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Short Report

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Assessment of the Relationship between Fear and Self-efficacy of Childbirth during Labor in Primipara Women

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Abstract

Fear of childbirth is an important and prevalent problem during pregnancy and delivery. Self-efficacy of childbirth is one of the factors playing an important role in the fear of delivery. This study aimed to determine the relationship between the fear and self-efficacy of childbirth during labor in primipara women. This descriptive and analytical study was conducted on 100 primipara women in Ommolbanin Hospital, Mashhad, Iran, during 2017. Data were analyzed in SPSS software using descriptive statistics and Pearson's correlation coefficient. According to the results, the mean scores of fear and self-efficacy of delivery were reported to be 48.9±14.2 and 220.5±54.9, respectively. In addition, there was a reverse association between the scores of fear of childbirth and self-efficacy of delivery using Pearson's results ($r=-0.44$, $P<0.001$). Therefore, it is recommended that interventions be carried out to decrease the fear of childbirth.

Keywords: Delivery, Fear, Labor, Self-efficacy

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Introduction

The fear of natural delivery is an important and prevalent problem during pregnancy, as well as during and after childbirth. It is estimated that 5-25% of pregnant women are afraid of childbirth (1). The fear of childbirth ranges from rational to severe. In fact, one out of every five pregnant women is afraid of childbirth and 6-13% of pregnant women experience severe and disabling fear (2). Most women, especially primipara women, have a rational fear of childbirth due to lack of familiarity with the process. More than 80% of women with low-risk pregnancies experience some degrees of childbirth fear (3). Studies have shown that there is a reverse relationship between fertility and fear of childbirth. In addition, the fear of childbirth is higher in primipara women, compared to multipara women (4).

Admission to the maternity ward is the first experience for many women, and fear of unknowns in an unfamiliar environment intensifies the anxiety of these individuals. Simkin describes this as emotional dystocia (5). Fear of childbirth is an important factor in increasing elective and emergency cesarean section reported as the most common reason for selecting this procedure (6). In a study conducted by Kordi et al., the mean score of childbirth fear was significantly higher in women who selected the cesarean section, compared to those who selected natural delivery (7). Moreover, fear of childbirth is associated with a difficult and prolonged labor, an abnormal pattern of fetal heart rate, low Apgar score, fetal mortality near birth, and postpartum depression (8, 9). In order to reduce the fear of childbirth, it is necessary to recognize effective factors related to childbirth fear and develop appropriate interventions. Childbirth self-efficacy is one of the factors that can play an important role in fear of childbirth. Generally, childbirth self-efficacy refers to the belief in one's ability to perform a behavior (10). Bandura (1997) believes that self-efficacy affects all aspects of emotional behavior and activities, such as anxiety, stress, and thought patterns.

Fear of childbirth has been measured in previous studies using the type-A Wijma delivery expectancy questionnaire (WDEQ-A), which is specific for pregnancy. In addition, childbirth attitude questionnaire by Harman, which can be measured at any time during pregnancy and childbirth (11), and WDEQ version B, which is specific for after the delivery (12) were applied in the studies.

Some studies have also used researcher-made tools (13, 14). The Delivery Fear Scale (DFS) has been designed specifically by Wijma et al. to assess the fear of childbirth during labor (15). According to the current review, the use of the Persian version of this questionnaire has not been reported so far. Therefore, the questionnaire was translated in the present study and its psychometric assessment was carried out for the first time. With regard to the high prevalence of childbirth fear and its negative outcomes and limited studies in this field, this study aimed to determine the fear and self-efficacy of childbirth during labor and its association with primipara women.

Methods

This descriptive-analytical and cross-sectional study was conducted on primipara women in Ommolbanin Hospital in northeastern Iran. Sampling was initiated after taking the necessary permissions and the approval from the Research Deputy and the Ethics Committee of Mashhad University of Medical Sciences, Mashhad, Iran. At first, the researcher explained the objectives to the participants who were selected based on inclusion and exclusion criteria, and written informed consent was obtained prior to the study.

