

The effect of presence of trained husbands beside their wives during childbirth on women's anxiety

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ABSTRACT

Background: Childbirth is accompanied with enormous physical and emotional changes in mothers. Anxiety is the most common problem among these patients. This study was aimed to determine the effect of the presence of trained husbands beside their wives during childbirth on their anxiety.

Materials and Methods: In a randomized control trial, 84 primiparous women were enrolled in childbirth educational classes. Anxiety score was compared among three groups; without accompaniment (control), with accompaniment (doula), and with trained husband's support before hospitalization at the time of admission and during the 4th stage of delivery. Data was analyzed using one-way analysis of variance and least significant difference tests.

Results: The level of anxiety before hospitalization was not significantly different among the three groups (38.6, 39.2, and 38.4, respectively, in without accompaniment, with accompaniment (doula), and with trained husband's support groups). This level was significantly different among groups during hospitalization (36, 42.1, and 59.1, respectively, as per previous groups' order). The level of anxiety in the intervention group at 4th stage of delivery was significantly lower than other groups (31.4 versus 43.3 and 69.2, respectively with $P < 0.001$).

Conclusions: According to the results of this study presence of trained husbands beside their wives during delivery decreased mother's anxiety. It is recommended to use this intervention during childbirth.

Key words: Anxiety, delivery, emotional support, Iran, primiparous women

INTRODUCTION

The process of delivering a baby could be desirable for the pregnant mother or it could be very stressful and painful.^[1] Sometimes, to get rid of this stress, pregnant women prefer to choose caesarian section over natural birth.^[2,3] In a study conducted by Ostovar *et al.*, one of the

main reasons that made women chose caesarian section over natural delivery was the stress, concerns, and pains caused by natural delivery.^[4] Therefore, it is of significant importance to pay attention to the stress and concerns of pregnant women and try to reduce them.^[5]

Different societies have different methods for reducing the tensions during delivery.^[6] Some of these methods are Lamaze relaxation method, induced sleep, hydrotherapy, emotional support, and accompaniment of a relative or even the husband in the delivery room.^[7]

Emotional support in the delivery room could be provided by the midwife, the nurse or the physician, or it could be provided by trained women (Doula), friends, or one of the relatives, family members or pregnant women's husband.^[4,8] The main goal of these emotional supports

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is to reduce the stress and anxiety of the mother during delivery.^[9] The World Health Organization has also recommended that the pregnant woman should be accompanied by someone she trusts and feels safe beside them (friend, partner in life, midwife, nurse, accompanied midwife, or husband).^[10]

Results of a study conducted by Chunuan *et al.* on 114 pregnant women revealed that the presence and support of pregnant woman's family (mother, sister, friend, or husband) during delivery would enhance pain compatibility behaviors, feeling of safety, and satisfaction in the mother, reducing the consequences of delivery, improving the mental and physical health of the mother, and increasing the satisfaction of the mother from the experience of giving birth.^[11]

Results of a study by Bruggemann *et al.* on 212 first time pregnant women showed that having an accompaniment during delivery would increase the satisfaction of pregnant women from the birth of their child. However, this study showed that having a company during delivery would have no effects on infant's outcomes and their breastfeeding.^[12]

Results of another study showed that 27% of pregnant women reported that having an accompaniment during delivery would increase their anxiety.^[13]

Now, the question remains that whether husband's presence during pregnancy has any effects on delivery's outcomes or not. Further, results of other studies have shown that training pregnant women's accompaniment and explaining their roles at the time of delivery to them and the method of providing emotional support would improve the consequences of delivery.^[14,15]

Considering the cultural and structural limitations in our country regarding the presence of husband during the delivery, the emphasis on making delivery time more desirable for the mother, and because few significant evidence-based studies have been conducted in our country or their results have yet not become public, this study was conducted to evaluate the psychological consequences of the presence of trained husband beside their wives during delivery.

MATERIALS AND METHODS

The present study was a three-stage, three-group clinical trial. After obtaining permission from the ethics committee of Isfahan University of Medical Sciences and using statistical formulas, 84 pregnant women were selected by convenience sampling. This study aimed to determine the effect of trained husband's presence beside their wife during delivery on mother's psychological outcomes.

