±11.53	148±14.52	P=0.001, df=82, t=16.5
PV (inter group: Before and immediately after)	t=15.945, df=82, P<0.0001	t=0.337, df=82, P=0.7371	
After 2 months	190.14±14.92	150.07±12.56	P=0.001, df=82, t=13.3
PV (inter group: Before and after 2 months)	t=13.032, df=82, P<0.0001	t=0.389, df=82, P=0.6979	

SD: Standard deviation; PV: P-value

and control group subjects before the intervention $P = 0.1$; whereas there existed a significant difference between the intervention and control groups after the intervention and 2 months after the study ($P = 0.001$). Independent *t*-test results, as shown in Table 3, indicated that there was no significant difference in the religious attitude score between the two groups of intervention and control before the intervention $P = 0.9$, while between the intervention and control groups after the intervention ($P = 0.001$) and 2 months after the study there was a significant difference ($P = 0.001$).

In evaluating the anxiety level in the intervention group after training, the state anxiety in severe anxiety declined from 7.1% to 2.4% while the moderate anxiety remained unchanged (40.5%) and the mild anxiety changed from 52.4% to 57.1%. Thus, a slight increase in the state anxiety suggested that the volume of severe anxiety was reduced in the intervention group. In the control group, severe anxiety increased from 9.5% before the intervention to 11.9% after the intervention and to 24.4% within 2 months after the intervention. Moderate state anxiety in the control group increased from 66.7% before the intervention to 64.3% after the intervention and to 71.4% within 2 months after the intervention. Mild anxiety individuals reduced in size due to allocation of more individuals in the moderate and severe anxiety groups.

The severe trait anxiety of individuals in the intervention group after religious education decreased from 7.1% to 0% and the reduction remained constant 2 months after completion of the intervention. However, the moderate trait anxiety of the individuals increased from 47.6% to 73.8% after the intervention and then remained fixed for up to 2 months after completion of the training. Moreover also, mild personality anxiety slightly increased from 19% to 29% after the intervention and the volume reduced to 10% 2 months after the intervention. Finally, the volume of more severe personality anxiety reduced in the intervention group.

Severe anxiety in the control group increased from 14.3% before the intervention to 16.7% after the intervention and to 23.8% within 2 months after the intervention. In the control group, moderate personality anxiety had increased from 59.5% before the intervention to 64.3% after the intervention and 73.8% after 2 months of completion of the intervention. Furthermore, the number of individuals in the mild trait anxiety reduced and this was due to allocation of more people in the moderate and severe anxiety group.

In evaluating the level of anxiety in pregnant women, the independent *t*-test results in Table 4 show that there was a significant difference in the state anxiety score in primigravida women between the intervention and control groups before the intervention, ($P = 0.002$); so, between the two cohorts of intervention and control after the intervention ($P = 0.001$) and 2 months after the intervention there was a significant difference

($P = 0.001$). The independent t -test results in Table 5 has shown that personality anxiety scores between the two cohorts

Table 3: Comparison of the religious attitude score before and after the intervention, and 2 months after completion of the study in the intervention and control groups

Intervention groups-score	Groups		PV (between groups)
	Intervention group	Control group	
Before	86.9±13.91	85.88±10.23	$P=0.9$, $df=82$, $t=0.08$
Immediately after	111.50±79.9	86.30±9.87	$P=0.001$, $df=82$, $t=11.7$
PV (inter group: Before and immediately after)	$t=1.966$, $df=82$, $P=0.0527$	$t=0.191$, $df=82$, $P=0.8486$	
After 2 months	108.54±11.60	86.54±9.84	$P=0.001$, $df=82$, $t=9.3$
PV (inter group: Before and after 2 months)	$t=7.743$, $df=82$, $P<0.0001$	$t=0.301$, $df=82$, $P=0.7639$	

SD: Standard deviation; PV: P-value

Table 4: Comparison of state anxiety scores before and after intervention and 2 months after completion of the intervention in the control and intervention groups

	Mean±SD		PV (between groups)
	Intervention group	Control group	
Before	41.54±10.33	48.45±9.35	$P=0.002$, $df=82$, $t=-3.2$
Immediately after	38.76±9.21	46.46±9.99	$P=0.001$, $df=82$, $t=5.1$
PV (inter group: Before and immediately after)	$t=1.302$, $df=82$, $P=0.1966$	$t=0.943$, $df=82$, $P=0.3487$	
After 2 months	43.45±8.48	54.04±90.40	$P=0.001$, $df=82$, $t=5.1$
PV (inter group: Before and after 2 months)	$t=1.302$, $df=82$, $P=0.1966$	$t=2.732$, $df=82$, $P=0.0077$	

