

Original Article

The reasons for delivery: Related fear and associated factors in western Turkey

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ABSTRACT

Background & Aim: Childbirth related fear (CRF) causes pregnant women to select cesarean section (CS) without a medical reason. The purpose of this study was to determine reasons for delivery related fear and associated factors in pregnant women.

Methods & Materials: A descriptive, cross-sectional study was conducted on 315 pregnant women who were in the last trimester. Participants were randomly recruited from an outpatient clinic of a state hospital in Çanakkale, Turkey, between March and May 2012. Data were collected using a socio-demographic information form and CRF information questionnaire. Descriptive statistics and chi-square test were performed to identify the frequency of delivery related fear and associated factors. Data were analyzed with mean, standard deviation, frequency, and chi-square test using SPSS version 16.

Results: The mean age of the pregnant women was 26.67 ± 5.62 years and the mean gestational week of the women was 34.02 ± 4.22 . Of 315 women, 53.7% had CS, 30.8% had vaginal birth, 34% had prenatal education, 69.8% had knowledge about birth, 66% were influenced by prenatal education positively, 62.5% had delivery-related fear, and 27% of them stated that this fear was related to loss of their babies. About 40% of the women talked to their mothers about childbirth and 70.2% of these women were affected positively by these conversations, 24.1% of the women heard about bad birth experiences, and 69.7% of the women were affected negatively by these experiences. There was a significant relationship between delivery related fear and age, education, income, the number of pregnancies, problems in pregnancy, planning of pregnancy, prenatal health monitoring visits, getting information related to birth, being influenced by this information, talking about birth with people, and hearing about bad birth experiences ($P < 0.050$).

Conclusion: Based on the results of this study, it can be concluded that pregnant women need to get appropriate information from health professionals to deal with CRF.

Introduction

During pregnancy, many women have both expectations and experience anxiety about the upcoming delivery, a normal feeling, and process that may help the women to prepare themselves. Some women develop childbirth related

fear (CRF) which may be a mild, moderate, severe or phobic fear (tocophobia) (1-3). Studies showed that the prevalence of CRF in pregnant women is 3.2-31% (4-12). Furthermore, it has been estimated that the prevalence of severe CRF is 2-11% (4-6, 13-15). A recent study indicated the importance of taking personal responsibility for birth satisfaction (16). Fear involves a loss of personal control and responsibility.

It has been determined that young maternal age, nulliparity, psychological problems, and a

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history of abuse or adverse obstetric events are associated with a high prevalence rate of CRF (4, 11). Predictors of CRF are manifold. It is reported that CRF was to be associated with a thought that it would be very painful birth, previous traumatic birth experience, not to be ready to family, lack of social support, and the problems related partner. Specifically, nulliparous women report higher levels of CRF on average than parous women, which a lack of experience with childbirth may be a reason of this phenomenon (12, 13).

Specific characteristics such as fear of pain and low pain tolerance have been cited as common reasons for CRF as well as previous childbirth and trait anxiety (1). Lack of social support or expressing dissatisfaction with one's partner are also predictors of CRF (14).

High level of fear could cause prolonged labor. This situation may cause an increase in maternal blood pressure and toxemia. Fear may also contribute to prematurity or post-term birth because of increasing in uterine arterial pressure, low Apgar scores, and infants' asphyxia related to prolonged labor (14). Antenatal interventions for women with CRF have been successful in reducing birth-related anxiety and cesarean section (CS) rates and increasing birth-preparedness (15). In many parts of the world, antenatal education plays an important role in preparing couples for pregnancy, childbirth, and parenthood. Although there are standard education programs in many developed countries, antenatal preparation is not still achieved through formal education programs in most developing countries and knowledge of birth is transmitted from mothers to their daughters (17). Group psychoeducation and crisis-oriented support have been shown to be the most effective in avoiding CS, but this evidence has been provided by nonrandomized studies (15, 18).

CRF leads pregnant women to opt for elective CS without a medical reason (19). Although WHO reported that a rate of CSs over 15% is not acceptable, especially in Turkey, the rate of CSs is higher than 37% due to pregnant women's negative perceptions about vaginal birth. Furthermore, in Turkey, women generally tell other pregnant women about their vaginal birth

experience by giving negative details such as tolerating long duration of pain, oxytocin-induced birth contractions, drug administrations, and getting exhausted while giving birth (20).

Although women are more educated in Western Turkey, rates of CSs are high. Then, the present study investigated the causes of pregnant women's delivery related fear and associated factors in Western Turkey.

