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Childbirth Fear and Associated Factors in a Sample of Pregnant Iranian Women

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ABSTRACT

Objectives: Fear of childbirth is common during pregnancy and may contribute to several adverse outcomes. We aimed to investigate childbirth fear and associated factors in a sample of pregnant Iranian women. ***Methods***: This cross-sectional study was conducted on 525 pregnant women in Sabzevar, Iran from December 2016 to March 2017. The Wijma Delivery Expectancy/Experience Questionnaires (W-DEQ) was used to investigate fear of childbirth. ***Results:*** The mean W-DEQ score was 67.6±23.5. Of 525 women, 19.6% and 6.1% experienced moderate (mean W-DEQ score ≥ 85) and severe (mean W-DEQ score ≥ 100) fear of childbirth, respectively. W-DEQ scores were not different in the categories of gestational age, parity, maternal age, educational level, body mass index, and employment status ($p > 0.050$). The mean score of childbirth fear was significantly higher in multiparas who preferred cesarean in comparison to those who preferred vaginal delivery ($p < 0.032$). The mean score of childbirth fear was significantly higher in nulliparas with a lower family income compared to those with a higher family income ($p < 0.011$). In nulliparas, predictors of moderate and severe childbirth fear were women's description of their present pregnancy (odds ratio (OR) = 2.600; 95% confidence interval (CI): 1.323–5.112), and receiving a low level of emotional support from their husband (OR = 4.450; 95% CI: 1.349–14.674), respectively. In multiparas, predictors of childbirth fear were unwanted pregnancy (OR = 2.930; 95% CI: 1.549–3.541), experiencing moderate to severe dyspareunia in the first intercourse (OR = 2.829; 95% CI: 1.479–5.414), having a low level of physical activity (OR = 1.942; 95% CI: 1.014–3.716), and perceived a low level of health (OR = 3.415; 95% CI: 1.172–9.950). ***Conclusions:*** We observed a relatively high prevalence of childbirth fear in pregnant women in Iran. Interventions should be implemented in high-risk women considering psychological variables.

Giving birth to a child is a process associated with both pain and pleasure. In recent decades, labor pain and fear of childbirth have received much attention from authors of papers, which described labor as a painful phenomenon. As a result, several measures have been designed to reduce labor pain and fear of childbirth.[1–5] However, it is likely that childbirth has become more fearful than the past in most countries as there is an increasing rate of cesareans worldwide[6] and the fear of childbirth is one of the most important factors in requesting a cesarean.[7–10] Studies showed that fear of childbirth is multidimensional and can be categorized into domains one of which is labor pain.[11] Other dimensions of childbirth fear are loneliness, losing self-control during labor, insufficient support, loss of the baby's life,[11] obstetric injuries, vaginal tearing, loss of the mother's life,[12,13] and quality of midwife care.[14] The Wijma Delivery Expectancy/Experience Questionnaire (W-DEQ) was developed to measure different aspects of childbirth fear in pregnant and postpartum women.[11]

Fear of childbirth is common, especially in nulliparas.[15] In a study, 2.5% of nulliparous women and 4.5% of multiparous women experienced fear of childbirth.[16] Studies show that the prevalence of moderate childbirth fear in pregnant women varies between 18–31%,[8,17] and the prevalence of severe fear of childbirth is between 2–11%.[7,18] Other predisposing factors of childbirth fear are having a history of difficult childbirth,[15] depression, and previous cesarean section.[16]

Fear of childbirth and maternal attitudes towards childbirth are important factors related

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to birth outcome.[9] In other studies, women with childbirth fear had a longer interval to subsequent delivery,[19] a longer duration of active labor,[19] a higher probability of developing postpartum depression,[20–22] and a higher probability of having a cesarean delivery compared to women without childbirth fear.[16,18,19,23,24] Labor induction, emergency cesarean, elective cesarean, and instrumental delivery were more common among women with fear of childbirth.[7]

Fear of childbirth is thought to be the cause of the growing maternal demand for cesarean.[25] In a study in Tehran, Iran, the rate of elective cesarean was 72% of which 22% was performed due to maternal request.[26]

