PERINATAL JOURNAL

Original Article

Perinatal Journal 2022;30(3):284–291

Anxiety and fear about childbirth and postpartum period in last trimester and its relation to childbirth pain

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Abstract

Objective: This study aimed to determine the fear and anxiety related to childbirth and postpartum period in last trimester for pregnant women, and its relation to childbirth pain.

Methods: This study was conducted in a training and research hospital's obstetric clinic in Turkey. Totally, 104 pregnant women admitted to the hospital during the last trimester and they were followed up to delivery, which occurred in the same hospital. Data were gathered with an Information Form, Fear of Childbirth and Postpartum Anxiety Scale (FCPAS), Spielberger State and Trait Anxiety Inventory (STAI) and Visual Analogue Scale (VAS).

Results: The mean FCPAS score of the women was 4.87±1.25. The highest scores were for the FCPAS subscales of fears about breastfeeding, behavior of the health staff at childbirth, and the possibility of Cesarean section. Labor pain had a significant positive weak relation with fear about childbirth and the total STAI-State score (r=0.281, p=0.041; r=0.327, p=0.017), respectively.

Conclusion: It is important to determine the fear and anxieties about childbirth and postpartum period experienced during last trimester, in terms of planning prenatal education and counseling services, and supporting women to cope effectively.

Keywords: Pregnancy, fear of childbirth, postpartum period.

Introduction

Many women feel fear and anxiety about childbirth for various reasons, such as uncertainties about labor, labor pain, loss of control, and giving birth alone.[1,2] Fear of childbirth is a general term without a clear definition. Lack of standardized scales to measure childbirth fear and cultural differences result in variations in the reported prevalence of childbirth fear in the world.[3] In studies, the rate of pregnant women experiencing fear of childbirth varies between 4.8% and 31%.[3–5] The sources of fear are usually the risk of harm to women themselves or their babies, and the health staff's attitudes and insufficient knowledge.[2–4] This prenatal fear may lead to pain and restlessness during labor, emergency Cesarean section and postpartum affective disorders.[3,6]

Stress experienced during pregnancy affects not only maternal health but also childbirth outcomes (e.g. preterm delivery, difficult delivery, complications and low birth weight).[7–9] The most frequently experienced anxiety in the first and last trimesters are not directly associated with obstetric complications; however, anxiety can cause obstetric complications due to the changes in the endocrine system.[6] Although labor pain can be caused by physiological changes such as cervix dilatation and uterus contractions, it may also result from psychological factors such as stress, anxiety and fear.[10] It can be

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e-mail: meltemugurlu17@gmail.com **Received:** May 30, 2022; **Accepted:** August 25, 2022

How to cite this article: Uğurlu M, Yavan T. Anxiety and fear about childbirth and postpartum period in last trimester and its relation to childbirth pain. Perinat J 2022;30(3):284–291. doi:10.2399/prn.22.0303009

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beneficial to identify antenatal anxiety, so that women experiencing it can be made aware of their condition and encouraged to ask for support from health professionals.[3]

According to the World Health Organization (WHO), the purpose of the antenatal care is to help women to have a positive childbirth experience.[11] Positive expectations about childbirth during pregnancy may lead to a positive childbirth experience, while anxiety, fear or negative expectations can create the opposite effect.[3,12] Some studies have shown that antenatal education and counseling decrease anxiety, fear and labor pain.[3,13]

This study aimed to determine the fear and anxiety experienced by pregnant women related to the childbirth and the postpartum period, and to evaluate the relationship between labor pain, and fear and anxiety.

Methods

The study had a descriptive, prospective design and was conducted in the obstetric clinic of a training and research hospital. Study population included the pregnant women in their third trimester presenting to the obstetrics outpatient clinic of the hospital at the time of the study, and the sample comprised 110 pregnant women planning to give birth in the same hospital. Six women gave birth in another hospital; therefore, the study was performed with 104 women (95%).