Methods

A descriptive, cross-sectional study was carried out to assess CRF and its related factors among pregnant women.

The study was conducted at an obstetric outpatient clinic of a state hospital in Çanakkale, Turkey. The study sample included the pregnant women, aged 18-40 years, not having pregnancy complications, and being in the last trimester. Women who could not speak Turkish and had psychiatric disorders were not included. A simple random sampling was used. The participants were randomly selected from eligible women who were volunteer to take part in the study. Data were collected between March and May, in 2012. In this period, a total of 327 eligible women were completed the questionnaires.

Socio-demographic and medical information was taken by using a 23-item questionnaire included: Age, education, income level etc., medical and obstetric histories, chronic diseases, prenatal health monitoring visits, and problems in pregnancy. CRF information questionnaire is an 18-item self-reporting tool assessing women's information about childbirth and methods, information sources, selected childbirth method and reasons, CRF, and reasons. The questionnaires were developed and adapted by the researchers according to the literature to identify possible factors for CRFs (1, 4, 5, 8, 11). The content validity index (CVI) of the research instruments were measured based on the ratings of the items by the content experts (well-experienced teaching members $n = 5$), and content validity was considered acceptable. The CVI was measured based on the ratings of the items by the content experts. The CVI of the items in an instrument is the proportion of items

that were rated 3 or 4 by the experts. Teaching staff were asked to evaluate the questionnaires by measuring the degree of each question in the questionnaires by using “1 = Not available,” “2 = Question should be replaced,” “3 = Suitable, but you need a small change,” “4 = Very appropriate” the form of expressions for each question between 1 and 4 points. Kendall’s W of the items in these questionnaires were 0.25 and statistically significant (χ^2 : 31.018 \pm 19, $P < 0.005$), and content validity was considered acceptable. Furthermore, to assess the face validity of the measurements, the questions were individually discussed with a convenient sample of 20 pregnant women. Modifications were made to the instruments following their comments regarding the understandability and readability of its items, as well as the ease of filling the questionnaire.

Statistical analyses were performed using the Statistical Package for Social Sciences (SPSS) version 16.0 for Windows (SPSS, Inc., Chicago, IL). Descriptive statistics including frequency and percentage were used to describe women’s socio-demographic and obstetric characteristics. Relationships between dependent and independent variables were examined using Chi-square analysis. Statistically, $P < 0.050$ was considered significant.

Ethical approval for the study was obtained from the regional Ethics Committee of the Çanakkale Provincial Health Directorate (the Letter No. 1102-28341). Furthermore, all participants received a detailed explanation about the purpose, the advantage of study, information about the questionnaires and the time it takes to complete them, and then an informed consent form was taken.

Results

Of 327 women, 12 did not fill in the forms correctly. The data analysis was performed on 315 volunteer pregnant women. The mean age of the participants was 26.67 \pm 5, 62 years and 76.8% of them were unemployed. The mean gestational week was 34.02 \pm 4.22 and the mean number of prenatal health monitoring visits was 7.53 \pm 3.98. Of all the participants, 41.6% were

primiparous, 32.1% had their second pregnancy, and 26.3% had their third pregnancy or more. 18.1% of the participants had health problems in their previous pregnancy. 19% of the women had an abortion and 9.5% had curettage in their previous pregnancies. Other obstetric features of pregnant women are shown in table 1.

Table 1. Obstetric features of pregnant women (N = 315)

Characteristics	N (%)
Chronic diseases	
Yes	18 (5.7)
No	297 (94.3)
Receiving prenatal health monitoring	
Never	12 (3.8)
1-5 times	79 (25.1)
6-10 times	177 (56.2)
11 and more times	47 (14.9)
Problems in the current pregnancy	
Yes	96 (30.5)
No	219 (69.5)
Planning pregnancy	
Planned	231 (73.3)
Unplanned	84 (26.7)
Receiving knowledge of delivery methods	
Yes	300 (95.2)
No	15 (4.8)
Knowledge about delivery methods	
Vaginal birth	97 (30.8)
Cesarean birth	169 (53.7)
Water birth	34 (10.8)
Epidural birth	15 (4.7)
Selected delivery methods	
Vaginal birth	221 (70.2)
Cesarean birth	89 (28.3)
Epidural birth	5 (1.6)
Receiving prenatal education	
Yes	107 (69.8)
No	208 (30.2)
Receiving knowledge of delivery	
Yes	220 (69.8)
No	95 (30.2)
Influence of knowledge received	
Positive	208 (66.0)
Negative	13 (4.1)
Not being influenced	94 (29.8)
Having CRF	
Yes	197 (62.5)
No	118 (37.5)
Total	315 (100.0)