The sample size was determined based on pilot research. To this end, 10 pregnant women were studied at first, and the correlation coefficient score of childbirth with delivery self-efficacy score was estimated at -0.28. In the end, the sample size was estimated at 98 using a sample size formula in correlation studies with 0.05 alpha and 0.20 beta. To simplify the task, a total of 100 subjects were entered into the study. The inclusion criteria were: 1) literacy, 2) primipara, 3) cervical dilation of 4-5 cm, 4) low-risk pregnancy, 5) age range of 18-35 years, 6) body mass index (BMI) of 20-30, 7) no smoking and no use of alcohol and drugs, 7) wanted pregnancy, 8) spontaneous labor, 9) gestational age of ≥38 weeks, 10) lack of initial indication of cesarean section, and 11) a healthy, alive, and singleton fetus.

Data collection tools included individual and midwifery characteristics questionnaire, DFS (15) and childbirth self-efficacy questionnaire (16). The individual and midwifery characteristics questionnaire was made by the researcher and contained questions related to demographic and pregnancy characteristics. This questionnaire was reviewed by seven faculty members of midwifery faculty of Mashhad University of Medical Sciences, Mashhad, Iran, and employed after applying their

suggestions and corrective comments. In this study, DFS, which is a questionnaire designed by Wijma in 2002, was exploited to assess fear (15). This scale evaluates fear of childbirth during labor and includes 10 items with the scores ranging from 1 (completely disagree) to 10 (completely agree). The overall score is the sum of scores of all items in the range of 10-100, where the higher score is indicative of greater fear. In order to obtain the equivalent of the original language, the translation and psychometric assessment of the questionnaire were carried out based on the Breslin model (17).

First, two linguists independently translated the questionnaire into Persian, and the Persian version was prepared as the result of the consensus of comments. Afterward, another two linguists back-translated the Persian version into English independently, and the prepared version was compared and finalized by two bilingual experts. The final version was evaluated and verified by 10 faculty members of Mashhad University of Medical Sciences, Mashhad, Iran. In addition, the reliability of the Persian version was estimated by calculating the internal consistency through Cronbach's alpha method, which was estimated at 0.80. The childbirth self-efficacy questionnaire was designed by Lowe (1993) in order to measure maternal perception on maternal compatibility in labor so that the expected outcomes and self-efficacy could be estimated.

In the present study, the mentioned questionnaire was completed in an active phase, which encompasses 32 items. While the first part (items 1-16) measures the expected outcomes related to the active phase of childbirth, the second section (items 17-32) estimates the expected self-efficacy of this phase. The items of the questionnaire are scored based on a 10-point scale (from absolutely uncertain to absolutely sure). The total self-efficacy score is obtained by summing up the scores of expected self-efficacy in each section and scores of expected outcomes in two parts. The validity of the questionnaire was confirmed by Khorsandi et al. (2013) for the Iranian community and its Cronbach's alpha had a high internal consistency (0.84-91) (16).

Moreover, the questionnaire was assessed by seven faculty members, who ensured the applicability of the questionnaire in the present study. The reliability of the self-efficacy questionnaire in the Iranian community was calculated using Cronbach's alpha for the expected outcomes of the active phase (0.84), expected self-efficacy of labor (0.92), expected outcomes of the second phase of labor (0.94), and expected self-efficacy of the second phase of labor (0.94) (16). The questionnaires were completed during the period of 4 to 5 cm of cervical dilation. Sampling continued until reaching the desired sample size. Data analysis was performed in SPSS software (Version 20) using descriptive and inferential statistics, including Chi-square, independent t-test, and Pearson's correlation coefficient. Moreover, P-value less than 0.05 was considered statistically significant.

Results

In this study, the mean age of the participants was 23.52±4.1 years and their mean gestational age was 39.16±0.64 weeks. In terms of the level of education, 56% of the participants had below diploma degrees, whereas 35% and 9% of the subjects had diplomas and academic degrees, respectively. Moreover, 92% of women selected natural delivery while only 5% of the subjects selected cesarean section. However, 3% of the participants had no specific preferences. Regarding the occupational status, 96% of the subjects were housewives and 4% of the participants were employed. In terms of BMI, 80% of the subjects were within the range of 20-25 kg/m^2, whereas 20% of them were in the range of 25-30 kg/m^2. Regarding income level, 58% of the participants had an acceptable income level, whereas 42% of them had an insufficient income. In addition, 69% of the participants were married ≤2 years while 31% of the subjects were married for more than two years.