SD: Standard deviation; PV: P-Value

Table 5: Comparison of personality anxiety scores before and after intervention and 2 months after completion of the intervention in the control and intervention groups

	Mean±SD		PV (between groups)
	Intervention group	Control group	
Before	41.28±9.97	47.23±12.79	$P=0.0197$, $df=82$, $t=-2.3$
Immediately after	36.16±8.79	49.23±11.11	$P=0.001$, $df=82$, $t=-5.9$
PV (inter group: Before and immediately after)	$t=2.496$, $df=82$, $P=0.0145$	$t=0.765$, $df=82$, $P=0.4464$	
After 2 months	44.30±8.84	54.2±10.10	$P=0.001$, $df=82$, $t=-5.9$
PV (inter group: Before and after 2 months)	$t=1.469$, $df=82$, $P=0.1457$	$t=2.772$, $df=82$, $P=0.0069$	

SD: Standard deviation; PV: P-Value

have no difference preintervention ($P = 0.0197$) so, between the intervention and control cohorts after the intervention ($P = 0.001$) and 2 months later there existed a significant difference ($P = 0.001$).

Discussion

Based on the obtained results in this study, religious education has led to an increase in religious knowledge and attitudes among pregnant women. Therefore, an increase in the knowledge and attitudes of pregnant women indicated the influence of religion on them. In the control group which had equal qualifications as the intervention group but instead of attending religious teachings was given only routine cares, no increase in the religious knowledge and attitudes was observed. The results indicated that by using religious education, the religious knowledge, and attitudes of participants in the training group in comparison with the controls went up and after 6 sessions of training, both state and trait anxiety have reduced. Severe state anxiety in the first trimester of pregnancy in the intervention cohort ceased, and the individual stages of anxiety were in the range of mild and moderate, whereas those in the control group in the third trimester of pregnancy had 21.4% of severe state anxiety and 23.8% of severe trait anxiety.

In a study on 4132 individuals aged 65 and older in Canada, who regularly worshiped and participated in the religious gatherings, it was demonstrated that they suffered less from depression while there was no relationship between depression and worship. The depression was obvious among those who only listened to the religious radio and watched religious TV.^[24] Involvement in religious rituals, social ties and social support from the religious gatherings may strengthen the beliefs and religious practices.^[25] In another study, it was indicated that belief or faith in God or reading or reciting Bible and strong connection with the church could help the hospitalized medically ill patients.^[26] Several groups of researchers by reviewing the studies have concluded that religious beliefs and religious practices have a positive impact on people's physical and mental health status.^[27-30]

A longitudinal study was conducted on 1091 secular individuals from East Baltimore in Canada from 1981 to 2004. The study participants attended religious worship gatherings at least once a year. Using a questionnaire, it was revealed that how often the individuals participated in the religious worship gatherings and to what extent the comfortable feelings and peace increased in them (confidence interval: 0.31–0.99 adjusted odds ratios = 0.55, 95%).^[31] The results of the mentioned study were consistent with those of this study.

In a longitudinal study on 69 women in the 28–40 weeks of gestation and older than 18 years in Latin America, the relationship between spirituality and psychological, social, and maternal outcomes was investigated. In this study, 65% of the participants had high and moderate religious tendencies and

71.4% had spiritual tendencies and adhered to moral principles. The other results showed that:

- Spiritual: Religious values revealed a significant correlation with social protection and the average time of delivery, with perceived stress and depressive symptoms and the increased average birth weight. The results of this study are consistent with ours in reducing the mothers' anxiety.^[32]

This cross-sectional study (2005) was carried out on 300 pregnant women referring to 6 health care centers of Iran University of Medical Sciences in Tehran, in the field of Health knowledge of Islam during pregnancy period. The results showed that knowledge of 20.6% of the participants was fine, and that of 64.7% and 14.7% was average and poor. Health knowledge of Islam during lactation was 3.6% good, 77% moderate, and 16.7% were poor. Furthermore, it was shown that in 91.7% of the mothers who recited Quran anxiety was reduced during pregnancy. The results of this study are consistent with our findings in reducing the anxiety of the mothers and the importance of education in religious teachings during pregnancy together with medical training.^[33]

In a meta-analysis conducted in the field of mental health and religious studies, results showed a positive relationship between religion and mental health in 47%, in 23% of them there was a negative relationship, and in 30% no significant relationship was observed.^[34]

Evaluation studies show that religious concerns can have a protective effect on anxiety and depression during pregnancy. Spiritual-religious values had an inverse relationship with the perceived stress. So, to raise knowledge and improve mental health during pregnancy and postpartum, training programs for prenatal care associated with Islamic teachings and training of health staff are also recommended.

