

Original Article

Fear of childbirth and related obstetric variables

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ABSTRACT

Background & Aim: The fear of childbirth is defined as the fear experienced before, during and after birth. This study was carried out to study the relationship between fear of childbirth and obstetric variables.

Methods & Materials: : This cross sectional study was conducted in a State Hospital in Kars, Turkey on 403 pregnant women who were recruited from the delivery ward. The convenience sample included pregnant women who could speak and read Turkish, had a single fetus, were without a high risky pregnancy and were in the latent phase of labor. Exclusion criteria were experiencing high-risk conditions associated with their birth. Data were collected using three questionnaires; a survey form including socio-demographic and obstetric characteristics, the Wijma Delivery Expectance/ Experience Questionnaire (W-DEQ/A), and the Turkish version of Beck Anxiety Inventory (BAI).

Results: The W-DEQ/A and BAI scores were higher in the nulliparous than multiparous (W-DEQ/A 67.08±28.33, 59.87±26.91, P=0.039<0.05, BAI 18.97±9.5, 16.65±11.83, p<0.001 respectively). Moreover, the W-DEQ/A and BAI scores of the pregnant women with ≤37 / ≥41 weeks of gestation and those who didn't receive any training and had vaginal delivery were higher than those with 38-40 weeks of gestation and who received prenatal training and had cesarean delivery (W-DEQ/A 67.54±29.20, 56.44±22.59, 69.72±25.53 p<0.05, BAI 21.41±9.07; 15.77±11.20, 18.36±10.57 p<0.05 respectively). Both in the nulliparous and multiparous, as the W-DEQ/A score increases, the BAI score increases, too (r=0.256; p<0.001).

Conclusion: The severe fear of childbirth and anxiety was more common in the nulliparous women, mothers with history of pre- term, and post-term pregnancy and in those who did not receive prenatal care and had vaginal delivery.

Introduction

Even though pregnancy and childbirth are a physiological process, the fear of childbirth remains a serious problem for women (1). Although the prevalence of the fear of childbirth has been reported at various rates due to the differences in cultural characteristics, gestational week, and the method of detecting the fear of

childbirth in the literature, the research has shown that about 20-50% of women experience the fear of birth at a mild level (2, 3), 20-26% experience it at a moderate level and 2- 13% at a severe level (4,5).

The causes of the fear of childbirth have been described as biological (the fear of pain), psychological (related to personality, previous traumatic events and being a mother in the future), social (inadequate support systems, economic disabilities) or secondary fears (due to the previous birth experience) (6). Thanks to the studies

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carried out both in our country and abroad, it has been demonstrated that the fear of childbirth which occurs at different levels and for different reasons, adversely affects the course of labor and increases the need for medical intervention and urgent caesarean section by preparing the ground for the development of maternal and neonatal complications (5, 7). In addition, the previous studies have shown that women who are experiencing the fear of birth have a higher preference for a cesarean section (4, 5, 8).

The parity influences the content of the fear of childbirth (9, 10). Especially, nulliparous are reported to have a higher fear of birth rate than multiparous (11). It is indicated that nulliparous are usually afraid of unknown, labor pains and the loss of control while multiparous are generally afraid of the previous birth experiences, defined as the secondary fear of childbirth (4,9). In addition, it is stated that the fear of childbirth is related to the quality of birth-related information provided by health personnel in the prenatal period (12).

It is emphasized that the childbirth fear of the pregnant women who are educated in the prenatal period lessens have a lower rate of a cesarean section, prepare themselves for birth consciously, manage childbirth and take an active role, thereby having an increased satisfaction level and self-confidence (13,14).

It is normal that every woman has some fear of birth. However, in order to determine whether there is any level of birth fear that requires medical intervention, a questionnaire has been developed by Wijma et al. (15) The Wijma Delivery

Expectancy/Experience Questionnaire A Version (W-DEQ/A) has been developed to measure women's feelings and fear before delivery by means of the woman's cognitive appraisal regarding the delivery process. It is a self-assessment scale that has been used both in scientific and in clinical work (15). Besides, the Beck Anxiety Inventory (BAI) was used to determine the concurrent validity of W-DEQ / A.

