Original Article

Pre and Postpartum Levels of Childbirth Fear: A Turkish Experience

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Abstract

Background: The presence of negative thoughts about pregnancy and childbirth can complicate the expectation and experience of birth; The presence of positive thoughts about pregnancy and birth strengthens mother-baby communication and increases postpartum satisfaction.
Objective or Aims: The study was conducted to determine the relationship between pre- and postpartum levels of fear of childbirth.
Methodology: The study was conducted with a descriptive and correlational design. The sample for the study consisted of 312 women who were in gestational week 38 or later and 202 women who had experienced vaginal delivery and were in the second or third postpartum week.
Results: In the study, it was found that while the women mostly experienced fear of childbirth at a moderate level before delivery, many experienced a clinical level of fear of childbirth after the delivery ($p<0.05$). Regression analysis showed that their fear expectation was consistent with the attitudes of the health personnel, and that their position in relation to a request for social support during the delivery, and the W-DEQ-A were important predictive variables for fear of childbirth as experienced by these women. It was also found that women expressed greater fear of childbirth after the birth than before it.
Conclusions: W-DEQ-A, the attitudes of the health personnel, and the state of requesting social support during the delivery were important predictors for the fear of childbirth as experienced by the women.

***Keywords*:** Fear of childbirth, Wijma Delivery Expectancy/Experience Questionnaire A, Wijma Delivery Expectancy/Experience Questionnaire B

Background

Delivery is an important transition for a woman when her gestation period ends and she gives birth to her infant. The vast majority of women have ambivalent feelings toward delivery and during their pregnancy wonder how their delivery will be (Demsar et al., 2018;Adams, 2016). The thoughts and expectations of women regarding delivery differ significantly. The presence of negative thoughts about pregnancy and delivery can make a delivery difficult and also cause problems in the postpartum period (Aune et al.,2015; Sluijs et al.,2012). The presence of positive thoughts toward the pregnancy and delivery strengthens maternal-infant communication and increases satisfaction after the birth. It is also reported that having positive thoughts reduces the complications experienced by both the mother and the baby, the need for interventions during the birth, and the rate of caesarean births (Christianens and Bracke,2007; Dahlberg et al., 2016; Potur et al. 2017; Reisz et al., 2015; Nilsson et al.,2013)

When evaluating the labour experience, not only the sensitivity of the woman toward delivery but also her desire for and control over a vaginal delivery, the care she receives during delivery, and the presence and support of personnel in the delivery room should all be considered (Adams,2016; Ayers,2007). In studies investigating delivery expectations and experiences, a positive experience of labour is seen to provide personal enhancement for women,

an increased sense of their achievement with feelings of self-respect, and to facilitate in relationships involving the role of motherhood (Bhatt et al.,2014; Brane et al.,2014; Güneysu, 2016; Hildingsson,2015).

Since midwives spend more time with women during delivery than any other healthcare personnel, they have a strong influence on the psychological and psychosocial outcomes of the labour experience (Sessions,2012; Ulfsdottir et al.,2014). Healthcare personnel should be aware of the fear experienced by women in relation to labour, and they should meet the physical and psychological needs of the women, helping them to cope with the birth pains and to have a healthy conclusion to labour (Spaich et al.,2013; Waldenström et al.,2004). In the literature, women's fear of childbirth and the associated factors have been thoroughly examined, but a comparison of the fear of childbirth experienced during pregnancy with the fear of childbirth as experienced postpartum has been addressed only in a limited number of studies (Roosevelt and Low,2016; Tugut et al.,2015). First, the extent of women's fear before childbirth should be determined and then the relationship between this fear and the fear after the experience of labour should be examined. For this reason, this study was conducted to determine the relationship between the pre- and postpartum levels of the fear of childbirth.