Data collection tools

Data were gathered with an Information Form, Fear of Childbirth and Postpartum Anxiety Scale (FCPAS), Spielberger State and Trait Anxiety Inventory (STAI) and Visual Analogue Scale (VAS).

Information form

Information form was created by the researchers in light of the literature.[6,14] The form includes questions about the age, employment status, education, number of pregnancies, problems experienced during previous and current pregnancy, and planned delivery type characteristics.

Fear of Childbirth and Postpartum Anxiety Scale

FCPAS was developed by Kitapçıoğlu et al.[6] to determine fear experienced during and after childbirth. The scale is composed of 10 subscales and 61 items. It is a five-point Likert scale, with one corresponding to 'completely disagree' and five, to 'totally agree'. Some items are scored in the reverse order. The scores for the scale range from 0.00 to 10.00. The scores 0.00–2.00 are very low, the scores 2.01–4.00 are low, the scores 4.01–6.00 are moderate, the scores 6.01–8.00 are high and the scores 8.01–10.00 are very high. Cronbach's alpha was reported to be 0.95 for the original scale[6,15] and it was found to be 0.96 in the present study.

Spielberger State and Trait Anxiety Inventory

STAI was developed by Spielberg in 1970 to measure state and trait anxiety levels of individuals. It was adapted for Turkish culture by Öner and Le Compte.[16] The inventory is composed of two scales; state anxiety scale (STAI-State) and trait anxiety scale (STAI-Trait), and each involves 20 items. The former is formulated to determine how individuals feel at a certain moment and under a certain condition, whereas the latter shows how individuals feel in general. STAI is a four-point Likert scale. The total score for the inventory ranges between 20 and 80. The scores >40 show pathological anxiety. Lower scores are indicators of mild anxiety, higher scores, of severe anxiety.

Visual Analogue Scale

VAS was developed by Price et al. in 1983 to measure the severity of pain.[17] It is frequently used to determine the severity of pain experienced by women during labor.[1,18] Individuals are asked to assign a score for their pain on a 10 cm-scale ranging from 0 to 10. Zero corresponds to lack of pain and 10 corresponds to very severe pain.

Data collection

The women were given information about the aim and methods of the study and their participation in the study was voluntary. Those agreeing to participate in the study and planning to give birth in the hospital where this study was conducted were given the data collection tools, and requested to complete them. This took 15 minutes for each participant. During the data collection process, the researcher answered participants' questions. Every day during the study period, the researcher checked whether there were any participants among the women presenting to the hospital to give birth. The pain severity was evaluated using VAS for the women giving vaginal birth during the active phase of labor, and for the women having Cesarean section in the postpartum four hours.

Ethical considerations

Ethical approval was obtained from the ethical committee (no: 13/1648.4-2819). According to the Helsinki Declaration, written consent was taken from the participants after they were informed about the aim and conduction of the study. The Clinical trial was registered on www.clinicaltrials.gov (NCT04478604).

Data analysis

The obtained data were analyzed with the SPSS 16 package software (SPSS Inc., Version 16.0, Chicago, IL, USA). The Kolmogorov-Smirnov test was used to determine whether the data for the continuous variables were normally distributed or not. Numbers, percentages, median and mean±standard deviation were used for descriptive statistics. Cronbach's alpha coefficient was determined. For comparative statistics, the following were utilized: t test, one-way analysis of variance, Kruskal-Wallis test and Mann-Whitney U test. The relation between two continuous variables was analyzed with the Spearman correlation test. The statistical significance was set at 0.05 for all the analyses.

Results

The mean age of the women was 31.29±4.74 years. The mean parity was 1.96±0.81 and the mean week of gestation was 36.68±1.63 at admission. Of all the women, 88.5% had a planned pregnancy. Regarding their current pregnancies, 51% had vaginal birth and 49% Cesarean section (**Table 1**).

The mean FCPAS score of the women was 4.87±1.25. The highest scores for the subscales were as fol-

Table 1. Demographic and obstetric characteristics of the women (n=104).