Participants were Iranian, 20–35 years old, experiencing their first pregnancy, 28 to 37 weeks pregnant, had no previous or current mental problems, and had no history of smoking, alcohol, or drug consumption. Participants' fetus were single and head down and their deliveries were simple and the fetus was healthy.^[16,17]

Encountering any stressful event during the study (death or special diseases), delivering before 37 weeks, missing of one educational session by the couples, showing unusual anxiety reactions by the husband, or the accompaniment and husband's absence at least during the active phase of the delivery were the exclusion criteria.

After gaining necessary permissions, the researcher started sampling and contacted the participants on the phone. The participants were randomly allocated into three groups of having a trained husband present during delivery, having an accompaniment during delivery, and not having any accompaniment (control). At this time, the first stage of anxiety questionnaire was completed by mothers of all the groups.

At the first educational session for participants of the intervention group and their husbands, the researcher explained the process of reception at the hospital, delivery procedure, midwifery cares that the mother and the infant would receive at the maternity ward, husband's presence in the delivery room and his role, the method of providing emotional support by the husband, and the probable problems during delivery and hard delivery. At the end of the session, educational pamphlets and slides that were provided by the researcher were handed to the couples for studying at home.

At the second educational session (2 weeks after the first session), the researcher answered the questions, concerns, and possible confusions of pregnant women and their husbands regarding the process of the study. The entire procedure and stages of the study were also explained to the other two groups and a written consent form was filled in case of willingness to participate.

At the admission of the participants to the study, the researcher completed the demographic characteristics questionnaire for the participants that included age, income level, religion, employment status, and educational level, and also completed Spielberger's State-Trait Anxiety Questionnaire. All three groups received the usual cares and measures at the maternity ward. Trained husbands accompanied pregnant mothers during labor, at least during the active phase of delivery, by being near their wives, providing spiritual and emotional support, giving them comfort and confidence, making physical contact

through holding hands, and massaging and encouraging them to cooperate with the delivery team. In the group that had an accompaniment (a friend or a relative), the accompaniment's role was to be present at least during the active phase of delivery, providing spiritual and emotional support, and encouraging the mother to cooperate with the delivery team.

For the group that had no accompaniments, the usual cares were conducted for the mother during delivery by the delivery team. The only difference between this group and the other two groups was not having their husbands or any other accompaniments during labor by their side. After delivery and when mother's condition became stable (fourth phase of delivery), Spielberger's State-Trait Anxiety Questionnaire and The Birth Satisfaction Scale were completed by mothers in all the groups. To evaluate its content validity, The Birth Satisfaction Scale, which included 20 multiple-choice questions, was given to a number of gynecologists, academic members of nursing and midwifery faculty, and working midwives at the university-affiliated maternity center. They were asked to evaluate and correct the face and the content of the questionnaire. A pilot study was conducted and its Cronbach's alpha was calculated for determining the reliability of The Birth Satisfaction Scale (Cronbach's $\alpha = 95\%$).

Data were analyzed through the SPSS, v. 16 (SPSS Inc., Chicago, IL, USA) using one-way analysis of variance (ANOVA) and *post hoc* least significant difference (LSD) tests.

Ethical considerations

Permission to conduct this research has been obtained from the ethics committee of Isfahan University of Medical Sciences.

RESULTS

Eighty four pregnant women were included in this clinical trial. Samples were randomly allocated into three groups of 28 each using a table of random numbers. Results of this study showed that the mean score of anxiety before the intervention in the group without accompaniments was 38.6, in the group with accompaniment was 39.2, and in the group with husband's companion was 38.4. According to one-way ANOVA, the score of anxiety before the intervention had no significant difference between the three groups ($P = 0.88$). The mean score of anxiety during hospitalization in the group with the husband as a companion was 36, in the group with accompaniment was 42.1, and in the group without accompaniment was 59.1; one-way ANOVA showed a significant difference between three groups ($P < 0.001$). *Post hoc* LSD test showed that the mean score of anxiety during hospitalization in the