Methods

Participants: This descriptive and correlational study was conducted between 01 March and 30 September 2017. The population for the study consisted of all primiparous women who were in gestational week 38 or later and living in the region served by 18 Family Health Centres (FHCs) in a city in Eastern Turkey. The number of primiparous pregnant women registered in these FHCs during this period was 312. Since the intention was to include the whole population in the study, no sampling method was used. The sample for the study therefore consisted of the 312 women who were in the gestational week 38 and above, and 202 (64.7%) women who had a vaginal delivery and were in the second or third week postpartum. Of the original number, 92 women were excluded from the latter part of the study as they had caesarean sections, 18 women were excluded from the study because they changed their residence after delivery. The inclusion criteria for the study were that the woman knew her last menstrual period, was not carrying any risk factor in her pregnancy, was having a singleton pregnancy, there were no health problems in her infant, and that she had a vaginal delivery.

Data Collection: In the study, the data were collected twice by the researcher using the face-to-face interview technique and making home visits to the women within working hours on weekdays.

The Participant Information Form was prepared by the researcher utilizing the literature; the Wijma Delivery Expectancy/Experience Questionnaire A (W-DEQ-A), and the Wijma Delivery Expectancy/Experience Questionnaire B (W-DEQ-B) were used to collect the data (Körükçü et al.,2012; Tugut et al.,2015; Uçar,2013). The Participant Information Form and the W-DEQ-A were applied to the pregnant women before the delivery; while the postnatal part of the Participant Information Form and the W-DEQ-B were applied to them in their second or third weeks postpartum.

Participant Information Form: The form consists of two parts to be used before and after childbirth. Questions about age, educational level, whether working, and income status are asked of the women before the childbirth; questions regarding the duration of delivery, the interventions performed during the delivery, the attitudes of the healthcare personnel and any requests for social support during the delivery are asked of the women after the birth.

In the study, the delivery duration was evaluated as the period between the admission of the woman to the hospital and the time of delivery.

Wijma Delivery Expectancy/Experience Questionnaire A/B (W-DEQ-A/B): The Wijma Delivery Expectancy/Experience Questionnaire A/B was developed by Klaas and Barbro Wijma to measure women's fear of childbirth. Both questionnaires consist of 33 items. A high score on both questionnaires signifies that the woman experienced a high level of fear of childbirth (Wijma et al.,1998). The W-DEQ-A and W-DEQ-B scores are evaluated in relation to four sub-groups. The first sub-group are those who experience low fear of childbirth (scores ≤ 37); the next, those who experience moderate fear of childbirth (scores between 38–65); then those who experience severe fear of childbirth (scores between 66–84); and finally those who experience clinical fear of childbirth (scores ≥ 85) (Wijma et al.,1998). The Cronbach's alpha value for the W-DEQ-A when adapted into Turkish was

determined to be 0.89 (Körükçü et al.,2012) and the Cronbach's alpha value of the W-DEQ-B was found to be 0.88 (Uçar,2013). In the present study, the Cronbach's alpha values were determined as 0.73 for the W-DEQ-A and 0.78 for the W-DEQ-B.

Statistical analysis: The data were assessed by use of a computer using the SPSS 16.0 software package. In the statistical evaluation, percentage distribution, arithmetic mean, ANOVA, independent samples t-test, Cronbach's alpha reliability analysis, chi-square test, Pearson's correlation analysis, and bivariate and multivariate linear regression analyses were used. The results were accepted at a confidence interval of 95% and a significance level of $p<0.05$.

Ethical consideration: Before starting the study, written permissions were obtained from the Malatya Clinical Trials Ethics Committee (2017/6-13) and from Adıyaman Public Health Directorate. The women who participated in the study were informed about the study and their inclusion in the study was voluntary.

Results

Table 1 shows the distribution of the socio-demographic characteristics of the women in the study in terms of their W-DEQ-A mean scores. It was determined that 53.2% of the women were 24 years old and younger; 67.6% of the women had secondary school or high school education, 80.8% of them were unemployed, and 49.4% had a monthly income of a middle level. While the W-DEQ-A mean score of the employed women in the study was 55.16±15.79, the W-DEQ-A mean score of the unemployed women was 61.20±15.40 (*p<0.05*). No statistically significant difference was found between the age, educational level, and monthly income of the women and their W-DEQ-A mean scores (*p>0.05*).