It is known that the fear of childbirth is a major source of stress and anxiety for women (16). A positive correlation has been found between anxiety and fear of birth (17). It has been suggested that the women with high anxiety levels are more likely to experience the fear of childbirth (18,19) and it starts in the second trimester and increases especially in the third trimester of the pregnancy (16). It has been observed that anxiety at birth increases the fear of birth and pain, and at the same time, the more birth fear women have, the more anxiety they have. For this reason, it is essential to determine the relationship between anxiety and fear. In this study, anxiety levels of women were measured by using the Beck Anxiety Inventory (BAI).

It is important that nurses, midwives and physicians who have a role and responsibility in labor know that women have anxiety and fear associated with birth and plan their attempts to manage women's birth pains. The primary aim of this study was to explore the fear of childbirth in relation to parity, the prenatal education, the mode of delivery, and gestational age.

Methods

This descriptive study was carried out between November 2015 and March 2016 at the delivery ward of the Kars Harakani State Hospital. This hospital was chosen for the study because it is a regional hospital and serves women in all socio-economic status. The study population consisted of all the pregnant women who applied to Kars Harakani State Hospital to give birth in within one year. Since the number of these women was 5235, a sampling selection formula was used in order to calculate the minimum sample size for the research (20). According to this formula, 403 pregnant women were included in study.

Some criteria were determined in the selection of the sample, and those matching these criteria (those with a single fetus in the vertex position, those with primary and higher education graduates, those without a high risky pregnancy, those in the latent phase of labor (0-3 cm dilatation) and those who were volunteers) were included in the study. The participants who had complications during their previous birth (difficult birth, multiple pregnancy, bleeding) were excluded from the study. All the participants were informed about the research and their approval was obtained. The data were collected in the latent phase of labor and approximately 15-20 minutes were allocated for each pregnant woman.

The data were collected using an demographic and obstetric information form, the Wijma Birth Expectancy/Experience Scale A Version (W-DEQ/A) and the Beck Anxiety Inventory (BAI). The data were obtained from the women who met the inclusion criteria and those who were in the latent phase of labor. The

demographic and obstetric information form was prepared by the researchers and it includes 24 questions (4,21,22). The Beck Anxiety Inventory (BAI) was developed by Beck et al.(23) in 1988 due to the necessity of a scale that can separate anxiety from depression. It measures the intensity of anxiety symptoms that individuals are exposed to. It is a scale that questions subjective anxiety and physical symptoms. It is comprised of 21 items, and is filled by the patient through scoring from 0 to 3 just as a likert scale. The score interval is 0–63. The high total score indicates the intensity of the anxiety level of a person. The validity and reliability of the studies in Turkey were performed by Ulusoy, Şahin and Erkmen (24). Based on the scores of the BAI, patients' anxiety levels are categorised as low for 0–17 points, medium for 18–24 points, 25 and above for high. The Wijma Delivery Expectance/Experience Questionnaire Version A W-DEQ/A was developed by Wijma, Wijma and Zar (15) in order to determine the fear of childbirth. Turkish studies for validity and reliability of the scale were made by Körükçü et al. (25), and Cronbach's alpha coefficient is determined as .92. Körükçü et al. (25) proposed that the scale can be applied to the women with 28-40 weeks of gestation. The scale has 33 items, answers are scored from 0 to 5, and it has a type of six- point likert scale. 0 means “completely” and 5 means “none.” Minimum score is 0, maximum score is 165. High scores indicates that women have an severefear of childbirth. Negative questions (2, 3, 6, 7, 8, 11, 12, 15, 19, 20, 24, 25, 27, 31) are calculated reversely in order to maintain the harmony

of the scale. Körükçü et al. have divided Wijma Birth Expectancy/ Experience Scale A Version (W-DEQ/A) Scale points into four sub-groups. These groups are composed of the pregnant women who have a slight fear of childbirth (point ≤ 37), intermediate fear (38-65 points), severe fear (66- 84 points) and clinical fear (points ≥ 85).

The findings obtained in this study were analyzed using SPSS v.21 and using Mann-Whitney U test, and Spearman Correlation Analysis were performed. The results were evaluated at a confidence interval of 95% and at a significance level of $p < 0.05$.

