Crit Care NursJ. 2018 May; 11(2):e74212. doi: 10.5812/ccn.74212.

Published online 2018 July 24. **Research Article**

Effectiveness of Group Psychological Counseling on the Pregnancy Anxiety and Fear of Vaginal Delivery in the Pregnant Women: A Quasi-Experimental Study

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Received 2018 May 10; **Revised** 2018 July 10; **Accepted** 2018 July 14.

Abstract

Background: In obstetrics, pregnancy and childbirth are the basis for psychological and biological crises and are associated with a high prevalence of anxiety disorders. This study aimed to investigate the effectiveness of group psychological counseling on the level of pregnancy anxiety and fear of vaginal delivery in pregnant women.

Methods: This Quasi-experimental study was done in 2016 on 96 pregnant women (selected via multistage cluster sampling) that had low to medium levels of anxiety and had an average of 28 or higher fear scores from birth labor. The intervention group treated with 5 sessions of group psychological counseling pre-test and post-test were completed by each of the two groups. Independent and paired t-tests were used for analyzing.

Results: Results showed that the psychological counseling could reduce situational and trait anxiety in the intervention group ($P < 0.001$). Inthecontrolgroup,trait($P=0.007$)andsituationalanxiety($P=0.004$)wereincreased. Thedifferenceof situationalandtrait anxiety between two groups was significant ($P < 0.001$). Regarding the fear of childbirth in the intervention group, psychological counseling reduced fear of childbirth significantly ($P < 0.001$). Fear of childbirth showed a slight increase in the control group, and it difference score in two groups was significant ($P < 0.001$).

Conclusions: According to results, psychological counseling was effective in reducing pregnancy anxiety and fear of childbirth. Therefore, it is recommended that the findings were considered by nurses and other medical staffs to improve the health status of pregnant women.

Keywords: Psychology, Pregnancy, Anxiety, Vaginal Delivery

1. Background

Despite the scientific advances around physical problems during pregnancy, psychological problems are the important issues in the health of pregnant women (1). Women's mental health during pregnancy is affected by some factors such as their individual's feelings toward the identity of their femininity, marital life, sexual relationship, and desire to have a child (2). The physical and mental changes experienced by a pregnant woman can affect the level of her anxiety. More than 90% of pregnancy anxiety is related to the delivery process (3). Most women, especially primiparous women, experience a logical fear due to unfamiliarity with the process of delivery (4). Fear of vaginal delivery is a common problem in pregnant women and in most cases, it leads to a request for cesarean section. It is estimated that about 5% to 25% of pregnant women are afraid of vaginal delivery (5). More than 50% of the cesareans in Iran occur without medical reasons (6). An increase in cesarean surgery around the world has resulted into this issue as one of the health system problems (7, 8). Childbirth fear exacerbated delivery pains by releasing catecholamines and a lack of myometre function as well; it will result into the reduction of the ineffective and prolonged pains, the progress of labor, the need for surgical interventions, the need for induction of labor, and unplanned cesarean section (9, 10). The results of the study show that limited therapeutic programs and interventions have been used to prevent and mitigate the mood problems (11). One of these measures is the use of

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drug therapy (12). However, the risks of effective drugs on the mood of pregnant women are unclear during their pregnancy and before this period (13). One of the most effective ways to cope with anxiety and fear is to use non-pharmacological methods (14). Researchers suggest thatthesemethodsusedasanxiety-reducinginterventions in pregnant women can improve their pregnancy results such as the following: yoga, progressive muscle relaxation, massage, meditation, respiratory techniques, aromatherapy, and imaginary therapy (15). Evidence suggests that patients prefer the use of psychological treatments to the pharmaceutical ones during their pregnancy (12). Psychological treatments of pregnancy period can reduce anxiety and depression (16). Based on the results of the study by Delaram et al., counseling with primiparous women during the 3rd quarter of their pregnancy period can reduce their anxiety at the onset of their labor (17). According to theresultsof theabovestudies,itseemsthatgrouppsychological counseling can be effective in decreasing the psychological symptoms in pregnant women who are afraid of normal delivery. Since the fear of normal delivery increases the choice of cesarean section, the awareness level and attitude of the pregnant women in this regard should be increased in order to prevent the maternal and neonatal complications as well as caesarean surgery, which lead into a change of behavior and choice of vaginal delivery. Nurses in relation to pregnant women in critical wards of hospital should take actions for reducing the anxiety and fear of women (18). This can help them for better care actions and improving the health status of the women and infants. Based on mentioned literatures, group psychological counseling may be able to help pregnant women for decreasing anxiety (19, 20). However, no similar studies were published yet in regards to this issue in Iran. Therefore, the present study aimed at determining the effect of group psychological counseling on the pregnancy anxiety and the fear of vaginal delivery in pregnant women.