Characteristics		Mean±SD	
Age (years)		31.29±4.74	
Week of gestation		36.68±1.63	
Number of pregnancies		1.96±0.81	
		Number (n)	Percentage (%)
Education level	Primary school	10	9.6
	High school	31	29.8
	University	63	60.6
Working status	Working	34	32.7
	Not working	70	67.3
Status of planning pregnancy	Planned	92	88.5
	Not planned	12	11.5
Planned type of delivery	Vaginal birth	29	27.9
	Cesarean section	57	54.8
	Not clear	18	17.3
Number of pregnancies	1	36	34.6
	2	36	34.6
	≥3	32	30.8
Have a problem in previous pregnancy? (n=68)*	Yes	11	16.2
	No	57	83.8
Have a problem in the current pregnancy?	Yes	17	16.3
	No	87	83.7
How previous pregnancy ended (n=68)*	Vaginal birth	35	51.5
	Cesarean section	21	30.9
	D&C	12	17.6
Type of birth in the current pregnancy	Vaginal birth	53	51.0
	Cesarean section	51	49.0
Total	104	100	

*First pregnancies were not included. **D&C:** dilation & curettage.

lows: 6.13±2.13 for fear about breastfeeding after childbirth, 5.75±2.23 for fear about behavior of the health staff at childbirth, and 5.72±2.41 for fear about the possibility of Cesarean section. The mean score for STAI-State was 37.45±9.43 and the mean score for STAI-Trait was 43.9±7.14 (**Table 2**).

The total FCPAS scores of the women with planned vaginal birth and the women with an unclear mode of birth were significantly higher than the women with planned Cesarean section (F=3.814, p=0.046). The scores of the women aged 20–29 years were significantly higher for fears about childbirth, breastfeeding, failure in infant care and behavior of the health staff at childbirth than the women aged 30 years and older (p=0.005, p=0.033, p=0.022), respectively. The scores of the women in employment and the scores of the women with an unplanned pregnancy were significantly higher for fear about social life after childbirth than the unemployed women and the women with planned pregnancy (p=0.032, p=0.035), respectively. The scores of the women with planned vaginal birth were significantly higher for fears about childbirth and behavior of the health staff at childbirth than the women with planned Cesarean section (p=0.000, p=0.037), respectively. The scores of the primigravidas were significantly higher for fear about failure in infant care (p=0.013). The scores of women whose previous pregnancy ended with dilation & curettage (D&C) and the scores of primigravid women were significantly higher for fear about the baby and for fear about failure in infant care after childbirth (p=0.002, p=0.001) (**Table 3**).

There were positive associations between labor pain and the fear about childbirth, and between labor

Table 2. The relation between the FCPAS and STAI scores and labor pain of the women (n=104).

FCPAS subscales	Mean±SD Median (min–max)		Pain VB (n=53)	 CS (n=51)
Total FCPAS score (min=0, max=10)	4.87±1.25 4.98 (2.16–8.36)	r p	0.225 0.105	-0.179 0.209
Factor 1: Fear about the baby	4.83±1.91 4.40 (2.0–10.0)	r p	0.226 0.103	-0.156 0.274
Factor 2: Fear about childbirth	5.66±2.01 5.61 (2.00–10.00)	r p	0.281* **0.041**	-0.135 0.346
Factor 3: Fear about breastfeeding after childbirth	6.13±2.13 6.00 (2.00–12.00)	r p	0.054 0.700	-0.337* **0.015**
Factor 4: Fear about failure in infant care after childbirth	4.07±1.63 4.00 (2.0–10.0)	r p	0.063 0.654	-0.200 0.159
Factor 5: Fear about social life after childbirth	4.70±2.02 4.00 (1.75–7.25)	r p	0.174 0.214	0.221 0.120
Factor 6: Fear about health of the baby and mother after childbirth	4.20±1.34 4.00 (1.75–7.25)	r p	0.153 0.273	-0.084 0.557
Factor 7: Fear about lack of spousal support after childbirth	2.56±0.94 2.57 (1.43–5.43)	r p	0.194 0.163	-0.124 0.386
Factor 8: Pre-labor fear	5.12±2.15 5.33 (2.0–10.0)	r p	0.168 0.230	-0.132 0.357
Factor 9: Fear about behavior of the health staff during childbirth	5.75±2.23 5.50 (2.0–10.0)	r p	0.164 0.241	-0.167 0.242
Factor 10: Fear about possibility of Cesarean section	5.72±2.41 6.0 (2.0–10.0)	r p	0.194 0.164	-0.040 0.780
STAI-State score (min=20, max=80)	37.45±9.43 37.0 (20.0–65.0)	r p	0.327* **0.017**	0.166 0.246
STAI-Trait score (min=20, max=80)	43.90±7.14 44.0 (27.0–64.0)	r p	0.116 0.410	0.035 0.810