According to Iran health ministry policies, all women must give birth in hospitals and under the supervision of midwives or obstetricians to reduce maternal and neonatal mortality rates. Giving birth in most public hospitals in Iran may be very stressful since maternity settings in Iran mostly are not in the form of labor/delivery/recovery rooms and a woman cannot get support from her husband or family. Women must be alone in busy labor rooms with several other parturient women. This situation increases fear about the labor and birth process in pregnant women.[27]

Considering the high rate of elective cesarean in Iran, Iranian women's demand for cesarean, the negative effects of childbirth fear on pregnancy and birth outcome, and the lack of research in Iran on fear of childbirth and predisposing factors using a validated and comprehensive scale; we conducted this study to investigate childbirth fear and associated factors in pregnant Iranian women. Measuring childbirth fear is the first step in reducing it.

METHODS

This cross-sectional study was conducted on 525 pregnant women registered at eight public health clinics affiliated with Sabzevar University of Medical Sciences for receiving prenatal care. Sampling was done in Sabzevar City in Iran, from December 2016 to March 2017. Women had to be pregnant and able to read to be included in the study. Women with a history of psychiatric disorders who were under medical care were excluded from the study.

The sample size for this study was calculated as 469 based on the results of a previous study in Iran,[28] in which the prevalence of childbirth fear was 26.6%. The final sample size was determined to be 562 based on the following formula: $n = z^2pq/d^2$ with $d = 0.04$ and considering a rate of incomplete questionnaires at 20%.

A probability sampling method was used for data collection. Of 16 health centers in the city, which covered the entire population, we selected eight clinics. We divided the city into four socioeconomic districts and randomly selected two clinics in each district. Midwives in each clinic performed the sampling. They were instructed to recruit all women registered for receiving prenatal care who consented to participate in the study and met the inclusion criteria.

We used the W-DEQ[11] which was developed to investigate the fear of childbirth during pregnancy in both nulli- and multipara women. Wijma and colleagues examined the construct validity of the scale and found that the W-DEQ might comprehend a psychological construct related to childbirth fear. The scale also measured the psychological construct more clearly in multiparas than nulliparas.[11] W-DEQ contains 33 items that are rated on a six-point Likert scale ranging from zero (not at all) to five (extremely). The minimum and maximum total scores of the questionnaire are 0 and 165, respectively, with higher scores indicating higher fear. During the developmental process, the scale showed an excellent internal consistency (Cronbach's alpha = 0.93).[11] The validity of the scale was confirmed by moderate correlations between the scale and Beck Depression Inventory, Trait Spielberger Anxiety Inventory, Karolinska Scale of Personality, and S-R Inventory of Anxiousness.[29] The scale was translated into several languages including Italian, Turkish, Japanese, and Farsi.[28,30–33] The factorial structures of the Farsi scale were confirmed in a previous study.[28] The Farsi W-DEQ includes 32 items and six factors. The first item was excluded from the Farsi version of the scale during the adaptation process; however, we consider the first item score for calculating the total score to enable comparing with proposed cut points of 85 and 100 (moderate and severe fear, respectively).

The 5-item World Health Organization Well-Being Index (WHO-5) questionnaire[34] consists of five items about the individual's feelings during the past two weeks. Each item is rated on a six-point Likert scale from 0 to 5. The total score ranged from 0 to 25 with higher scores indicative of positive feelings. The WHO-5 has been validated in a

previous study.[35] The scale has been translated into Farsi and validated.[36]

The Ethics Committee of Sabzevar University of Medical Sciences approved the study proposal (Approval No: Medsab.Rec.95.38). Women were ensured that their information would be kept confidential. All women who verbally consented to participate in the study signed a written informed consent form before they were instructed how to complete the questionnaires.

