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The comparison of fear of childbirth and sense of coherence among low-risk and high-risk pregnancy women

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Abstract:

INTRODUCTION: Childbirth fear is one of the major problems during pregnancy and postpartum, and it assesses the sense of management coherence in stress. Therefore, the present study was conducted to compare the association between the sense of coherence and childbirth fear in high-risk and low-risk pregnant women.

MATERIALS AND METHODS: This was a cross-sectional correlation study performed on 440 low-risk and high-risk pregnant women referred to health centers in Isfahan in 2016. Sampling was carried out in several stages and clustered and accessible. The data gathering tool was Sense of Coherence and Fear of Childbirth Questionnaires.

RESULTS: The results showed that in high-risk pregnant women, the mean score of the sense of coherence was 108.23 and the fear of delivery was 41.7, and in low-risk pregnant women, the sense of integrity and fear of delivery were 19.109 and 42.25, respectively. In addition, the results of *t*-test showed that there is no significant relationship between the fear of delivery in high-risk and low-risk pregnant women ($P = 0.056$), while there is a significant relationship between sense of coherence score in high-risk and low-risk pregnant women ($P = 0.02$).

CONCLUSION: Having the desired level of success, happiness, well-being, ability to cope with stress and overcoming psychological crisis, and pleasant social relationships can increase the sense of coherence in pregnant mothers.

Keywords:

Fear of childbirth, high risk, low risk, pregnancy, sense of coherence

Introduction

Pregnancy is one of the most important and stressful periods in women's life courses. Women's different psychological statuses during pregnancy and the stresses of this era can directly or indirectly affect maternal or fetal health and postpartum years.^[1] Most women, especially nulliparous women, experience a logical fear due to unfamiliarity with the labor process. This fear is naturally controlled during

pregnancy and childbirth. Irrational fears are revealed in the form of daily anxiety, nightmares, and physical symptoms that often cause the mother to demand elective cesarean section delivery. Even occasionally, severe phobia of delivery leads to avoidance of pregnancy and motherhood or denial of pregnancy. Some researchers believe that the fear of delivery has increased in the new generation, while others believe that its prevalence has always been fixed.^[2] In general, fear of labor is one of the major problems during pregnancy and after delivery. It is estimated that one out of every

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five pregnant women has fear of childbirth.^[3] In most women, childbirth is accompanied by increased pain, prolonged delivery, and unsightly labor experiences. In addition to the physical effects of childbirth fear, it has a significant relationship with depression, anxiety, and eating disorders.^[4] Women who experience fear of childbirth are very vulnerable to increased surgical interventions and labor outcomes.^[5] More than 80% of women with low-risk pregnancies experience some fear of childbirth, and in 60% of cases, this fear causes severe complications. Experience has shown that fear is often due to ignorance, and creating insight leads to overcoming fear.^[4]

Researchers believe that anxiety and fear during pregnancy can increase arterial blood pressure and reduce uterine-placental blood flow and increase the resistance of placental vessels. That all of these factors can be attributed to embryonic growth restriction and fetal asphyxia.^[6] Statistics of high-risk mothers in Iran who require special care are 76.6%.^[7] The risk of increased psychosis, anxiety, depression, sleep and nutrition disorders, phobia, and loneliness in high-risk group of pregnant women is high.^[8] High-risk pregnancy women include women under the age of 18 and over 35, the number of pregnancy >5 times, women with a history of premature labor, late delivery, having insult in recent pregnancy, the presence of preeclampsia symptoms, women with urinary tract infection, drug, alcohol, and tobacco addicts, weight below 50 kg before pregnancy, short-height mothers (<150 cm), and improper weight gain or overweight during pregnancy.

In this regard, one of the effective factors that can help pregnant women to confront with pregnancy and childbirth stresses and reduce the psychological stresses caused by it such as fear of delivery is the sense of coherence. In fact, sense of coherence is known as a pleasant sensation that can increase the self-efficacy for labor and delivery satisfaction.^[9-11]

The sense of coherence is defined as a personal orientation to life. The formation of the sense of coherence concept returns to 1970. Sense of coherence was raised by Aaron Antonovsky. He emphasizes that sense of coherence can explain why a person can survive a high degree of stress and stay healthy.^[12] People with a strong sense of integrity will be able to understand and manage the situation by using available resources in the coping with a stressor, and this will keep him/her healthy.^[13] The sense of coherence is the tendency of individuals to perceive their world as understandable, manageable, and meaningful. According to Antonovsky's theory (1987), the sense of coherence is an inner experience that gradually grows during youth, until it reaches a relatively stable quality in a person. Another important point is that the intensity

of the sense of coherence is continuously influenced by external events and the individual's response to these events.^[14]

Krantz and Ostergren, about the association between sense of coherence and health, have shown that a high sense of coherence increases the tendency to better and more effective management of stress, while a low sense of coherence increases vulnerability to the patient. High scores in sense of coherence have a high association with health factors in the field of psychology and medicine.^[15]

Therefore, with regard to the mentioned cases, and since the care of pregnant women is the midwives' responsibility, which itself requires the recognition of the psychological factors of pregnant women during pregnancy and postpartum, the aim of this study was to determine the relationship between childbirth fear and sense of coherence in high- and low-risk pregnant women.