*Correlation is significant at the 0.05 level. **CS:** Cesarean section; **r:** correlation coefficient; **VB:** vaginal birth.

Table 3. The comparison of scores for FCPAS and its subscales according to demographic and obstetric characteristics of the women (n=104).

	FCPAS										
	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**	**Factor 6**	**Factor 7**	**Factor 8**	**Factor 9**	**Factor 10**	**Total score**
Age group											
20–29	4.88±1.97	6.23±1.90	6.59±2.15	4.52±1.80	4.74±2.05	4.46±1.24	2.49±0.80	5.42±2.30	6.36±2.22	6.06±2.37	5.17±1.19
≥30	4.78±1.86	5.12±1.98	5.70±2.03	3.65±1.35	4.67±2.01	3.96±1.39	2.62±1.06	4.83±1.97	5.20±2.10	5.40±2.43	4.59±1.25
Test	-0.385*	0.305†	0.000†	-2.297*	0.037†	0.660†	2.278†	0.338†	0.050†	1.137†	1.496†
p	0.701	**0.005**	**0.033**	**0.022**	0.873	0.060	0.458	0.165	**0.008**	0.170	0.224
Education level											
Primary school	5.24±2.35	7.07±1.99	7.32±0.50	4.68±0.98	4.25±1.87	4.95±1.59	2.65±0.85	6.60±1.67	6.85±2.55	6.80±3.08	5.64±1.25
High school	4.98±2.20	5.63±2.03	6.16±2.28	3.74±1.24	4.58±1.98	4.29±1.49	2.49±0.86	4.94±2.14	5.45±1.95	5.45±1.94	4.78±1.20
University	4.69±1.69	5.44±1.95	5.92±2.09	4.14±1.85	4.84±2.08	4.03±1.19	2.58±1.00	4.97±2.15	5.73±2.29	5.73±2.29	4.80±1.25
Test	0.592§	4.746§	1.891‡	4.197§	0.772§	2.701§	0.136§	5.644§	1.508‡	2.190§	0.126‡
p	0.744	0.093	0.156	0.123	0.680	0.259	0.934	0.059	0.226	0.334	0.126
Working status											
Working	4.76±1.88	5.92±1.96	6.03±2.29	4.35±1.76	5.40±2.14	4.49±1.19	2.75±1.05	5.39±2.14	5.69±2.18	6.09±2.56	4.81±1.24
Not working	4.86±1.95	5.59±2.01	6.20±2.07	3.97±1.86	4.41±1.88	4.10±1.37	2.48±0.87	5.03±2.14	5.84±2.23	5.60±2.31	5.09±1.21
Test	-0.432*	-0.757*	1.352†	0.012†	-2.139*	0.801†	-1.098*	-0.592*	-0.479*	-0.814*	0.871†
p	0.666	0.449	0.248	0.914	0.032	0.373	0.272	0.554	0.632	0.416	0.353
Status of planning pregnancy											
Planned	4.81±1.92	5.62±2.01	6.12±2.11	4.06±1.53	4.54±1.93	4.21±1.31	2.57±0.92	5.11±2.15	5.74±2.18	5.78±2.44	4.86±1.21
Not planned	4.95±1.86	5.96±2.10	6.20±2.33	4.16±2.35	5.91±2.37	4.10±1.64	2.45±1.13	5.16±2.24	5.87±2.64	5.25±2.17	5.00±1.58
Test	-0.138*	0.140†	-0.281*	-0.378*	-2.110*	-0.592*	-0.470*	-0.118*	-0.179*	-0.709*	1.624†
p	0.891	0.709	0.779	0.705	**0.035**	0.554	0.638	0.906	0.858	0.478	0.205
Planned type of birth											
Vaginal birth	4.94±1.88	6.14±1.78	5.97±2.21	4.29±1.65	4.82±1.96	4.37±1.22	2.58±0.77	5.46±2.02	6.21±2.02	6.22±2.34	5.10±1.14
C-section	4.53±1.96	4.42±2.14	6.02±2.13	3.46±1.41	4.56±2.20	3.95±1.40	2.59±1.19	4.34±2.14	4.77±2.16	5.31±2.22	4.40±1.39