In order to adhere to ethical considerations in this study, before starting the research written permission was obtained from Provincial Directorate of Health Ethics Committee (Reg.No. 82134845/730.08.03, 2015) and verbal consent was obtained from the participants. "Informed Consent", "Respect for Autonomy" and "Privacy and Protection of Privacy" principles were fulfilled by informing academicians about the purpose of the study, providing voluntary participation and ensuring to keep data confidential respectively (26). Our study has some certain limitations, which must be taken into consideration before generalizing the results. The fact that the results are representative only for the institutions in a province of Turkey where the study was conducted was accepted as the limitation of the study.

Results

When the socio-demographic characteristics of the primiparous women are examined, it is seen that 70.4% are in 20-29 age group, 51.9% are in their 38-40

weeks of gestation, 36.0% are secondary school graduates, 85.2% are unemployed, 46.6% live in the city, 72.0% have a medium income level, 84.1% have health insurance and 97.9% have been married for 1-10 years. The socio-demographic characteristics of the multiparous show that the majority of the participants (55.6%) are in 20-29 age group, 75.2% are in their 38-40 weeks of gestation, 52.3% are primary school graduates, 89.3% are unemployed, 46.7% live in a village, 76.2% have a medium income level, 86.9% have health insurance and 62.1% have been married for 1-10 years.

The evaluation of obstetrics characteristics of the participants demonstrate that most of them have come to monitoring 4 or more times during their gestation period, have not had any health problem during their current pregnancies, have received social support from her spouse or her family, have agreed with her spouse to have this child, have had vaginal delivery before, and have had prenatal education (95.2%; 83.6%, 82.5%; 80.4%, 97.4%; 92.5%, 97.4%; 85.5%, 84.7%; 79.4%, 65.6%; 65.0% respectively).

The effect of parity, prenatal education, the mode of delivery and gestational age on the scores of the W-DEQ/A and BAI is shown in Table 2. The nulliparous were significantly had more fear of childbirth than the multiparous. The W-DEQ/A and BAI scores were higher in the nulliparous than multiparous (W-DEQ/A 67.08 ± 28.33 , 59.87 ± 26.91 , $P = 0.039 < 0.05$, BAI 18.97 ± 9.5 , 16.65 ± 11.83 , $P = 0.0009 < 0.05$ respectively). Moreover, the scores of the W-DEQ/A and BAI of the pregnant women with ≤ 37 / ≥ 41 weeks of gestation and who

didn't receive any training and had vaginal delivery were higher than those with 38-40 weeks of gestation and who received

prenatal training and had cesarean delivery (W-DEQ/A 67.54 ± 29.20 , 56.44 ± 22.59)

Table 1. Sociodemographic and Obstetric Characteristics of the Participants

Sociodemographic and Obstetric Characteristics		Primiparae		Multiparae	
		N	%	N	%
Age group	15-19 years	41	21.7	7	3.3
	20-29 years	133	70.4	119	55.6
	30 years and over	15	7.9	88	41.1
Gestational week	37 weeks and less	65	34.4	37	17.3
	38-40 weeks	98	51.9	168	75.5
	41 weeks and over	26	13.8	9	4.2
Educational level	Elementary school and below	43	22.8	112	52.3
	Secondary school	68	36.0	46	21.5
	High school	39	20.6	39	18.2
Employment status	University and above	39	20.6	17	7.9
	Employed	28	14.8	23	10.7
	Unemployed	161	85.2	191	89.3
Place of residence	Village	69	36.5	100	46.7
	Town	3	1.6	2	0.9
	District	29	15.3	47	22.0
Income status	City	88	46.6	65	30.4
	Low	38	20.1	40	18.7
	Medium	136	72.0	163	76.2
Health insurance	High	15	7.9	11	5.1
	Yes	159	84.1	186	86.9
Family type	No	30	15.9	28	13.1
	Extended	81	42.9	101	47.2
Marital duration	Nucleus	108	57.1	113	52.8
	1-10 years	185	97.9	133	62.1
Frequency of prenatal care visit	11 years and over	4	2.1	81	37.9
	<4	9	4.8	35	16.4
Having a health problem during the current pregnancy	4 and more	180	95.2	179	83.6
	Yes	33	17.5	42	19.6
Any disorder that requires continuous drug use	No	156	82.5	172	80.4
	Yes	15	7.9	24	11.2
Social support* existence	No	174	92.1	190	88.8
	Yes	184	97.4	198	92.5
Do you and your husband agree to have this baby?	No	5	2.6	16	7.5
	Both of us want it	184	97.4	183	85.5
	I do, but my spouse does not.	1	0.5	4	1.9
	My spouse does, but I do not.	4	2.1	16	7.5
Delivery mode	Neither of us wants it.	0	0.0	11	5.1
	Vaginal	160	84.7	170	79.4
Abortion	Caesarean section	29	15.3	44	20.6
	Yes	1	0.5	39	18.2
Miscarriage	No	188	99.5	175	81.8
	Yes	0	0.0	69	32.2
Prenatal care	No	189	100.0	145	67.8
	Yes	65	34.4	75	35.0