CRF: Childbirth related fear

About 40% of the women talked to their

mothers, 26.1% to their sisters, 21.1% to their neighbors and 9% to their husbands about delivery, and 70.2% of them were positively affected by these conversations, which reduced their fears. In addition, 24.1% of the women heard about bad birth experiences of their relatives and 69.7% of them were negatively affected by these experiences. 12.1% of women were still thinking about vaginal delivery, 9.1% of them reported that they would select CS, and 9.1% of them had a low level of fear related to the unpleasant experiences they had heard about. The reasons for pregnant women's delivery related fear are shown in table 2.

Based on chi-square test, there was a significant relation between CRF and age, education, income, the number of pregnancies, problems in pregnancy, planning pregnancy, prenatal health monitoring visits, obtaining information related to delivery and being under influence by this information, talking about birth to people, and hearing about bad birth experiences. Pregnant women who aged 20-25 years, graduated from primary school, had an income level equivalent to expenses, worked as workers, were primiparous, have no health problems in pregnancies, had planned pregnancies, had health visits 6-10 times, had knowledge about delivery, were positively affected by this knowledge and who were not affected by other women's unpleasant delivery experiences had more CRF (Table 3).

In order to measure of association between two nominal variables Cramer's V and Gamma were calculated in addition to Chi-square test. There was a significant association between fear of childbirth and age (Gamma = 0.216,

$P < 0.050$), education (Cramer's V = 0.187, $P < 0.050$), income (Gamma = 0.381, $P < 0.050$), the number of pregnancies (Cramer's V = 0.197, $P < 0.050$), problems in pregnancy (Cramer's V = 0.142, $P < 0.050$), planning pregnancy (Phi = -0.140, $P < 0.050$), receiving prenatal health monitoring (Gamma = 0.215, $P < 0.050$), receiving knowledge of childbirth (Phi = -0.123, $P < 0.050$), being influenced by the knowledge received (Cramer's V = 0.220, $P < 0.050$), being influenced by people talking about delivery (Cramer's V = 0.283, $P < 0.050$), and being influenced by hearing about previous bad experiences (Cramer's V = 0.229, $P < 0.050$).

Discussion

This study was aimed at investigating the causes of delivery-related fear and associated factors among pregnant women. The findings of the present study revealed that 62.5% of women had CRF. Recent studies indicate that the prevalence of CRF in pregnant women is 3.2-31% (4-12), the prevalence of severe CRF is 2-11% (4-6, 13-15). It is stated that CRF may overshadow the whole pregnancy, complicate labor, and lead to an increase in the number of CSs (4, 7). Therefore, CRF is an important issue in women's health. The prevalence rates of childbirth fear vary. Different measures and descriptions of CRF are likely to contribute to these findings. Probably cultural factors, environmental factors, parity and timing of data collection and instruments are also likely to influence reported levels of childbirth fear.

Table 2. The reasons for pregnant women's delivery related fear (N = 315)

Reasons	Selected vaginal birth	Selected cesarean birth	Total
	N (%)	N (%)	N (%)
Death of the baby or the mother	49 (96.1)	2 (3.9)	51 (100)
Not knowing what to experience in delivery	46 (95.8)	2 (4.2)	48 (100)
Suffering, cutting, and suturing	35 (94.6)	2 (5.4)	37 (100)
Previous unpleasant delivery experiences	21 (100.0)	0 (0.0)	21 (100)
Risky pregnancy	11 (100.0)	0 (0.0)	11 (100)
Fear of vagina reinstatement	10 (100.0)	0 (0.0)	10 (100)
Fear of having CS	3 (75.0)	1 (25.0)	4 (100)
Thinking that delivery would be difficult	4 (100.0)	0 (0.0)	4 (100)
Hearing about bad delivery experiences	2 (100.0)	0 (0.0)	2 (100)
Bad behaviors of health staff	1 (100.0)	0 (0.0)	1 (100)
Total			189*100.0

*Of 197 women who had CRF, 189 women stated a reason for their fear, CRF: Childbirth related fear, CS: Cesarean section

Table 3. Factors affecting delivery related fear (N = 315)