Table 2 shows the distribution of the socio-demographic characteristics of the women in the study in terms of their W-DEQ-B mean scores. No statistically significant difference was found between the age, educational level, and working status of the women and their W-DEQ-B mean scores (*p>0.05*). It was determined by the study that while the W-DEQ-B mean score of the women with a middle/low monthly income was 90.69±29.55, the W-DEQ-B mean score of women with a high income was 75.41±22.52 (*p<0.05*).

Table 3 shows the distribution of delivery-related characteristics of the women in terms of their W-DEQ-B mean scores. It was determined that 65.3% of the women had a delivery duration of longer than 12 hours, 72.8% received both an episiotomy and oxytocin during their labour. In addition, 83.7% of the women stated that the attitudes of the healthcare personnel were consistent with their expectations, and 83.7% stated that they requested social support during the delivery. An additional result, not shown in the table, was that all women gave birth in a state hospital. In the study, no statistically significant difference was determined between the delivery duration and W-DEQ-B mean score (*p>0.05*). In the study, while the W-DEQ-B mean scores of the women who underwent only an episiotomy during the delivery was 79.12±28.36, the W-DEQ-B mean score of the women who experienced an episiotomy + oxytocin was 90.96±28.56 (*p<0.05).* The W-DEQ-B mean score of women whose expectations were consistent with the attitudes of the healthcare personnel during delivery was 84.28±27.95; however, the W-DEQ-B mean score of those whose expectations were not consistent with the attitude of the healthcare personnel was 90.71±27.89 (*p<0.05*). The W-DEQ-B mean score (90.33±28.67) of the women who requested social support during delivery was higher than that of those who did not (72.75±25.98) (*p<0.05*).

Table 4 shows a comparison of the women's fear of childbirth according to W-DEQ-A and W-DEQ-B. In this study, it was determined that while the women mostly experienced a moderate level of fear of childbirth before the birth, a large number (45.8%) experienced fear of childbirth at a clinical level after the birth. A positive weak correlation was determined between the women's W-DEQ-A mean score (60.04±15.63) and their W-DEQ-B mean score (87.74±28.92) (*p<0.05*).

Table 5 shows the working status associated with W-DEQ-A, the monthly income status, interventions performed during the delivery, whether their expectations were consistent with the attitudes of the healthcare personnel, and whether they requested social support during delivery as these factors were found to be associated with W-DEQ-B, and the results of a linear regression analysis conducted with W-DEQ-A. No significant correlation was found in the linear regression analysis made between working status and W-DEQ-A in the study (*p=0.061*). However, a low significant correlation was found between whether their expectations were consistent with the attitudes of the health personnel and W-DEQ-B, and between whether

they had requested social support during delivery and W-DEQ-A (R:0.42, R2=0.18, *p<0.001*). These variables accounted for 18% of the total variance for W-DEQ-B. The order of significance of the variables for W-DEQ-B was determined as whether their expectations were consistent with the attitudes of the healthcare personnel, W-DEQ-A, and whether they requested social support during their delivery. It was determined that whether their expectations were consistent with the attitudes of the health personnel, W-DEQ-A, and whether they requested social support during delivery were all important predictors of the fear of childbirth after the experience (Table 5).

Table 1. Distribution of Socio-Demographic Characteristics of the Women in terms of their W-DEQ-A mean scores (N:312)

Socio-Demographic Characteristics	N	%	W-DEQ-A $\bar{X}$±SD	Statistical Test
Age				
≤24	169	53.2	60.75±15.37	t=0.867
>25	143	45.8	59.20±15.96	p=0.386
Educational level				
Illiterate/Primary School	25	8.0	62.84±12.52	F=0.442
Secondary/High School	211	67.6	59.87±16.01	p=0.643
College/Faculty	76	24.4	59.59±15.58	
Working Status				
Employed	60	19.2	55.16±15.79	t=-2.716
Unemployed	252	80.8	61.20±15.40	**p=0.007**
Monthly Income Status				
Middle/Low	244	78.2	62.26±23.75	t=1.656
High	68	21.8	58.58±16.58	p=0.099