Materials and Methods

This cross-sectional study was conducted on 440 low- and high-risk pregnant women during 2016. Sampling was carried out in multistage cluster sampling and accessible method. From the four hospitals (Alzahra, Amin, Eisan ibn Maryam, and Beheshti) with hospitalization department of high-risk pregnant women, 2 hospitals (Alzahra and Shahid Beheshti) were randomly selected and then samples were collected from each hospital, by the available method. For low-risk pregnant women, health centers number 1 and 2 were considered as clusters and then, from each cluster, two urban health centers were randomly selected using a random number table. Then, sixty pregnant women were randomly selected from each urban health center in a convenient and easy way. Due to the lack of a relevant study, after the guideline study on ten pregnant women and after determining the correlation coefficient between the variables and the acceptable error of 5% and precision of 95%, 240 persons were selected from each group as a final sample size.

It should be noted that in the low-risk mothers' group, ten persons were highly fatigued and ten persons completed the questionnaire because of their physician's turn (according to mother's words). In the high-risk mothers' group, ten persons because of impatience and ten persons because of lack of satisfaction and fatigue refused to complete the questionnaire. Finally, in each group, 220 persons completed the questionnaire. The inclusion criteria in low-risk mothers were the following: being Iranian and Muslims, primipara, aged between 18 and 35 years, no history of neuropsychiatric disease, not using psychiatric drugs, lack of medical conditions

associated with pregnancy and other disease, and no history of infertility.

The study tools were Demographic and Perinatal Profile Questionnaire and Antonovsky's Sense of Coherence and Fear (attitude) of Childbirth Questionnaire. Demographic and Perinatal profile questionnaire was determined by content validity method. The Fear of Childbirth Questionnaire was scored between 16 and 64 that a higher score on this questionnaire means that the person had more fear of childbirth. The content validity of the questionnaire was confirmed by Taheri *et al.* (2015); its reliability had been confirmed with $r = 0.8$.^[16] We also used the Antonovsky's Sense of Coherence Scale that has 29 items and is used to measure the sense of coherence based on a five- point Likert scale. Its score ranges between 29 and 203. In addition, the content validity of the questionnaire was confirmed by Alipour and Sharif (2012); its reliability had been confirmed by test-retest method ($r = 0.79$)^[12] so that the researcher, after obtaining a permit for sampling, referred to health centers and hospitals and called for all pregnant women to participate in the study. Then, the goals for the research units were explained and, if they were willing to participate in the study, written consent was taken. In the next stage, if they had the criteria for entering study, Demographic and Perinatal Profile Questionnaire and Antonovsky's Sense of Coherence and Fear (attitude) of Childbirth Questionnaire were completed. At the end, supplementary questionnaires were gathered. Data were analyzed by Pearson's correlation coefficient using SPSS software version 16 (SPSS Inc., Chicago, IL, USA).

Results

The mean \pm standard deviation of the maternal age was 26.95 ± 6.4 years; spouse age was 32.51 ± 6.33 years and gestational age was 28.5 ± 1.33 weeks. In addition, the mean weight was 61.39 ± 1.31 kg and the mean height was 160 ± 6 cm.

Nearly 75% of the participants completed a high school diploma and family income was modest. Almost 80% of the mothers were housekeeper and the place was 60% private. The results of *t*-test showed that there was no significant difference between mother's age ($P = 0.23$), spouse's age ($P = 0.43$), gestational age ($P = 0.14$), and body mass index ($P = 0.17$) in low- and high-risk pregnant women.

In this study, the results of *t*-test showed that there was a significant difference between the mean score of sense of coherence in 2 groups of low- and high-risk pregnant women, but there was no significant difference between the scores of fear of childbirth in the 2 groups of mothers [Table 1].

In addition, the results of Spearman's correlation coefficient test showed that there was no significant correlation between fear of childbirth and the sense of coherence in the 2 groups of low- and high-risk pregnant women ($P = 0.188$ and $P = 0.792$, respectively).

Furthermore, in order to control the confounding variables, all quantitative and qualitative variables in each group of low- and high-risk pregnant women entered the general linear regression model [Table 2].