The relationship was evaluated between demographic variables and DFS of fear and self-efficacy of childbirth in women. The results showed no significant difference between the two groups regarding the scores of fear and self-efficacy childbirth at different age levels (P=0.20 and P=0.65, respectively), gestational age (P=0.97 and P=0.91, respectively), BMI (P=0.67 and P=0.62, respectively), occupational status (P=0.15 and P=0.74, respectively), level of education (P=0.47 and P=0.15, respectively), income level (P=0.11 and P=0.39, respectively), and place of residence (P=0.73 and P=0.85, respectively).

The results were also indicative of no significant difference between fear of childbirth and duration of marriage (P=0.35). However, a significant difference was observed between the score of self-efficacy of childbirth at various levels and duration of marriage (P=0.04). In this respect, women with a longer duration of marriage received a higher self-efficacy score.

The mean of DFS of childbirth fear was 48.93±14.2, where the fear of childbirth was moderate to severe in 67.7% of the cases. In addition, the mean overall score of self-efficacy was 220.51±54.9, and the majority of women received a moderate overall score (43.0%), moderate expected outcomes (44.0%), and moderate expected self-efficacy (44.0%) (Table 1).

Table 1. Frequency distribution of level of childbirth fear scale and childbirth self-efficacy score of research units (n=100)

Variable	N (%)
Fear of childbirth	
Mild	32 (32.3%)
Moderate	32 (32.3%)
Severe	35 (35.4%)
Mean±standard deviation	48.9±14.2
Expected outcomes	
Low	35 (35.4%)
Moderate	44 (44%)
High	21 (21%)
Mean±standard deviation	114.3±28.9
Expected self-efficacy	
Low	33 (33%)
Moderate	44 (44%)
High	23 (23%)
Mean±standard deviation	106.2±31.0
General self-efficacy	
Low	33 (32.3%)
Moderate	43 (43%)
High	24 (24%)
Mean±standard deviation	220.5±54.9

The results of Pearson test demonstrated a reverse and significant relationship between DFS childbirth scores and self-efficacy of childbirth (P<0.001), in a way that women with a low score of self-efficacy of childbirth had a higher score of fear of childbirth. Moreover, there was a reverse and significant association between the subscales of expected outcomes and self-efficacy with DFS fear of childbirth (Table 2).

Table 2. Correlation between the scores of fear of childbirth and the scores of childbirth self-efficacy, as well as expected outcomes and self-efficacy

Variable	Fear of childbirth	
	Correlation coefficient	P-value
Childbirth self-efficacy	-0.44	P<0.001
Expected outcomes	-0.41	P<0.001
Expected self-efficacy	-0.41	P<0.001

Implications for Practice

The results of the current study indicated that the majority of primipara women had a severe and moderate fear of childbirth and a moderate self-efficacy of childbirth. Moreover, the findings of this study demonstrated a reverse and significant association between DFS of fear of childbirth and the scores of expected outcomes with self-efficacy and the overall self-efficacy score during labor. Accordingly, women with a lower self-efficacy score had a higher fear of childbirth during labor.

The measurement of the fear of childbirth during pregnancy is of particular importance since it occurs during the actual experience of childbirth. As described in the introduction, it could lead to several negative consequences as dystocia. Therefore, it is recommended that interventions be performed to increase the self-efficacy of childbirth in primipara women in order to reduce the fear of childbirth and subsequently decrease the adverse effects of this issue. One of the major strengths of the current study was measuring the fear of childbirth during the process of DFS, which was translated to Farsi and its needs assessment was carried out for the first time. However, it is suggested to use this questionnaire and collect more evidence to confirm its validity and reliability. One of the major drawbacks of the present research was convenience sampling and performing the research only on primipara women. Accordingly, the generalizability of the results must be carried out with caution.

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Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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