2. Methods

2.1. Purpose

This Quasi-experimental study was done in 2016 with a pre-test, post-test, and control group aimed at determining the effect of group psychological counseling on the pregnancy anxiety and the fear of vaginal delivery in the pregnant women.

$$n = \frac{\left(Z_{1-\alpha/2} + Z_{1-\beta}\right)^2 (\sigma_1^2 + \sigma_2^2)}{(\mu_1 - \mu_2)^2}$$

Figure 1. Equation

2.2. Sample

The study population consisted of primiparous women who were referred to the health centers in Kerman, Iran. Using a multistage cluster sampling, 10 clinics were selected from the whole and 5 clinics were allocated to each area. Pregnant women who had the criteria were invited to attend the clinic and participate in the study by giving information about it. A total of 96 women were selected (21) and randomly divided into two group including 48 subjects as control and interventional group. At first, 96 random numbers between 0 and 1 were made by computer (Excel software), and then, numbers were printed automatically. An envelope containing a number was given to each subject. Nurses with numbers < 0.5 were assigned into the experimental group and the ones with the numbers > 0.5 were assigned into the control group.

2.3. Sample Size

By the test power of 80% (β) and 5% error (α), the sample size for calculating the mean difference was determined based on a similar study (22).

The inclusion criteria included first pregnancy, aged 18 - 35years, pregnancyagebetween20-35weeks, lackof midwifery problems, lack of special medication, single pregnancy, desired pregnancy, low risk pregnancies, maternal fear score as 28 or higher, women who were not eligible for selective cesarean surgery (21), and having a low to moderate anxiety score based on Spielberger's Anxiety Scale (situational anxiety: score from 31 to 53 and trait anxiety scale: from and 35 to 56 from).

The exclusion criteria included the incidence of pregnancy complications such as bleeding, diabetes, hypertension, preterm labor, intrauterine death, absence in the training classes more than one session, major mental injuries and stress during the intervention period (such as loss of a first-degree relatives, loss of occupation), and delivery of emergency cesarean surgery.

2.4. Instruments

2.4.1. Harman Delivery Attitude Questionnaire

The Harman delivery attitude questionnaire has 14 questions. The answers are in the form of a 4-point Likert scale (never, very low, moderate, high), as the score of each question is between 1 to 4, respectively. Thus, the scores range from 56 to 14. High scores represent more fear. According to the similar research, the median score "28" or more, was considered as a score of fear of giving birth. The reliability of this questionnaire in Iran was 0.85 regarding Cronbach's alpha as well (22). Also the content validity was confirmed (22).

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2.4.2. Spielberger's Anxiety Questionnaire

It has 40 questions, 20 of them refer to the situational anxiety "the feeling of a person who currently has", and 20 questions refer to the personality anxiety "the background anxiety of an individual or her preparedness toward measuring her anxiety as what is its reasons". The answers of these questions are along with four options (very low, low, high and very high), and the score of each option is 1 to 4 points, respectively. Theinterpretationsof thescoresof situational anxiety were 20 to 30 (the lowest anxiety level), 31 to 42 (mild anxiety level), 43 to 53 (moderate anxiety level), and 54 and more (severe anxiety level). In addition, the interpretations of the scores of attribute-anxiety were 20 to 34 (the lowest anxiety level), 35 to 45 (mild anxiety level), 46 to 56 (moderate anxiety), and 57 and more (severe anxiety level). This questionnaire was standardized in Iran by MehramanditsreliabilityregardingCronbach'salphawas 0.91 (23). In Iran, the validity and reliability are repeatedly measured. Rahimi et al. studied and measured the validity and reliability, as its internal consistency for situational anxietyandtraitanxietywas0.9and0.88, respectively(24). No each of samples were loosed in this study.