Data analyzes were performed using SPSS Statistics (SPSS Inc. Released 2009. PASW Statistics for Windows, Version 18.0. Chicago: SPSS Inc). Before doing tests, normality assessment of the dependent variable was conducted on the levels of the independent variable. A *t*-test was used to compare the W-DEQ scores of primiparas and multiparas as well as other dichotomous variables. In addition, the W-DEQ mean scores of women who wished to have a cesarean and those who preferred a vaginal birth were compared by a *t*-test. Analysis of variance was used for comparing the mean W-DEQ scores of women in three gestational age categories, mode of previous childbirth, and body mass index (BMI) groups. Descriptive tests calculated the percentage of women's responses to items of the scale and the mean of each factor of the Farsi W-DEQ. Binary logistic regressions using the backward conditional method were performed to investigate how the variables contributed to the levels of moderate and severe childbirth fear using odds ratios (OR) and a 95% confidence interval (CI).

RESULTS

Of the 570 distributed W-DEQ, 558 (97.9%) were returned by midwives and 525 (92.1%) were completed. Participants' characteristics are presented in Table 1. The women's mean age was 27.2±5.5 years; 34.9% had a university diploma. The percentages of women who were in the first, second, and the third trimester of pregnancy were 21.3%, 36.9%, and 41.7%, respectively. Less than half of women were primigravida (42.7%) and 24.1% of women reported a history of abortion. Of 525 women, 19.6% (20.8% of nulliparas vs. 19.7% of multiparas) experienced moderate childbirth fear (mean W-DEQ score ≥ 85). The corresponding figure for severe childbirth fear (mean W-DEQ score ≥ 100) was 6.1% (6.2% of nulliparas vs. 6.0% of multiparas). The mean W-DEQ score was 67.6±23.5 with median 70.1, range 5–139, skewness 0.238, and kurtosis 0.214.

Fear of childbirth was not different in the categories of gestational age, parity, maternal age, educational level, BMI, and employment status. Low-income nulliparous women reported higher

Table 1: Participants' characteristics and childbirth fear.

Characteristics	n (%)	W-DEQ score, mean ± SD	*p-value*
Gestational age, weeks			0.102
< 14	111 (21.3)	71.7 ± 21.2	
14–26	192 (36.9)	66.0 ± 22.7	
> 26	217 (41.7)	66.8 ± 25.1	
Age, years			0.819
< 20	45 (8.7)	65.6 ± 23.6	
20–30	324 (62.4)	67.7 ± 22.8	
> 30	150 (28.9)	68.1 ± 25.1	
Educational level, years			0.859
≤ 12	342 (65.1)	67.5 ± 23.2	
> 12	183 (34.9)	67.9 ± 24.0	
Job			0.103
Housewife	448 (85.8)	68.3 ± 23.8	
Employed	74 (14.2)	63.5 ± 19.7	
Body mass index			0.281
< 25	32 (6.1)	61.2 ± 24.4	
25–30	254 (48.5)	68.0 ± 24.4	
> 30	238 (45.4)	68.2 ± 22.3	
Hemoglobin, mg			0.513
≤ 12	179 (35.0)	68.2 ± 24.2	
> 12	332 (65.0)	66.8 ± 23.2	
Parity			0.298
0	223 (42.7)	66.4 ± 24.1	
≥ 1	299 (57.3)	68.5 ± 22.0	
Nulliparas household income			0.011*
Low-income	27 (12.1)	77.5 ± 21.0	
Middle or high-income	197 (87.9)	65.0 ± 24.1	
Multiparas household income			0.709
Low-income	34 (11.4)	69.9 ± 21.6	
Middle or high-income	263 (88.6)	63.3 ± 23.3	
Nulliparas preferred mode of delivery			0. 903
Cesarean	54 (24.4)	66.0 ± 19.7	
Vaginal delivery	167 (75.6)	66.5 ± 25.5	
Multiparas preferred mode of delivery			0.032*
Cesarean	102 (35.3)	72.5 ± 23.2	
Vaginal delivery	187 (64.7)	66.4 ± 22.8	

**p < 0.050; W-DEQ: Wijma Delivery Expectancy/Experience Questionnaire; SD: standard deviation.*

Table 2: Psychosocial variables and childbirth fear according to parity.