Not clear	4.94±1.96	5.66±2.01	6.13±2.13	4.34±1.75	4.55±2.01	4.04±1.59	2.44±1.02	5.29±2.34	5.88±2.55	4.77±2.64	4.91±1.18
Test	0.889§	F:8.582‡	F:1.009‡	5.053§	0.392§	1.891§	0.457§	5.262§	6.619§	5.631§	F:3.814‡
p	0.641	0.000	0.368	0.080	0.822	0.389	0.796	0.072	**0.037**	0.060	**0.046**
Number of pregnancies											
1	4.59±1.60	2.16±0.36	6.20±2.47	4.66±1.72	4.55±2.11	4.25±1.30	2.38±0.88	5.55±2.34	5.84±2.50	5.22±2.49	4.90±1.25
2	5.11±2.11	5.54±1.82	6.16±1.78	3.97±1.59	5.11±2.00	4.43±1.18	2.80±0.89	5.18±1.69	6.13±1.99	6.63±2.01	5.08±1.10
≥3	5.06±2.35	5.61±2.10	6.01±2.13	3.51±1.39	4.42±1.93	3.89±1.53	2.49±1.02	4.56±2.31	5.23±2.10	5.25±2.50	4.60±1.38
Test	0.299§	0.187‡	0.072‡	4.571‡	2.033§	1.409‡	4.796§	3.476§	3.012§	8.152§	1.273‡
p	0.861	0.830	0.931	0.013	0.362	0.249	0.091	0.176	0.222	**0.017**	0.284
Have a problem (need medical care or extra investigation) in previous pregnancy?											
Yes	6.21±2.71	6.83±2.47	7.34±2.25	4.46±2.17	4.86±2.71	4.47±1.46	2.64±0.86	5.09±2.72	5.09±2.72	5.45±2.46	5.37±1.62
No	4.63±1.72	5.50±1.93	5.96±2.08	3.98±1.52	4.67±1.95	4.14±1.32	2.54±0.95	5.07±2.05	5.07±2.05	5.75±2.43	4.79±1.18
Test	-1.797*	1.359†	0.130†	-0.644*	-0.867*	0.564†	-0.505*	2.522†	-0.086*	-0.469*	1.423†
p	0.072	0.111	0.076	0.520	0.867	0.488	0.614	0.990	0.931	0.639	0.273
Have a problem (need medical care or extra investigation) in the current pregnancy?											
Yes	5.64±2.19	6.17±2.42	6.61±2.17	4.36±2.24	4.32±2.76	3.80±1.46	2.50±0.73	4.86±2.40	5.29±2.55	4.94±2.51	4.85±1.68
No	4.67±1.82	5.56±1.93	6.03±2.12	4.01±1.50	4.78±1.86	4.27±1.31	2.57±0.98	5.17±2.11	5.85±2.16	5.87±2.38	4.88±1.16
Test	-1.634*	1.024†	0.197†	2.472†	-1.451*	0.068†	-0.045*	-0.652*	-0.976*	-1.368*	3.467†
p	0.102	0.338	0.328	0.540	0.142	0.234	0.964	0.514	0.329	0.171	0.948
How previous pregnancy ended											
Primigravida	4.57±1.62	5.93±2.09	6.25±2.48	4.74±1.68	4.62±2.09	4.32±1.24	2.40±0.88	5.65±2.30	5.95±2.45	5.31±2.47	4.97±1.20
Vaginal birth	4.78±1.81	5.61±1.40	5.86±1.75	3.55±1.04	4.92±1.60	4.19±1.30	2.56±0.79	4.89±1.58	5.81±1.77	6.31±2.37	4.85±0.96
C-section	4.47±1.76	4.43±1.97	5.94±1.93	3.26±1.47	4.35±2.20	3.89±1.59	2.63±1.31	4.22±2.18	4.83±2.43	5.23±2.30	4.33±1.51
D&C	6.21±2.61	7.01±2.38	6.83±2.37	4.96±2.03	4.88±2.63	4.40±1.34	2.85±0.76	5.74±2.61	6.57±2.10	6.00±2.44	5.54±1.35
Test	4.242§	5.334‡	0.738‡	17.457§	0.392‡	0.552‡	2.883§	6.964§	4.294§	1.388‡	5.972§
p	0.236	**0.002**	0.532	**0.001**	0.759	0.648	0.410	0.073	0.231	0.251	0.113