Discussion

A study by Takegata *et al.* (2014) on 240 healthy pregnant women in Japan showed a negative significant relationship between sense of coherence and fear of childbirth so that the higher the sense of coherence is, the lower the fear of delivery.^[11] Sense of coherence is a general orientation toward life rather than a personality trait. This sense preserves the person's health in the face of stressful life events. These studies, on the other hand, show a strong relationship between the sense of high coherence and the reduction of maternal mortality and, on the other hand, the link between low sense of coherence and greater vulnerability to stressful cases. By increasing the sense of coherence, we can help in the better management of pregnancy and the improvement of pregnancy.

Higher coherence seems to be more effective in women with high-risk pregnancies than low-risk pregnancies.

Table 1: Frequency distribution of fear of childbirth and sense of coherence in low- and high-risk pregnant women

Variables	Mean \pm SD		t-test (P)
	Low-risk pregnant women	High-risk pregnant women	
Fear of childbirth	41.7 \pm 6.0	42.2 \pm 6.0	0.056
Sense of coherence	108.2 \pm 16.0	119.0 \pm 16.8	0.021

SD=Standard deviation

Table 2: Factors related to fear of delivery and sense of coherence based on Generalized linear model: Regression coefficients

Parameters	High-risk pregnant women			Low-risk pregnant women			P
	P	SE	B	P	SE	B	
Maternal age	0.031	1.622	0.08	0.010	2.602	0.08	0.064
Spouse age	0.321	1.023	0.28	0.32	1.021	0.21	0.311
BMI	0.302	0.125	0.314	0.65	0.25	0.36	0.127
Gestational age	0.120	2.031	0.36	0.24	1.036	0.17	0.325
Educational level	0.154	1.025	0.15	0.65	3.02	0.25	0.789

SE=Standard error, BMI=Body mass index

According to the results of this study, there was no significant difference in the sense of coherence in high- and low-risk pregnant women, but there was a significant relationship between the mean score of sense of coherence between low- and high-risk pregnant women. The sense of coherence in this study refers to the perception and emotion of a mother, which makes her life understandable, controllable, and meaningful and increases her ability to cope with stressful conditions (pregnancy, especially high-risk pregnancy). And this, in turn, increases the tolerance of the baby's illness for the mother.

As a result, mothers who lack a sense of coherence lose the ability to cope with these conditions.

Gavam and Goradel (2014) conducted a study on 122 pregnant women to investigate the role of the metacognitive beliefs and positive and negative emotions in fear of delivery in first delivery women. The results showed that there was a significant relationship between fear of delivery and metacognitive beliefs.^[17] During each woman's life, there are steps that have profound effects on her life. For example, the period of pregnancy and afterward is accompanied by very important physiological and psychological changes that despite the feeling of pleasure of being, sometimes come with stress and extreme fears. Pregnancy is a major part of women's life and the severity of this stress is higher in the third trimester. Even stress from the birth of the first child, in the psychosocial stress tables, is classified as severe stress.^[18]

Avaznejad *et al.* conducted a study in 2015 on 300 mothers to compare the sense of coherence in mothers that have healthy children and mothers that have children with chronic diseases.

The results showed that the sense of coherence of the mothers with the sick child was reduced compared to mothers with a healthy child, and mothers with a sick child need more support than fathers during diagnosis, confirmation, treatment, and rehabilitation.^[19]

The results of Olsson and Hwang's study found that the sense of coherence in a parent with a mentally impaired child is lower than that of healthy children, and parents with a sick child are more at risk of depression. It was also found that parental perception of the theory of sense of coherence would help parents maintain more adaptability in different mental conditions.^[20] Delgado's study showed that the sense of high coherence and spirituality was related to low stress and high quality of life. Neither sense of coherence nor spirituality had a significant relationship with the intensity of the symptoms. As

a result, psychological factors are important in the cognitive interpretation of patients.^[21]

According to Toohill *et al.*, trained midwives can effectively reduce the level of fear of high birth and increase confidence in pregnant women from mid to late pregnancy by listening and responding to women's emotions.^[22] The strength of the present study was selection of mothers with first-child delivery in both groups, since having experience could have an effect on the outcome of the fear of childbirth and the sense of coherence.

Differences in individual characteristics, psychological status of research units in completing questionnaires, as well as the selection of limited health centers as accessible and thus limiting generalization to the whole society can be the limitations of the study.

Conclusion

Regarding the results of the present study, there was no significant relationship between fear of delivery in 2 groups of low- and high-risk pregnant women, but there was a significant relationship between sense of coherence in 2 groups. Therefore, it can be said that having the desired level of success, happiness, well-being, ability to cope with stress and overcoming psychological crisis, and pleasant social relationships can increase the sense of coherence in pregnant mothers.