Variables	Nulliparas		Multiparas		Total	
	n	Mean ± SD	n	Mean ± SD	n (%)	Mean ± SD
Desirability of pregnancy						
Wanted	184	64.8 ± 24.0	196	66.1 ± 21.9	380 (72.5)	65.5 ± 22.9
Unwanted or unplanned	41	73.7 ± 23.5	103	73.2 ± 24.4	144 (27.5)	73.3 ± 24.1
p-value		0.032*		0.012*		0.001**
WHO-5 well-being index						
< 50	45	76.3 ± 19.5	82	76.9 ± 19.3	127 (24.6)	76.7 ± 19.3
≥ 50	179	63.8 ± 24.5	210	65.0 ± 23.6		64.4 ± 24.0
p-value		< 0.001***		< 0.001***		< 0.001***
Receiving support from husband						
Very poor to acceptable	33	79.0 ± 20.4	56	75.5 ± 22.2	89 (17.0)	76.8 ± 21.5
Good to very good	193	64.3 ± 24.0	242	66.8 ± 22.9	435 (83.0)	65.7 ± 23.4
p-value		0.001**		0.011*		< 0.001***
Quality of the relationship with husband						
Very poor to poor	13	84.1 ± 22.6	22	75.9 ± 23.4	35 (6.7)	79.0 ± 23.1
Acceptable to very good	210	65.6 ± 23.6	277	68.0 ± 22.9	487 (93.3)	66.9 ± 23.2
p-value		0.006**		0.119		0.003**
Perceived health						
Less than moderate	9	83.1 ± 26.1	17	84.8 ± 18.2	26 (5.0)	84.2 ± 27.7
Moderate or very good	217	65.8 ± 23.7	282	67.6 ± 23.0	499 (95.0)	66.8 ± 23.3
p-value		0.033*		0.003**		< 0.001***
Women's description of their present pregnancy						
Very dissatisfied to moderately dissatisfied	82	75.1 ± 22.3	137	73.6 ± 20.7	219 (42.4)	74.1 ± 21.3
Satisfied to very satisfied	140	61.0 ± 23.6	158	64.5 ± 24.2	298 (57.6)	62.9 ± 23.9
p-value		< 0.001***		0.001**		< 0.001***
Women's description of their previous delivery						
Very dissatisfied to moderately dissatisfied	-	-	142	71.5±22.3	-	-
Satisfied to very satisfied	-	-	147	66.1 ± 23.7	-	-
p-value		-		0.047*		-
Physical activity						
≤ 30 minutes/week	133	69.8 ± 23.0	159	70.8 ± 24.0	292 (55.7)	70.3 ± 23.0
> 30 minutes/week	93	61.7 ± 24.8	139	65.9 ± 21.7	232 (44.3)	64.2 ± 23.0
p-value		0.012*		0.069		0.003**
Dyspareunia						
Not at all or mild	159	64.4 ± 22.8	210	66.5 ± 21.9	369 (70.4)	65.6 ± 22.3
Moderate or severe	66	71.1 ± 26.5	89	73.3 ± 24.8	155 (29.6)	72.4 ± 25.5
p-value		0.058		0.019*		0.003**
Dysmenorrhea						
Not at all or mild	123	64.9 ± 23.0	219	68.2 ± 23.4	342 (65.5)	67.0 ± 23.2
Moderate to severe	103	68.3 ± 25.2	77	69.4 ± 22.4	180 (34.5)	68.7 ± 24.0
p-value		0.290		0.696		0.415

*$p < 0.050$, **$p < 0.010$, ***$p < 0.001$; SD: standard deviation; (WHO-5) 5-item World Health Organization Well-Being Index.*

fear of childbirth than middle or high-income nulliparas [Table 1].

There was a significant relationship between preferred mode of delivery and parity ($p = 0.008$); 35.3% of multiparas vs. 24.4% of nulliparas preferred cesarean. We found no significant relationship between preferred mode of delivery and fear of childbirth in nulliparas whereas the mean score of childbirth fear was significantly higher in multiparas who preferred cesarean in comparison to multiparas who preferred vaginal delivery. Out of 525 women, 93 had a previous elective (n = 53) or emergency

Table 3: Logistic regression analyses of the W-DEQ scores on significant psychosocial variables.