2.5.Procedure

The intervention was performed in coordination with the pregnant mothers in the first three days of the week, and the control group visited the usual care for the next three days. Since counseling was held on a weekly basis, there was no interference with the usual care of the control group, which was a monthly one. The consultation session included 5 sessions of 60 to 90 minutes in 5 weeks (25) in groups of 4 and 6 persons. The content of counseling sessions includes support (using recommendations forpregnantwomentocalmthem),empathy(understanding the feelings of others), teaching (teaching the pregnant mother's mood and mood changes, preparing a person for motherhood), and sensitizing (23). At the end of thefifthweekof intervention(25), thequestionnaireswere completed again by both groups. During the intervention period, 2 individuals in the control group were in preterm labor and were excluded from the study.

2.6. Ethical Considerations

Thisstudywasconfirmedbytheassociateduniversity's medical sciences ethics committee (Ethic code: 163/1395). Women were informed about the goals and stages of the study so that their participation was voluntary. In addition, a consent form was gathered. Women passed the study's stages in a quiet room. To ensure that a wide range of women were involved in the study, a trained researcher who was a member of the study provided the supplies. All patient information was undetectable by assigning a code to each woman.

2.7.Statistical Analysis

The statistical package for social sciences, version 20.0 (SPSS Inc., Chicago, IL, USA) were utilized for data analysis. First descriptive statistics for continuous variables were shown as means with standard deviation (SD) and n (%) for the categorical variables. Kolmogorov and Shapiro-Wilk tests were used to determine the normality of the data. Independent t-test and paired t-test were used for analysis.

3. Results

The mean age of mothers in the intervention group was 24.97 and in the control group were 24.25. Most women were housewives in both groups. The mean score of situationalanxiety, traitanxiety, totalanxiety, andfearof delivery before intervention were measured in two groups of intervention and control. Then, independent t-test showed that there was no significant difference between two groups before intervention in terms of situational, trait and total anxiety, as well as fear of delivery ($P > 0.05$), thus, two groups were similar before starting the training process.

The results of t-test showed that the mean of situational, trait and total anxiety, as well as fear of delivery at the beginning of the study and after a five-week interval in the control group had a statistically significant differenceforallvariablesotherthanfearof delivery. Thismeans that there was an increase in pregnancy anxiety after a fiveweek interval in the case group, however this increase was minor in the case of fear of delivery.

The results of t-test indicated that there was a significant statistical difference in the mean of situational, trait and total anxiety, as well as fear of delivery before and after intervention in the intervention group. That is, the anxiety and fear of the pregnant women were reduced after the intervention.

By comparing the variables in the two groups after the consultation period, it was determined that the situation, trait and total anxiety, and fear of delivery in the intervention group decreased compared to the control group, which means that the counsel was able to reduce Pregnancy anxiety and childbirth fear.

Table 1. Comparing the Mean Score of Pre-Test and Post-Test of Situational, Trait and Total Anxiety, and Fear of Delivery in the Control Group

Dimension	Group		Paired t-Test	P Value
	Pre-Test of Control Group	Post-Test of Control Group		
Situational anxiety	41.54 ± 2.33	44.35 ± 2.16	6.56	0.004

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Trait anxiety	42.23 ± 2.06	44 ± 2.31	6.23	0.007
Total anxiety	41.89 ± 1.98	44.18 ± 2.23	6.69	0.001
Fear of delivery	39.79 ± 1.55	40.50 ± 1.68	1.22	0.39

Table 2. Comparing the Mean Score of Pre-Test and Post-Test of Situational, Trait and Total Anxiety, and Fear of Delivery in the Intervention Group

Dimension	Group		Paired t-Test	P Value
	Pre-Test of Intervention Group	Post-Test of Intervention Group		
Situational anxiety	42.42 ± 1.65	37.73 ± 0.78	16.63	< 0.001
Trait anxiety	43.52 ± 1.96	38.4 ± 0.96	15.95	< 0.001
Total anxiety	42.97 ± 1.41	37.89 ± 1.15	16.82	< 0.001
Fear of delivery	40.67 ± 1.1	33.33 ± 1.23	15.92	< 0.001