*Mann-Whitney U; †Independent samples t test; ‡One-way ANOVA; §Kruskal-Wallis test. **C-section:** Cesarean section; **D&C:** dilation & curettage; **F:** Fisher's exact test.

pain and the total score for STAI-State in the women who had vaginal birth (p=0.041, r=0.281 and p=0.017, r=0.327 respectively). Labor pain scores increased with higher scores for anxiety and the fear about childbirth. There was a negative association between the postoperative pain and the fear about breastfeeding in the women who had Cesarean section (p=0.015, r=-0.337). As the scores of fear about breastfeeding increased, postoperative labor pain scores decreased (**Table 2**).

Discussion

Since pregnancy is a long process involving uncertainties, most pregnant women experience worries, fear and anxiety, but there may be individual differences in the severities of these feelings about labor and the postpartum period.[19–21] In the present study, the FCPAS scores of the women were moderate (4.87±1.25). While the mean scores in the present study are consistent with those in several studies,[15] they are lower than those reported in some other studies.[21,22] This discrepancy may result from regional and cultural differences.

In the current study, the pregnant women experienced high levels of fears about breastfeeding and the possibility of Cesarean section. Similar results were obtained in the literature.[19,20,22] Another source of fear was related to behavior of the health staff at childbirth. The literature showed that most fear of pregnant women is caused by not confiding in health staff, and because they consider that health staff can make mistakes and exhibit negative behavior.[3,23,24] Midwives and nurses spending the most time with pregnant women have important roles in the perinatal period. They should identify sources of fear and the concerns of women in antenatal care services, and strengthen their coping skills with training and counseling services. In this process, a continuous and stable quality of care delivery will also increase trust in healthcare personnel.

Another source of fear in this study was the possibility of Cesarean section. The rate of cesarean section recommended by the WHO[25] is 10–15%, but it is much higher (55%) in Turkey.[26] Quality midwifery and nursing care is important to encourage vaginal birth. It is reported that interventions by midwives can reduce the Cesarean section rates and increase the willingness of women to have a normal birth in their future pregnancies.[3] Fears about the possibility of Cesarean section can be reduced by education and answering questions about vaginal birth and Cesarean section, and giving examples of positive birth stories (for example, enabling them to communicate with women who have positive birth experiences, and watching positive birth videos).