Variables	All women			
	p-value	OR	95% CI	
W-DEQ score ≥ 85†				
Unwanted pregnancy	0.001**	2.216	1.359	3.615
Moderate to severe dyspareunia in the first intercourse	< 0.001***	2.429	1.500	3.935
Physical activity < 30 minutes/week	0.021*	1.781	1.089	2.910
Perceived a low level of health	0.015*	2.914	1.229	6.909
W-DEQ score ≥ 100‡				
Moderate to severe dyspareunia in the first intercourse	< 0.001***	4.175	1.927	9.046
Perceived low level of health	0.010*	4.522	1.442	14.184
Receiving low emotional support from husband	0.043*	2.320	1.027	5.243
Nullipara				
W-DEQ score ≥ 85				
Women's description of their present pregnancy	0.006**	2.600	1.323	5.112
Physical activity < 30 minutes/week	0.065	1.980	0.959	4.076
W-DEQ score ≥ 100				
Receiving low emotional support from husband	0.014*	4.450	1.349	14.674
Multipara				
W-DEQ score ≥ 85				
Unwanted pregnancy	0.001**	2.930	1.549	3.541
Perceived low level of health	0.024*	3.415	1.172	9.950
Physical activity < 30 minutes/week	0.045*	1.942	1.014	3.716
Moderate to severe dyspareunia in the first intercourse	0.002**	2.829	1.479	5.414
W-DEQ score ≥ 100				
Unwanted pregnancy	0.057	2.741	0.970	7.744
Physical activity < 30 minutes/week	0.040*	3.422	1.055	11.227
Moderate to severe dyspareunia in the first intercourse	0.001**	5.768	1.982	16.782

**p < 0.050, **p < 0.010, ***p < 0.001.*
†moderate childbirth fear, ‡severe childbirth fear.
OR: odds ratio; W-DEQ: Wijma Delivery Expectancy/Experience Questionnaire; CI: confidence interval.

cesarean (n = 40). There was no significant difference in childbirth fear between nulliparas, those with a history of vaginal delivery, women who gave birth by elective cesarean, and those with a previous emergency cesarean (p = 0.903). We observed no significant difference in childbirth fear among women who received midwife-based care and those who received physician-based prenatal care (p = 0.949).

Table 2 presents childbirth fear according to the psychosocial variables in nulliparous and multiparous women. Logistic regression analyses of the W-DEQ scores on significant psychosocial variables indicated that among significant variables, four variables were predictors of moderate childbirth fear and three variables were predictors of severe childbirth fear.

Predictors of moderate childbirth fear were unwanted pregnancy (OR = 2.216; 95% CI: 1.359–3.615), experiencing moderate to severe dyspareunia in the first intercourse (OR = 2.429; 95% CI: 1.500–3.935), having a low level of physical activity (OR = 1.781; 95% CI: 1.089–2.910), and a perceived low level of health (OR = 2.914; 95% CI: 1.229–6.909). Predictors of severe childbirth fear were experiencing moderate to severe dyspareunia in the first intercourse (OR = 4.175; 95% CI: 1.927–9.046), a perceived low level of health (OR = 4.522; 95% CI: 1.442–14.184), and receiving low emotional support from husband (OR = 2.320; 95% CI: 1.027–5.243). In nulliparas, predictors of moderate and severe childbirth fear were women's description of their present pregnancy (OR = 2.600; 95% CI: 1.323–5.112) and receiving a low level of emotional support from husband (OR = 4.450; 95% CI: 1.349–14.674). In multiparas, predictors of severe childbirth fear were unwanted pregnancy

Table 4: The percentage of the Farsi Wijma Delivery Expectancy/Experience Questionnaire (W-DEQ) items and the means of six factors.