Factors	Who has delivery fear	Who does not have delivery fear	χ^2	P
	N (%)	N (%)		
Age group				
15-19 years	25 (12.7)	4 (3.4)	18.077	0.001*
20-25 years	75 (38.1)	37 (31.4)		
26-30 years	55 (27.9)	42 (35.6)		
31-35 years	24 (12.2)	29 (24.6)		
36 years or older	18 (9.1)	6 (5.1)		
Education				
Illiterate	16 (8.1)	2 (1.7)	11.038	0.023
Primary school	69 (35.0)	31 (26.3)		
Secondary school	38 (19.3)	23 (19.5)		
High school	49 (24.9)	40 (33.9)		
University	25 (12.7)	22 (18.6)		
Income				
Income lower than expenses	51 (25.9)	14 (11.9)	9.517	0.009*
Income equivalent to expenses	136 (69.0)	94 (79.7)		
Income higher than expenses	10 (5.1)	10 (8.5)		
The number of pregnancies				
First pregnancy	96 (48.7)	35 (29.7)	12.235	0.002*
Second pregnancy	59 (29.9)	42 (35.6)		
Third pregnancy or more	42 (21.3)	41 (34.7)		
Problems in pregnancy				
Yes	44 (22.3)	13 (11.0)	6.378	0.012*
No	153 (77.7)	105 (89.0)		
Planning pregnancy				
Planned	135 (68.5)	96 (81.4)	6.210	0.013*
Unplanned	62 (31.5)	22 (18.6)		
Receiving prenatal health monitoring visits				
Never	12 (6.1)	0 (0)	11.935	0.001*
1-5 times	56 (28.4)	23 (19.5)		
6-10 times	107 (54.3)	70 (59.3)		
11 and more times	22 (11.2)	25 (21.2)		
Receiving knowledge of delivery				
Yes	129 (65.5)	91 (77.1)	4.744	0.029*
No	68 (34.5)	27 (22.9)		
Influence of Knowledge received				
Positive	115 (58.4)	93 (78.8)	14.260	<0.001*
Negative	12 (6.1)	1 (0.8)		
Lack of influence	70 (35.5)	24 (20.3)		
Influence of people talking about delivery				
Positive, relaxing	130 (66.0)	91 (77.1)	25.393	<0.001*
Not affecting, I am afraid	22 (11.2)	2 (1.7)		
Negative, rising my fear	31 (15.7)	5 (4.2)		
Not being affected	14 (7.1)	20 (16.9)		
Influence of hearing about previous bad experiences				
Not being affected	150 (76.1)	99 (83.9)	16.718	0.001*
Mild fear	2 (1.0)	4 (3.4)		
Negative	38 (19.3)	8 (6.8)		
Positive for vaginal birth	6 (3.0)	2 (1.7)		
Positive for cesarean birth	1 (0.5)	5 (4.2)		
Total	197 (100)	118 (100)		

This study showed that the reasons for CRF form selected vaginal birth (CRF) was death of mother or her baby, not to have information about the process of childbirth, previous bad childbirth experiences, risky pregnancy, fear of

vagina reinstatement, fear of having dystocia, bad childbirth stories, and bad behaviors of health staff. The results of prior studies are consistent with those of current study. The findings of previous studies were shown that CRF was to

be connected with pain, previous bad childbirth experiences (4, 11, 21, 22), previous obstetric complications (11, 22), a woman's personality characteristics such as anxiety, low self-esteem or lack of social support (14). In another study, it was determined that women had experienced CRF because of obstetric interventions (23). Sydsjo et al. claimed that women with secondary CRF after a previous traumatic delivery experience had a longer time interval to the subsequent delivery and more often gave birth with CS (24). Melender reported that women who have negative experiences in their previous pregnancy also experience fear of childbirth in their second pregnancies (21). In another study, it was determined that the external conditions influencing women's fear of childbirth and it was related to the context or environment in which women give birth and their interactions with health care professionals (25). Childbirth is inherently unpredictable and painful process and accompanied by a small risk of serious morbidity or even death for both the mother and the child. Most women overcome their fear; a few have extreme fear or anxiety, sometimes expressed as a morbid dread of childbirth (tokophobia) or have a request for CS without a medical problem (14). In Turkey, the factors which could increase childbirth fear are the important of a child in the structure of the Turkish family. Great importance placed by Turkish families on children, increasing the women's esthetic concerns regarding to giving many births and being affected much by bad experiences and childbirth related information received mostly from family, relatives, and friends (26).