W-DEQ-A=60.04±15.63

Table 2. Distribution of Socio-Demographic Characteristics of Women in terms of their W-DEQ-B Mean scores (N:202)

Socio-Demographic Characteristics	N	%	W-DEQ-B $\bar{X}$±SD	Statistical Test
Age				
≤24	109	54.0	89.92±32.01	t=1.163
>25	93	46.0	85.18±24.73	p=0.246
Educational level				
Illiterate/Primary School	21	10.4	84.85±27.43	F=2.967
Secondary/High School	139	68.8	88.90±29.54	p=0.698
College/Faculty	42	20.8	85.33±27.94	

Working Status				
Employed	37	18.3	84.00±24.50	t=-0.985
Unemployed	165	81.7	88.58±29.82	p=0.328
Monthly Income Status				
Middle/Low	163	80.7	90.69±29.55	t=3.024
High	39	19.3	75.41±22.52	**p=0.003**

W-DEQ-B=87.74±28.92

Table 3. Distribution of Delivery-Related Characteristics of the Women in Terms of their W-DEQ-B Mean scores

Delivery-Related Characteristics	**N**	**%**	**W-DEQ-B** $\overline{X}$**±SD**	**Independent samples t test**
Delivery Duration/Hours				
<12	70	34.7	83.67±27.01	t=1.505
12≥	132	65.3	89.90±29.75	p=0.134
Interventions During the Delivery				
Only Episiotomy	55	27.2	79.12±28.36	t=-2.636
Episiotomy + Oxytocin	147	72.8	90.96±28.56	**p=0.010**
Whether their Expectations were Consistent with the Attitudes of Healthcare Personnel				
Yes	169	83.7	84.28±27.95	t=3.913
No	33	16.3	90.71±27.89	**p=0.001**
Request Made for Social Support During Delivery				
Yes	169	83.7	90.66±28.62	t=3.561
No	33	16.3	72.75±25.98	**p=0.001**

W-DEQ-B=87.74±28.92

Table 4. Comparison of Women's Fear of Childbirth According to W-DEQ-A and W-DEQ-B

W-DEQ-A/B	**S**	**%**	$\overline{X}$**±SD**	**Pearson Correlation**
W-DEQ-A (n:312)				

Low	28	9.0		
Moderate	156	50.0	60.04±15.63	
Severe	114	36.5		
Clinical Level	14	4.5		r=0.268
				p=0.001
W-DEQ-B (n:202)				
Low	3	1.5		
Moderate	43	21.2	87.74±28.92	
Severe	63	31.0		
Clinical Level	93	45.8		

W-DEQ-B=60.04±15.63;W-DEQ-A=87.74±28.92

Table 5. Linear Regression Analysis of Risk Factors Associated with Fear of Childbirth in the Women

Risk factors for fear of childbirth	B	SE	β	t	p
			W-DEQ-A		
Working status (referent: unemployed)	7.853	4.16	0.132	1.885	0.061
R:0.13 R^2:0.01 AdjR^2:0.01 p:0.061					
			W-DEQ-B		
Monthly income status (referent: middle / low)	9.327	4.85	0.128	1.920	.056
Interventions during delivery (referent: episiotomy+oxytocin)	-36.483	26.87	-.089	-1.358	.176
Whether their expectations were consistent with the attitudes of the health personnel (referent:no)	15.927	5.14	.204	3.097	.002
Whether they requested social support during delivery (referent: yes)	13.285	5.13	.170	2.588	.010
W-DEQ-A	0.251	.083	.200	3.013	.003
R:0.42 R^2:0.18 AdjR^2:0.16 p:0.001					

W-DEQ-B=60.04±15.63; W-DEQ-A=87.74±28.92

Discussion

An experience of fearing childbirth can affect many factors such as the relationship between a woman, her child and her husband; the risk of depression in the postpartum period; the desire for another pregnancy; or the preference for a caesarean section (Aune et al.,2015; Roosevelt and Low, 2016). The results of studies conducted for the purpose of determining the relationship between fears of childbirth in women before and after childbirth were discussed in the review of literature in the Introduction.