Factors and Cronbach's alpha coefficients	Item number and item	Not at all					Strongly agree	
		0	1	2	3	4	5	Mean
Lack of self-efficacy (0.866)	13. Not content	18.8	13.4	22.0	23.4	14.4	8.0	2.2
	10. Not independent	14.6	14.3	22.9	25.6	13.9	8.7	2.3
	9. Not protected	20.4	16.5	17.5	23.7	13.7	8.3	2.1
	5. Not confident	13.6	12.7	21.7	28.6	15.4	8.1	2.4
	14. Not proud	18.3	12.9	14.6	23.2	13.5	17.5	2.5
	17. Not relaxed	16.6	11.1	18.3	30.2	13.2	10.7	2.4
	18. Not happy	26.1	15.3	14.9	21.5	13.2	9.0	2.0
	23. Not reassured	23.4	17.9	21.2	23.2	10.1	5.1	1.9
	22. Not self-confidence	20.6	15.4	21.5	24.8	10.8	6.9	2.1
	4. Not strong	13.7	13.3	22.2	30.3	13.3	7.3	2.3
Subscale mean 2.2 ± 1.0								
Lack of positive anticipation (0.739)	28. Not joyful	61.5	20.3	6.3	4.0	3.3	4.6	0.8
	21. Not eager to bear child	56.0	20.2	6.3	3.4	6.1	8.0	1.0
	29. Not natural	34.3	19.7	15.2	11.1	9.6	10.1	1.7
	30.Not happen as expected	31.0	21.9	18.8	16.1	6.6	5.6	1.6
Subscale mean 1.3 ± 1.1								
Loneliness (0.757)	15. Left alone	38.7	13.1	16.0	12.9	7.3	12.1	1.7
	11. Miserable	29.8	19.0	17.8	13.7	10.8	8.9	1.8
	8. Weak	19.8	20.4	20.6	16.7	10.2	12.3	2.1
	7. Abandoned	37.9	15.1	14.5	12.4	8.5	11.6	1.7
	3. Lonely	33.1	15.8	16.5	11.9	9.2	13.5	1.8
	2. Terrifying	19.9	14.8	24.6	15.0	13.1	12.6	2.2
	20. Hopeless	34.1	19.3	20.2	10.8	7.7	7.9	1.6
	31. Dangerous	24.7	14.3	21.2	13.9	10.6	15.3	2.1
Subscale mean 1.9 ± 1.1								
Fear (0.659)	19. Frightened	5.6	10.2	20.2	18.8	23.0	22.0	3.0
	6. Fearful	11.8	17.8	23.2	17.0	14.1	16.2	2.5
	24. Painful	10.9	16.0	24.6	14.5	16.4	17.6	2.6
	16. Not cold-blooded	12.6	10.5	15.3	28.5	17.2	15.9	2.7
	12. Nervous	18.7	16.4	22.5	16.4	14.9	11.1	2.2
Subscale mean 2.6 ± 1.0								
Concerns for the child (0.898)	32. Child will die	53.3	11.0	8.3	13.6	6.0	7.8	1.3
	33. Child will be hurt	45.2	13.1	12.1	13.1	6.5	10.0	1.5
Subscale mean 1.4 ± 1.6								
Concerns about losing control (0.559)	27. Lose control	26.2	19.2	19.0	12.8	8.6	14.2	2.0
	25. Act awfully	29.1	16.3	19.3	13.0	9.0	13.2	1.9
	26. Not let body to control	32.8	18.4	15.3	17.0	8.2	8.2	1.7
Subscale mean 1.9 ± 1.2								
Total (0.875) (32 items)								2.04

(OR = 2.930; 95% CI: 1.549–3.541), experiencing moderate to severe dyspareunia in the first intercourse (OR = 2.829; 95% CI: 1.479–5.414), having a low level of physical activity (OR = 1.942; 95% CI: 1.014–3.716), and a perceived low level of health (OR = 3.415; 95% CI: 1.172–9.950) [Table 3].

In Table 4, we present the descriptive statistics of the Farsi W-DEQ items, and means of six factors, the internal consistency of the Farsi W-DEQ-A and its subscales. The fear subscale had the highest mean score among the six subscales. The internal consistency of the Farsi W-DEQ-A and their subscales were satisfactory.