Sociodemographic and Obstetric Characteristics	Primiparae		Multiparae	
	N	%	N	%
No	124	65.6	139	65.0

*Social support: such as a woman’s partner, female relative, doula, midwife, or nurse.

69.72±25.53 p<0.05, BAI 21.41±9.07; 15.77±11.20, 18.36±10.57 p<0.05 respectively). Maternal age, education status, the place of residence, income status, employment status, health insurance, family type, marriage period and the existence of social support had no significant effect on the scores of the W-DEQ/A and BAI.

As a result of the correlation analysis performed to determine the relationship between the fear of total childbirth scale and anxiety, a positive significant relation was found (r=0.256; r=0.265, p<0.001). Accordingly, the anxiety score increased as the total score of the fear of childbirth scale of both primiparous and multiparous women increased.

Table 2. The fear of childbirth measured by the W-DEQ/A and BAI according to parity, prenatal education, the mode of delivery and gestational age

Variable	W-DEQ/A, N (%)	W-DEQ/A score, Mean±SD	P-value*	Beck N (%)	BAI score, Mean±SD	P-value*
Parity						
0	189	67.08±28.33	0.039	189	18.97±9.5	0.009
≥ 1	214	59.87±26.91		214	16.95±11.83	
Gestational age						
≤37 and ≥41 weeks	137	67.54±29.20	0.023	137	21.41±9.07	<0.001
38-40 weeks	266	61.04±26.81		266	15.77±11.23	
Mode of delivery						
Vaginal	330	69.72±25.33	<0.001	330	18.36±10.57	0.010
Caesarean section	73	34.03±17.93		73	15.00±11.76	
Prenatal care						
Yes	140	56.44±22.59	<0.001	140	15.77±11.20	0.001
No	263	66.87±29.59		263	18.81±10.54	

Table 3. The Relationship between the scores of the W-DEQ/A and the BAI

		Primiparae			Multiparae		
		N	R	P-value	N	R	P-value
Total birth anxiety scale	anxiety	189	0.256	<0.001	214	0.265	<0.001
Thoughts about labor pains and how the delivery will happen in general	anxiety	189	0.124	0.089	214	0.282	<0.001
Feelings she will have during labor pains and the delivery	anxiety	189	0.195	0.007	214	0.239	<0.001
Feelings she will have at the moment of delivery	anxiety	189	0.212	0.003	214	0.165	0.016
Thoughts she will have when labor pains reach peak	anxiety	189	0.317	<0.001	214	0.227	0.001
Her imagination about how she will feel at the moment of birth	anxiety	189	0.083	0.255	214	0.097	0.159
Thoughts she will have about labor pains and childbirth for the last 1 month	anxiety	189	0.268	<0.001	214	0.282	<0.001

Discussion

The objective of present study was to study how severe fear of childbirth is distributed in a pregnant population categorized according to parity, prenatal education, the mode of delivery and gestational age.

The fear of birth is one of the important factors that cause birth to be perceived as a stressful event (12). The tension created by this fear puts the woman in a vicious circle among fear, anxiety and pain (16). The previous studies have shown that parity is more effective on the fear of birth and anxiety (21,27), and this situation is experienced more frequently in nulliparous women but more intensely in multiparous women (3,28). In our study, the mean scores of both the W-DEQ/A and BAI were found to be higher in nulliparous than multiparous. Similarly Rouhe et al. (4), Rouhe et al. (7) and Ternström et al. (29) also reported that the childbirth fear of nulliparous was higher than that of multiparous. However, contrary to our study results, there are also some studies in the literature showing that childbirth fear increases as the number of births increases (13). The reason of this may result from the effect of insufficient information about pregnancy and birth and negative birth stories on the child birth fear for primiparous women and the effect of negative birth experiences for multiparous women.