The working status of women can affect their fear of childbirth as experienced during pregnancy (Jha

et al.,2018). It has been stated that unemployed women are more concerned about the economic future due to the extension of their family (Sessions,2012). It was determined in this study that the W-DEQ-A mean score of unemployed women was higher than that of employed women, but there was no significant correlation in the linear regression analysis. Similarly, in a study by Fenwick et al., it was found that unemployed women had higher W-DEQ-A mean scores than employed women (Fenwick et al.,2009). The results of the present study are similar to those of the study by Fenwick et al..

In the present study, the age, educational level, and monthly income status of the women had no significant correlation with their W-DEQ-A mean scores. In addition to studies that report a significant correlation between age (Alehagen et al.,2006; Fenwick et al.,2009), educational level (Demsar et al., 2018; Fenwick et al.,2009) and monthly income status (Fenwick et al.,2009) with W-DEQ-A mean score, there are also studies that report no significant correlation between age (Nieminen et al., 2009), educational level (Jokić-Begić et al., 2014) and monthly income (Sessions,2012; Ulfsdottir et al.,2014) with W-DEQ-A mean scores. The results of the present study are similar to those in the latter group.

Income status is an important factor affecting the fear of childbirth in many women (Jha et al.,2018). İt has been stated that women with an insufficient income level experience more negative feelings and thoughts during their deliveries (Sessions,2012). In the present study, it was found that women with middle and lower monthly income levels experienced more fear of childbirth than women with higher incomes; however no significant correlation was found in the linear regression analysis. This finding was confirmed in studies by Sessions and Ulfsdottir et al., where no significant correlation was found between monthly income and fear of childbirth (Sessions,2012; Ulfsdottir et al.,2014). The results of the present study are similar to the results of the studies by Sessions and Ulfsdottir et al..

It was also determined in this study that the fear of childbirth experienced by women was not affected by their age, education or working status ($p>0.05$). In addition to studies in the literature that claim a significant correlation between age (Hildingsonn,2015), educational level (Uçar, 2013), and working status (Fenwick et al., 2009) with W-DEQ-B mean scores, there are also studies that report that there is no significant correlation between age (Ucar,2013; Ulfsdottir et al., 2014), educational level (Ulfsdottir et al.,2014) and working status (Christiaens and Bracke, 2007; Ulfsdottir et al. 2014, Nissen and Ryding,2014) with W-DEQ-B mean scores. The results of the present study are parallel with those described in the second group in the literature.

There are studies in the literature that indicate that women who have high levels of fear before childbirth have longer delivery durations (Adams,2016; Waldenström et al.,2004). In the present study, no significant difference was determined between delivery duration and W-DEQ-B mean score ($p>0.05$). No correlation was found between delivery duration and fear of childbirth in a study (Sluijs et al.,2012). The results of the present study are similar to those of the study by Sluijs et al..

It has been stated that, in a vaginal birth, which is a normal physiological process, it is important to avoid interventions unless there is medical risk as interventions affect the experience of labour and the perceived level of fear of childbirth (Fenwick et al.,2009; Sessions,2012). In the present study, oxytocin and episiotomy were administered together to the majority of women. In the study by Sessions, it was determined that 22.5% of the women underwent episiotomy and 42.5% of them were given oxytocin (Sessions, 2012). The results of the present study show differences relative to the results of the study by Sessions. The difference is thought to be associated with cultural factors as well as the fact that only primiparous women were included in the present study.

It was determined in the present study that the group who simultaneously underwent oxytocin and episiotomy during delivery experienced more fear of childbirth but the linear regression analysis showed no significant correlation ($p<0.05$). In the study by Brane, Olsson, and Andolf, no significant correlation was found between the interventions performed during delivery and the labour (Brane et al.,2014). The results of the present study are similar to those of the study by Brane et al..