DISCUSSION

The W-DEQ assesses fear of childbirth. The main goal of our study was to determine the prevalence and associated factors of childbirth fear in both nulli- and multiparous pregnant women. Our results indicate that close to 20% of women experienced moderate childbirth fear and 6% of women experienced severe childbirth fear. One study reported severe fear of childbirth in 20.8% of their sample.[23] Results of Australian and Swedish studies revealed that 30% of women reported fear of childbirth in the first trimester.[37] The mean W-DEQ score in our sample was 67.6±23.5 (range 5–139), which is close to the study from Finland (68.3±21.1).[38]

Investigating associated factors of childbirth fear revealed that in our study fear of childbirth was not different in categories of gestational age, parity, maternal age, educational level, BMI, and employment status, indicating that childbirth fear is a problem in all women. In our study, 20.8% of nulliparas vs. 19.7% of multiparas and 6.2% of nulliparas vs. 6.0% of multiparas experienced moderate and severe childbirth fear, respectively. Our result is not in harmony with previous studies. In one study, fear of childbirth was experienced by 2.5% of nulliparous women and 4.5% of multiparous women.[16] Another study revealed that severe fear of childbirth was more common in nulliparous women in the second half of pregnancy.[38] Sabzevar is a small city with one small maternity hospital which is managed by the conventional childbirth method. Multiparas fears are due to their experience in childbirth in such a hospital. Nulliparas are under the influence of their friends and relatives' experiences in childbirth. We found that nulliparas with a low level of family income had more childbirth fear than those with higher family income. It seems that financial concerns may have a role in nulliparas fears. High socioeconomic status, advanced maternal age, and depression have been given as predisposing factors for fear of childbirth.[38] A lower level of education and mental problems were associated with fear of childbirth.[23] In our study, fear of childbirth was not influenced by whether a woman obtained midwife-based or physician-based prenatal care, which is in agreement with a previous study.[39] It may imply that both midwives and gynecologists do not talk about childbirth with their patients.

We also found that the mode of previous delivery did not influence fear of childbirth in the current pregnancy. One study found that a previous cesarean delivery increased childbirth fear in multiparous women.[16] A severe fear of childbirth was more common in women with a previous cesarean or instrumental delivery.[38]

Multiparas significantly preferred cesarean to vaginal delivery than nulliparous women and fear of childbirth had a role in a request for cesarean in multiparas. This relationship was not observed in nulliparas. Two studies indicate that women with increased childbirth fear preferred cesarean for their next pregnancies.[23,38]

Results indicated that most psychological variables influenced fear of childbirth in both nulli- and multiparas. In multiparas, predictors of childbirth fear were moderate to severe dyspareunia experienced in the first intercourse, perceived a low level of health, unwanted pregnancy, and having a low level of physical activity. In nulliparas, predictors of childbirth fear were receiving a low level of support from husband, women's description of their present pregnancy, and physical activity < 30 minutes/week.

Childbirth fear was higher in nulliparous women with negative attitude towards the present pregnancy which is in line with the results of previous study.[9] This study revealed that the quality of the first intercourse has an important role in developing fear of childbirth in multiparous women. Previous studies revealed a higher childbirth fear in women with a history of physical or sexual abuse in childhood[38] and adult life[39] than did the non-abused.

A low level of physical activity was also a predictor of childbirth fear. Results of an intervention on pregnant women showed that fear of childbirth decreased in pregnant women participating in the exercise program than women attending childbirth classes.[39]

Receiving a low level of emotional support from husband was also a predictor of childbirth fear in

nulliparas. Results of a qualitative study showed that pregnant women were interested in having support from their husbands in pregnancy and especially delivery.[40] A study from Norway found that poor social support was correlated to fear of childbirth.[41]

Our study can be generalized to all pregnant women in Sabzevar due to its high sample size and the sampling method. However, there is a possibility of information bias due to the cross-sectional design. In addition, the WDE-Q is a relatively long questionnaire and it might influence women's responses and their precision in reading the items.

CONCLUSION

We found a high prevalence of childbirth fear in pregnant Iranian women. Fear of childbirth was not different in categories of socioeconomic and obstetrics variables except family income indicating that childbirth fear is a common problem in all women. Several psychological variables could predict fear of childbirth. Predictors of childbirth fear in multiparous women were having an unwanted pregnancy, moderate to severe dyspareunia experienced in the first intercourse, a perceived low level of health, and having a low level of physical activity. In nulliparous women, receiving a low level of support from their husband and their attitudes towards the present pregnancy were predictors of childbirth fear.

Disclosure

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