In our study, it was determined that those with ≤ 37 and ≥ 41 weeks of gestation had higher scores both on the W-DEQ/A and on BAI than those with the normal gestational week (38-40 weeks). Because pre-term and post-term action

is a risky pregnancy table, it is a condition that causes stress, fear, and anxiety. In the literature, in such risky situations, it is stated that the pregnant women are experiencing severe anxiety and fear regarding the birth, the safety and the results of the birth and the health condition of the fetus as well as their own health (30,31). In a study by Şen and Şirin (30), it was found that the scores of anxiety level of those with pre-term diagnosis were high. Again in parallel with our study results, the state-continuity anxiety scores in pre-term labor in the studies by Dayan et al. (32) and Olçer and Oskay (31) was reported to be higher. The previous studies have not found a result to support this finding related to the fear of birth and anxiety leveling post-term pregnancies. Another cause of birth fear is the lack of information on birth. During labor, women experience fear, worries, and anxiety because they do not know and understand what they are experiencing and what is happening enough (8). In the literature, those who do not receive prenatal education are reported to have the fear of childbirth and anxiety more frequently (11,33). In our study, it was determined that the mean scores of both the W-DEQ/A and BAI of those who were not educated about pregnancy, childbirth and postpartum period were higher than those who had prenatal education. In parallel with our study findings, numerous studies have shown that prenatal education reduces maternal anxiety (14,34) and birth fear (13,22). While antenatal education is provided through training programs as a standard practice in developed countries, there are not such programs in our country.

In our study, as the total W-DEQ/A scores increased, the total score of the BAI also increased both in the nulliparous and in the

multiparous. It has been found that anxiety is related to the fear of childbirth (17), and the fear of childbirth is 2.4 times more common in the pregnant women along with anxiety. Saisto, Salmela-Aro, Nurmi, Halmesmäki (35) have emphasized that anxiety is an important determinant in the increased fear of childbirth in their meta-analysis. Likewise, Subaşı et al (13) stated that there was a significant positive correlation between the mean scores of the W-DEQ/A and the BAI.

One of the most basic fears in labor is birth pain. Women who have birth fear feel more pain during childbirth. Nevertheless, the factors such as inadequate training of pregnant women about the birth, birth pain, damage to the baby at birth, and the fear of the delivery room, inappropriate conditions of delivery room and ignoring the psychological support at birth cause the women to be afraid of vaginal birth (10,36,37). The scores of both the W-DEQ/A and BAI of the women who had vaginal delivery in our study, were found to be higher than those having a cesarean delivery. This indicates that even though prenatal care frequency ratios are above the numbers recommended by the World Health Organization, they do not have adequate prenatal training and are not sufficiently prepared for birth and experience fear of childbirth. Therefore, most women today prefer caesarean section because of being afraid of vaginal birth (8,10). In fact, today many women decide to have a cesarean from the moment they learn their pregnancy in order to avoid pain. The reported cesarean rate in our country is 37% (38).

In our study, we found that both the childbirth fear and anxiety levels were higher in the

nulliparous, those with ≤ 37 and ≥ 41 gestation weeks and those who had previous vaginal delivery. At the same time, a positive correlation was found between the fear of childbirth and anxiety.

The fear of childbirth is a condition that pregnant women often experience. Therefore, reducing the fear of birth and providing information can control the woman's behavior and make her have positive feelings, increase her self-confidence, improve the birth process and the results positively. Thus, it is important for the midwives/ nurses who give care in prenatal care services to determine the fear of birth and anxiety experienced by the pregnant women and to provide counseling to them in these areas. As in the developed countries, it may be suggested extending the preparatory classes for childbirth in our country, increasing the accessibility and providing a more positive experience of pregnancy and birth experience by supporting the participation of both pregnant women and their spouses in these classes.

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Conflict of Interest

The authors declare that they have no conflicts of interest

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