In the end, it is recommended that pregnant women with spirituality can cope with the stress in pregnancy and spend pregnancy and postpartum period with more comfort. Hence, medical teams can double the effectiveness by appealing to religious culture in addition to the gained science and knowledge.

Conclusions

The study findings have indicated that religious teachings could enhance relaxation in pregnant women. Furthermore, women who were trained showed a good resistance against pregnancy and severe anxiety; in general, the level of anxiety was reduced in comparison with the group who had received no training. This can act as a guide for planners and health authorities of the country to emphasize more on religious beliefs in the health education programs for pregnant women and use the strategic element of religion in counseling with mothers with mental health disorders.

Acknowledgment

This article is a part of Research Project, (IRCT: 2014030414041N3). Researchers appreciate Research and Technology Department of Shiraz University of Medical Sciences. Authors would like to thank Community-Based Psychiatric Care Research Center of Shiraz University of Medical Sciences for financially supporting the research. The authors would like to thank the Center for Development of Clinical Research of Nemazee Hospital and Dr. Nasrin Shokrpour for editorial assistance.

Financial support and sponsorship

The study was financially supported by the Research Vice-chancellor of Shiraz University of Medical Sciences, Shiraz, Iran.

Conflicts of interest

There are no conflicts of interest.

References

1. Cantwell R, Cox JL. Psychiatric disorder in pregnancy and the puerperium. *Curr Obstet Gynaecol* 2003;13:7-13.
2. Goland RS, Jozak S, Warren WB, Conwell IM, Stark RI, Tropper PJ. Elevated levels of umbilical cord plasma corticotropin-releasing hormone in growth-retarded fetuses. *J Clin Endocrinol Metab* 1993;77:1174-9.
3. McCubbin JA. Prenatal maternal stress hormones, risk for hypertension, and the neonatal pain response: Comment on France *et al.* Maternal family history of hypertension attenuates neonatal pain response. *Pain* 2009;142:173-4.
4. Catalano R, Bruckner T, Hartig T, Ong M. Population stress and the Swedish sex ratio. *Paediatr Perinat Epidemiol* 2005;19:413-20.
5. Kohman RA, Tarr AJ, Day CE, McLinden KA, Boehm GW. Influence of prenatal stress on behavioral, endocrine, and cytokine responses to adulthood bacterial endotoxin exposure. *Behav Brain Res* 2008;193:257-68.
6. Couret D, Jamin A, Kuntz-Simon G, Prunier A, Merlot E. Maternal stress during late gestation has moderate but long-lasting effects on the immune system of the piglets. *Vet Immunol Immunopathol* 2009;131:17-24.
7. Mueller BR, Bale TL. Early prenatal stress impact on coping strategies and learning performance is sex dependent. *Physiol Behav* 2007;91:55-65.
8. Kapoor A, Kostaki A, Janus C, Matthews SG. The effects of prenatal stress on learning in adult offspring is dependent on the timing of the stressor. *Behav Brain Res* 2009;197:144-9.
9. Nierop A, Wirtz PH, Bratsikas A, Zimmermann R, Ehlert U. Stress-buffering effects of psychosocial resources on physiological and psychological stress response in pregnant women. *Biol Psychol* 2008;78:261-8.
10. Cunningham FG, Kenneth JL, Steven LB, John CH, Dwight JR, Catherine YS. *Williams Obstetrics*. 23rd ed. New York: McGraw-Hill, Parkland Hospital; 2010.
11. Van den Bergh BR, Mennes M, Oosterlaan J, Stevens V,