Table 3. Comparing the Mean Score of Situational, Trait and Total Anxiety and Fear of Delivery in the Intervention and Control Group After Counseling Session

Dimension	Group		T-Test	P Value
	Intervention	Control		
Situational anxiety	-10.65	6.9	13.52	< 0.001
Trait anxiety	-12.22	4.16	14.62	< 0.001
Total/whole anxiety	-11.55	5.33	13.96	< 0.001
Fear of delivery	-17.57	2.44	13.32	< 0.001

4. Discussion

Psychological interventions decreased fear of delivery significantly. Childbirth is an individual experience and can create different attitudes for different people. Lack of knowledge about the process of pregnancy and childbirth, not being familiar with the hospital environment, fear of being alone at the time of need, fear of labor pain, and fear of maternal or neonatal harm, are all factors that make panic in pregnant mothers and increase their tendency to caesarean section (8). Getting inaccurate information from others who may be completely different from their pregnancy status, adds to these concerns. In psychological interventions, complete information was given on the process of pregnancy and the recommendation was made to participate in childbirth classes so that individuals could actively participate in the process of delivery and recognize that there could be signs at each stage (13), as well as which is natural and which is abnormal. Hence, in the last sessions, it was observed that the participants were more willing, active, and engaged in discussions and were asking for ambiguities and questions about their problems. As in other studies, it was found that adequate education and increasing awareness of pregnant mothers enabled them to use problem-solving methods in the field of pregnancy and increased self-confidence and self-efficacy of pregnant women (20, 26, 27). The results showed that psychological interventions by midwives or nurses could reduce pregnancy anxiety. Pregnancy anxiety was caused by worries, mental occupations, and individual fears regarding pregnancy, childbirth, infant health, and future childbirth. In most situations, providing information for people and raising their awareness of issues that are causing their anxiety and discomfort will make it easier for a person to face the problems that are going on.

According to similar studies, educational, psychological, or supportive interventions can reduce the level of anxiety and depression associated with pregnancy and increase self-confidence (7, 28). After the post-test, it was found that the control groups' anxiety levels had been increased, and it was found that receiving inaccurate information from inappropriate sites or talking to people who had bad experience and as a result had a bad attitude towards normal delivery, was the cause of the

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issue. In the studies of Rahimi et al. (24) and Akbarzadeh et al. (29), the meanscoresof anxietywasdecreasedintheinterventional group significantly after relaxation therapy, however, it wasalittleincreasedinthecontrolgroup,whichwasinline with this study. However, in the Moghadasi study on pregnant women after experiment, the score of anxiety was decreased in the control group, which was not similar to the present study (30). Some major variables can cause this conflict like perception of anxiety. As our knowledge it was the first study that assessed the effects of psychological counseling on pregnant women in Iran.

4.1. Limitation

Present study also had some major limitations, which included: 1, controlling the emotions and cultural differences between participants; 2, possible carelessness of participants during complete the questionnaires; and 3, small sample size, that may can limit the generalizability of results. Therefore, it is recommended that more research be done for detail assessing of this issue. In addition, qualitative studies can be performed for solving of cultural differences.

4.2. Implications for Psychiatry and Behavioral Sciences Practices, Medical Education and Future Trends

Accordingtotheobtaineddata, itispossibletosuggest the increased health status of pregnant women. It seems that considerable evaluations about performing specific psychological counseling for pregnant women would help increase the mental health levels and decrease the fear and anxiety. It is recommended to percept these factors and add them to an educational chart in universities.

4.3. Conclusion

The results of the study showed that early intervention in women with anxiety during pregnancy and the fear of vaginal delivery can reduce their anxiety and fear and increase their awareness as well as the rate of natural deliveryanddecreasecesareansection,thus,improvingmother and child health and reducing costs.

Acknowledgments

We would like to thank and appreciate all the personnel of the health centers and pregnant women who participated in this project.

Footnotes

Authors' Contribution: Elahe Momeni, Katayoun Alidostishahraki, and Mozhgan Taebi, searching, data gathering, andwritingthemanuscript; MehdiHoseini, andTanya Dahesh, data analysis. All of the authors approved the final version of manuscript.

Funding/Support: All the research financial and material support was supported by Kerman University of Medical Sciences (Kerman, Iran).

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