In this study; age, education, income, number of pregnancies, having problems in pregnancy, pregnancy planning status, health monitoring visits, receiving information related to childbirth, others' unpleasant experiences were found effective, which is compatible with the literature. In studies, high incidence of CRF has been connected with maternal characteristics as young age, low education level, unemployment (8, 27-29), smoking (8), and depression (14). Contrast to our research findings, Haines et al. (2011) found no association between CRF and parity in their Australian rural cohort (29). Furthermore,

Nieminen et al. (2009) found no difference between parity groups for CRF (28). On the other hand, in a study by Zar et al., the relationship between parity and fear of childbirth was determined (30). Women who are pregnant for the first time tend to be a bit more anxious about the unknown situation of birth (18). It was attributed to lack of information about pregnancy and process of childbirth and fear of the unknown. In a study by Saisto et al., the lack of information regarding to the birth and not to be ready for the birth were found effective in women's fear of childbirth (14).

This study showed the impact of others' words about delivery was related to fear of delivery. The prevalence of shared positive birth stories and their contribution to the development of women's confidence in birth are not clear. Future research could focus on the type of information about pregnancy and birth that is shared among women and how it affects their attitudes.

The results of the current study revealed that complications in pregnancy were associated with fear of delivery. Similar to our findings, several studies have revealed a relationship between CRF and complications during pregnancy and delivery, like high CRF related to prolonged labor or emergency CS (8, 31). The fear of delivery appears along with pregnancy complications in Western countries. Pregnancy-related complications are increased interventions at birth (vacuum, forceps, episiotomy, etc.). Pregnancy complications are increased interventions in birth, emergency or elective cesarean delivery, postnatal depression, posttraumatic stress syndrome, and disruption in mother-infant interaction. They play an important role in women's physical and emotional well-being and fulfillment of domestic femininity roles (32). Intense fear could cause prolonged labor, which may increase maternal blood pressure and toxemia. The fear of mother could produce prematurity or post-term birth due to increased uterine artery pressure in the newborn, low Apgar scores, and infants' asphyxia due to prolonged labor (13).

In the current study, it was determined that having knowledge about childbirth could be effective on delivery related fear. In Stoll and Hall's study, increased knowledge about birth

and learning about pregnancy were found to reduce fear of birth (33). Hence, that pregnant women can cope with delivery related fear, they should have appropriate knowledge about childbirth and this information should be offered by health professionals. With the aid of a cognitive behavioral approach, women can deal more effectively with possible setbacks and increase their related coping skills (34). The majority of women in the urban areas (93%) and in the rural areas (79%) of Turkey receive their antenatal care from obstetricians or general practitioners who visit them once per month and then biweekly in the last month. The others are provided with care for throughout pregnancy by midwives/nurses (20). Unlike many Western countries, Turkey does not offer a standard approach to antenatal education on antenatal care. The kind and the quality of education women receive during pregnancy depend on the care provider. Furthermore, in Turkey, there are a few antenatal education classes. Most of these classes are offered by the private sector. Therefore, the rate of participation in antenatal classes is also low.

Antenatal interventions for women with delivery related fear have been successful in reducing birth-related anxiety and CS rates and in increasing childbirth preparedness (15). Results from this study have important implications for the timing and the content of women health initiatives, which are aimed to enhance confidence in birth among next generations. Developing and evaluating a pregnancy and birth workshop, possibly offered through university health services or other postsecondary institutions, for young non-pregnant women would be an important next step.

Women with fear of delivery have been treated by trained midwives, obstetricians, and psychologists, offering different kinds of therapy and support. The findings have indicated that the outcomes were positive and 50-85% of women with fear of delivery prepared themselves for vaginal delivery and avoid from section, the results have been positive, with 50-85% of women with fear of delivery preparing themselves for vaginal delivery and avoiding section (15). Group psychoeducation and crisis-oriented support have been shown to be most effective in

avoiding section, but evidence for their effectiveness has been provided by non-randomized studies (15, 18). In obstetrics, the effect of the treatment for fear of delivery is mostly evaluated by the number of CS. However, it is also important to show better adjustment to pregnancy and parenthood. Recently, it has been shown that it is possible to increase a mother's preparedness for delivery, which, in turn, predicts an increase in positive motherhood and parenting (25). With the aid of a cognitive behavioral approach, women can deal more effectively with possible problems and increase their related coping skills.

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