- Stiers P, Marcoen A, *et al.* High antenatal maternal anxiety is related to impulsivity during performance on cognitive tasks in 14- and 15-year-olds. *Neurosci Biobehav Rev* 2005;29:259-69.
12. Austin MP, Hadzi-Pavlovic D, Leader L, Saint K, Parker G. Maternal trait anxiety, depression and life event stress in pregnancy: Relationships with infant temperament. *Early Hum Dev* 2005;81:183-90.
 13. Robertson E, Grace S, Wallington T, Stewart DE. Antenatal risk factors for postpartum depression: A synthesis of recent literature. *Gen Hosp Psychiatry* 2004;26:289-95.
 14. Koenig HG, Hays JC, George LK, Blazer DG, Larson DB, Landerman LR. Modeling the cross-sectional relationships between religion, physical health, social support, and depressive symptoms. *Am J Geriatr Psychiatry* 1997;5:131-44.
 15. Janbozorgi M. Religious orientation and mental health. *J Fac Med* 2007;31:345-50.
 16. Koenig HG. Religion, spirituality, and health: The research and clinical implications. *ISRN Psychiatry* 2012;2012:278730.
 17. Spielberger CD, Gorsuch RL, Lushene R, Vagg PR, Jacobs GA. *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press, Inc.; 1983.
 18. Giakoumaki O, Vasilaki K, Lili L, Skouroliakou M, Liosis G. The role of maternal anxiety in the early postpartum period: screening for anxiety and depressive symptomatology in Greece. *J Psychosom Obstet Gynaecol*. 2009;30:21-8.
 19. Marteau TM, Bekker H. The development of a six-item short-form of the state scale of the Spielberger State-Trait Anxiety Inventory (STAI). *Br J Clin Psychol* 1992;31(Pt 3):301-6.
 20. Bayrampour H, McDonald S, Tough S. Risk factors of transient and persistent anxiety during pregnancy. *Midwifery* 2015;31:582-9.
 21. Kalkhoran MA, Karimollahi M. Religiousness and preoperative anxiety: A correlational study. *Ann Gen Psychiatry*. 2007;6:17.
 22. Khodayarifard M, Bonab BG, Yekta MS, Faghihi AN, Beh-Pajooh A, Afrooz GA. Developing a religiosity scale for Iranian College student. *Procedia Soc Behav Sci* 2013;82:432-5.
 23. Ebrahimi A, Doost HN, kalantari M, Molavi H, Asadolahi GH. Factor structure, reliability and validity religious attitude scale. *Isfahan Univ* 2008;10:107-16.
 24. Koenig HG, Larson DB. Religion and mental health: Evidence for an association. *Int Rev Psychiatry* 2001;13:67-78.
 25. Ellison CG. Religious involvement, social ties and social support in a Southeastern community. *J Sci Study Relig* 1994;33:46-61.
 26. Koenig HG, Cohen HJ, Blazer DG, Pieper C, Meador KG, Shelp F, *et al.* Religious coping and depression among elderly, hospitalized medically ill men. *Am J Psychiatry* 1992;149:1693-700.
 27. Gundersen L. Faith and healing. *Ann Intern Med* 2000;132:169-72.
 28. Matthews DA, McCullough ME, Larson DB, Koenig HG, Swyers JP, Milano MG. Religious commitment and health status: A review of the research and implications for family medicine. *Arch Fam Med* 1998;7:118-24.
 29. Vasegh S, Mohammadi MR. Religiosity, anxiety, and depression among a sample of Iranian medical students. *Int J Psychiatry Med* 2007;37:213-27.
 30. Musick DW, Cheever TR, Quinlivan S, Nora LM. Spirituality in medicine: A comparison of medical students' attitudes and clinical performance. *Acad Psychiatry* 2003;27:67-73.
 31. Park JI, Hong JP, Park S, Cho MJ. The relationship between religion and mental disorders in a Korean population. *Psychiatry Investig* 2012;9:29-35.
 32. Dalmida SG, Robertson B, Carrion MM, Thompson WW, Erskine NL, Scruggs NJ, *et al.* Spirituality, religiousness, psychosocial factors and maternal-infant outcomes in Latina mothers. *Southern Online Journal of Nursing Research*, 2010;10:1-19.
 33. Tehran HA, Seidi M, Abedini Z. Assessment of the knowledge and attitude of the pregnant women who referred to Iran University of medical sciences in 2005 toward Islam's hygienic instructions during their pregnancy and breast feeding periods. *J Shahrekord Univ Med Sci* 2007;9:29-37.
 34. Payne IR, Bergin AE, Bielmea KA, Jenkins PH. Review of religion and mental health: Prevention and the enhancement of psychosocial functioning. *Prev Hum Serv* 1991;9:11-40.