A positive attitude and support from the healthcare personnel enables women to cope more easily with the negative situations they experience during their labour, such as fear, tension, and pain (Fenwick et al.,2009; Potur et al.,2017). In the literature, there are studies that state that when healthcare personnel give positive expressions of support it can eliminate or alleviate fear and have

a strong effect on fear of childbirth, reducing the fears of women about to go into labour (Aune et al.,2015; Nilsson et al.,2013; Potur et al.,2017). In the linear regression analysis conducted in the present study, the women whose expectations were not consistent with the attitudes of the healthcare personnel were identified as experiencing more fear in childbirth than those whose expectations were consistent ($p<0.05$). The results of the present study were similar to the literature.

In the present study, it was found that the women who requested social support during delivery were experiencing greater fear of childbirth; whereas, the women who did not want social support were experiencing less fear of childbirth ($p<0.05$). In the study conducted by Nilsson et al. with primiparous women, it was determined that social support was related to a positive experience of delivery (Nilsson et al.,2013). In the literature, there are studies determining the correlation between the social support received and the positive experience of delivery (Bhatt et al.,2014; Spaich et al.,2013). The results of the present study are similar to those described in the literature.

In the present study, the W-DEQ-A mean score was determined as 60.04±15.63. In the literature, the W-DEQ-A mean score varies between 56.66±19.49 and 68.00±23.00 (Fenwick et al., 2009; Brane et al.,2014; Körükçü et al.,2012; Nieminen et al.,2009). The results of the present study are similar to those in the literature. In the present study it was determined that most women experience a moderate fear of childbirth before the birth. In the study by Fenwick et al., 48% of women, and in the study by Demsar et al., 53.4% of women, were found to experience a moderate level of fear of childbirth (Demsar et al.,2018; Fenwick et al.,2009). The results of the present study are similar to the results of the Fenwick et al. and Demsar et al. studies in this regard.

The present study determined that a large number of women experienced the fear of childbirth at a clinical level subsequent to the birth, and according to W-DEQ-B. In a study conducted by Ulfsdottir et al. with primiparous women, it was determined that 44% of women, and in a study conducted by Uçar, 38.3% of women, experienced a severe fear of childbirth (Uçar,2013; Ulfsdottir et al.,2014). The fear experienced by women during the delivery experience was found to be higher in the present study than that identified in the studies by Ulfsdottir et al. and Uçar. The difference is thought to be associated wth the fact that the study by Ulfsdottir et al. was in a different country and used a different research design, while the population of the Uçar's study consisted of both primipara and multipara women.

Fear of childbirth in pregnancy is defined as a negative cognitive assessment involving expectation of an anxious and fearful delivery (Potur et al.,2017). When women who have experienced fear of childbirth during their pregnancy are faced with the delivery, their concentration is disrupted and they may experience greater feelings of anxiety and fear (Jokić-Begić et al., 2014). Numerous studies in the literature reveal that there is a relationship between the level of fear before childbirth and the level of fear after the birth (Bhatt et al.,2014; Fenwick et al.,2009; Rouhe et al.,2013). In the linear regression analysis performed in the present study, it was determined that women who had a high level of fear before childbirth also had higher levels of fear after the birth ($p<0.05$). Similarly, in studies by Guneysu and Alehagen et al., a positive significant correlation was found between the W-DEQ-A and W-DEQ-B mean scores (Alehagen et al.,2006; Güneysu,2016). The results of the present study are similar to those described in the literature.

Conclusion: It was determined from the study that the state of the women's expectations was consistent with the attitudes of the health personnel; while W-DEQ-A and the state of requesting social support during the delivery were important predictors for the fear of childbirth as experienced by the women. In accordance with these results, it is thought that it would be useful for healthcare personnel to examine the women holistically and to present positive attitudes to reduce their fear of childbirth. It would also be helpful if the healthcare personnel, or someone else requested by a woman, were available to meet their need for social support during the delivery, and if interventions were planned to reduce their fear by determining their level of fear of childbirth before the birth and so reduce the fear of childbirth experienced.

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