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Conflicts of interest

There are no conflicts of interest.

References

1. Mohamadirizi S, Dehnavi ZM, Torabi F, mohamadirizi M. The relationship between spiritual intelligence and fear of childbirth in low-risk pregnant women. *J Babol Univ Med Sci* 2017;19:26-31.
2. Ghazaie M, Davoodi I, Neysi A. The effectiveness of cognitive-behavioral therapy on fear of childbirth, fear of pain, self-efficacy of childbirth and tendency to caesarean in nulliparous women. *Iran J Obstet Gynecol Infertil* 2016;19:1-12.
3. Mohamadirizi S, Kordi M, Shakeri MT, Modares-Gharavi M. The relationship between eating disorder symptoms and obsessive compulsive disorder in Primigravida women. *Iran J Nurs Midwifery Res* 2015;20:642-6.

4. Mojibian M, Karimi M. The relationship between Stress during pregnancy with level of IgE of infants blood of navel. *J Shahid Sadooghi Yazd Univ Med Sci* 2012;85:142-6.
5. Wachholtz AB, Pargament KI. Migraines and meditation: Does spirituality matter? *J Behav Med* 2008;31:351-66.
6. Marx H, Wiener J, Davies N. A survey of the influence of patients' choice on the increase in the caesarean section rate. *J Obstet Gynaecol* 2001;21:124-7.
7. Akbarzade M, Toosi M, Zare N, Sharif F. Effect of relaxation and attachment behaviors training on anxiety in first-time mothers in Shiraz city: A randomized clinical trial. *Qom Univ Med Sci J* 2013;6:14-23.
8. Heron J, O'Connor T, Evans J, Golding J, Glover V. The course of anxiety and depression through pregnancy and the postpartum in a community sample. *J Affect Disord* 2004;80:65-73.
9. Mirzaee F. *High Risk Pregnancy*. 33rd ed. Tehran: Nore Andisheh Pub; 2009.
10. Sekizuka N, Nakamura H, Shimada K, Tabuchi N, Kameda Y, Sakai A. Relationship between sense of coherence in final stage of pregnancy and postpartum stress reactions. *Environ Health Prev Med* 2006;11:199-205.
11. Takegata M, Haruna M, Matsuzaki M, Shiraishi M, Okano T, Severinsson E, *et al.* Antenatal fear of childbirth and sense of coherence among healthy pregnant women in Japan: A cross-sectional study. *Arch Womens Ment Health* 2014;17:403-9.
12. Alipour A, Sharif N. Validity and reliability of the sense of coherence (SOC) questionnaire in university students. *Pajoothane* 2012;17:50-6.
13. Khanjari S, Mosavlpour SS, Oskouie F, Haghani H. Quality of life and sense of coherence in the mothers with term and preterm infants. *Iran Journal of Nursing* 2017;30:57-67.
14. Alireza AY, Nasim S. Analysis of the relationship between sense of coherence and emotional intelligence in university students. *Psychol Stud* 2011;7:51-73.
15. Krantz G, Ostergren PO. Does it make sense in a coherent way? Determinants of sense of coherence in Swedish women 40 to 50 years of age. *Int J Behav Med* 2004;11:18-26.
16. Taheri Z, Khorsandi M, Amiri M, Hasanzade A. Investigating the causes of fear of childbirth in Shahrekord pregnant women, in 2013: A short report. *J Rafsanjan Univ Med Sci* 2015;14:345-50.
17. Gavam SD, Goradel JA. The role of metacognitive beliefs and positive and negative affect in the Fear of childbirth of pregnant women with first experience. *Nurs Res* 2014;9(3):10-18.
18. Pournamdarian S, Birashk B, Farid AA. The clarification of contribution of metacognitive beliefs in explaining the symptoms of depression, anxiety and stress in nurses. *Knowl Res Appl Psychol* 2012;13:86-94.
19. Avaznejad N, Ravanipour M, Bahreini M, Motamed N. Comparison of the sense of coherence between mothers with healthy children and mothers of children with chronic disease in Kerman. *Q J Health Res* 2015;2:183-96.
20. Olsson MB, Hwang CP. Sense of coherence in parents of children with different developmental disabilities. *J Intellect Disabil Res* 2002;46:548-59.
21. Delgado C. Sense of coherence, spirituality, stress and quality of life in chronic illness. *J Nurs Scholarsh* 2007;39:229-34.
22. Toohill J, Fenwick J, Gamble J, Creed DK, Buist A, Turkstra E, *et al.* A randomized controlled trial of a psycho-education intervention by midwives in reducing childbirth fear in pregnant women. *Birth* 2014;41:384-94.