group with the husband as a companion was significantly lower than the group with accompaniment ($P < 0.001$) and also in the group with accompaniment was significantly lower than the control group ($P = 0.02$). The mean score of anxiety during the fourth phase of delivery was 31.4 in the group with husband's companionship, 43.4 in the group with accompaniment, and 69.2 in the group without accompaniment. One-way ANOVA revealed that the difference between the mean score of anxiety in the group with husband's companion and the other two groups was significant and the score of the group with accompaniment was also significantly lower than the control group ($P < 0.001$). *Post hoc* LSD test showed that the mean score of anxiety during the fourth phase of delivery in the group with husband's companion was significantly lower than the group with accompaniment ($P < 0.001$) and it was also significantly lower in the group with accompaniment than the control group ($P = 0.02$) [Table 1].

DISCUSSION

Results of this clinical trial that was conducted to determine the effect of the trained husband's and Doula's presence by the bed of pregnant women during labor on the psychological outcomes of delivery revealed that the score of anxiety was reduced in the groups with husband's and Doula's companionship in comparison to the control group that could be most likely due to the presence of a Doula and trained husband by their side. This implies that Doulas and especially trained husbands were informed about the procedure of the labor and delivery's dos and don'ts, which reduced the anxiety of the pregnant women, which was not observed in the control group.

The results of a clinical trial by Toosi *et al.*, on 210 first-time pregnant women, that was aimed to evaluate the effect of presence of an accompaniment on anxiety during labor in first-time pregnant women were also similar to the results of the present study; the study showed that the score of anxiety had no significant difference between both the groups before delivery.^[18]

Results of another study regarding obvious anxiety at the time of admission to the hospital were also similar to the present study. According to that study, at the time of admission to the maternity center, the mean score of anxiety in the group with accompaniment was significantly lower than the group without accompaniment ($P = 0.02$). Although the number of groups in that study was different from the present study, the presence of accompaniment at the time of admission to the maternity center did reduce the anxiety of pregnant women.^[12]

Table 1: Level of anxiety in groups

Group time	With husband presence		With companion (Doula support)		Without companion (control)		Test (ANOVA)	
	Mean	SD	Mean	SD	Mean	SD	P	F
Before hospitalization	38.4	5.4	39.2	2.1	38.6	4.2	0.88	0.13
During hospitalization	36	10.7	42.1	11.6	59.1	12.02	<0.001	30.07
During fourth stage of delivery	31.4	4.3	43.4	2.5	69.2	4.7	<0.001	662.5

The study by Chunuan *et al.* also reported that the presence of accompaniment (Doula) and trained husband by the pregnant women's side would decrease her anxiety, and hence the mean score of anxiety after delivery in the group with accompaniment's or husband's support was significantly lower than the group without accompaniment.^[11]

The study of Teshome *et al.* was conducted on 586 primiparous who had easy labors. Results of this study showed that the mean score of anxiety during the first 12 hours after delivery had no significant difference between both the groups.^[3] In this study, accompaniments (Doulas) did not receive any training before delivery and were just physically present at the pregnant woman's side during labor. However, in the present study, husbands had an active role during labor and provided emotional and physical support for their wives based on the trainings they received during educational sessions during pregnancy. Therefore, their presence and active support had an effective role in decreasing women's anxiety regarding the outcomes of delivery.

Providing pain relievers and sedative drugs or women by maternity ward's personnel to relieve their pain and anxiety, differences in personnel's attitude and behavior toward patients during labor, and the patients' and their husbands' cultural and structural limitations were some of the limitations in conducting this study.

CONCLUSION

In general, it could be stated that the presence of a trained husband by the pregnant woman's side during labor would improve the psychological outcomes of delivery and reduce their anxiety during labor. It is recommended that maternity centers take advantage of this inexpensive and easy intervention in their patients' delivery process. It is recommended that this study be conducted with more samples and in different centers of the country.

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Conflicts of interest

There are no conflicts of interest.

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