Fear about childbirth and the postpartum period can be affected by pregnant women's sociodemographic and obstetric features.[19–21,27] In the present study, the younger women had higher scores for fears about childbirth, behavior of the health staff at childbirth, breastfeeding and failure in infant care. Consistent with this finding, several other studies also revealed that younger pregnant women had higher scores for FCPAS,[20] are more afraid of childbirth,[14] have more expectations about childbirth[28] and are less likely to breastfeed.[29] It should be kept in mind that younger pregnant women need special care and support during their pregnancy.

In this study, employed women having an unplanned pregnancy had significantly higher scores for fear about postpartum social life. Working women have to continue their housework and baby care as well as their careers after giving birth.[30] For this reason, they expect less time for their social life, and there are fears about adapting to these changes. Unplanned pregnancy may lead to difficulty in adjusting to the postpartum period, and more worries about social life due to motherhood-related responsibilities. Strengthening the social support systems of working women and those with unplanned pregnancies is recommended, as well as encouraging the family and spouse to become involved in childcare roles and responsibilities.

In the current study, the FCPAS scores of the women planning to give vaginal birth were higher for fears about childbirth and behavior of the health staff at childbirth compared to the women with an unclear mode of childbirth and those with planned Cesarean section. Likewise, in another study, the women with planned vaginal birth had higher levels of fear than those with planned Cesarean section.[20] In the literature, it was reported that fear of birth affecting the decision to have a Cesarean section was caused by lack of trust in the health personnel assisting the delivery, complications related to pregnancy, labor pain, negative thoughts about birth, loss of control over the birth and possible situations beyond the woman's control.[3,27,31] It is recommended that pregnant women, especially those who plan to have a normal delivery, are informed during antenatal education about the method and process of delivery, to increase confidence in healthcare professionals.

In the present study, the primigravidas had a higher level of fear about failure in infant care, and the multigravidas had a higher level of fear about the possibility of Cesarean section. It is thought that primigravidas have such fears due to their first experience of baby care. Likewise, in a study about childbirth and infant care, primigravidas had significantly higher levels than multigravidas.[20] In the literature, there are studies that have similar results with our findings[18] and differ from our findings (i.e. the fear of Cesarean section is higher in primigravidas than in multigravidas).[20] Another result in this study is that the women who had abortion and curettage in their prior pregnancy had higher levels of fears about childbirth, and failure in infant care after childbirth. Egelioğlu Çetişli et al.[19] stated that the outcome of prior pregnancy had no significant relation to fear about childbirth, but had a significant relation to fear about failure in infant care. For this reason, it is important to consider that some pregnant women may have higher fear levels due to personality traits, and prenatal education and counseling services should be planned accordingly.

In the present study, the mean STAI-State score of the women having vaginal birth had a significant positive relation with labor pain, and labor pain increased with the STAI-State score. We found only one other study, conducted by Curzic and Jokic-Begic[18] which reflected this result; the mean STAI-State score had a positive relation with the labor pain score in the women in their last trimester. This result therefore is a potential contribution to the literature. In addition, in the current study, fear about childbirth had a significant positive relation with labor pain in the women having vaginal birth. Experiences during labor cannot be predicted, and thus the feeling of uncertainty often creates fear about labor. When individuals face a condition causing fear, their attention is distracted, and they focus on the factor causing the threat, and experience more severe anxiety. Interventions such as yoga, and mindfulness aimed at reducing the fear of childbirth may also contribute to the reduction of labor pain.

The present study revealed a negative relation between postpartum pain and fear about breastfeeding in the women having Cesarean section; however, we were unable to find other studies in the literature evaluating the relation between fear about breastfeeding and labor pain.

Conclusion

The early identification of fear and anxiety about labor and the postpartum period in pregnant women by nurses and midwives is important in designing appropriate prenatal care and education, and providing support for effective coping strategies. This can help women to have a healthier pregnancy and a more positive experience of labor, and increases the chances of giving birth to a healthy baby.

Funding: This work did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Compliance with Ethical Standards: The authors stated that the standards regarding research and publication ethics, the Personal Data Protection Law and the copyright regulations applicable to intellectual and artistic works are complied with and there is no conflict of interest.

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