

# Fear of childbirth and its relationship with the attitude towards child bearing: A descriptive-analytical study ,

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## Abstract

**Background and purpose:** With regard to the importance of fear of childbirth, negative consequences, its impact on fertility, and the differences in the prevalence and related factors in different regions of Iran, this study was conducted with the aim of determining the status of fear of childbirth and its relationship with attitudes toward fertility in women of childbearing age in the city of Kermanshah.

**Methods:** This study was conducted descriptively-analytically on 600 married women of reproductive age who visited the comprehensive health service centers in Kermanshah in 2023. The sampling method was multi-stage random sampling. The data collection tools included a demographic details form, the Wijma Delivery Expectancy/Experience Questionnaire , and attitudes towards fertility and childbearing, which were completed by the participants. The data were analyzed using statistical tests and the STATA software version 14.

**Findings:** The prevalence of fear of childbirth is generally 69.055%, with its subgroups categorized based on the scoring of the fear of childbirth questionnaire used in the study as follows: mild (0.33), moderate (30.17), severe (66.83), and clinical (2.67). The results also indicate an inverse relationship between the two variables, fear of childbirth and attitude towards childbearing (P<0.05). There was a significant relationship between the variables of number of childbirths, gender, number of live children, and partner's occupation with fear of childbirth (P<0.05). On the other hand, there was a significant relationship between the variables of delivery type, children's gender, woman's age, income, number of pregnancies, as well as number of childbirths and number of live children with attitude towards childbearing.

**Conclusion:** According to the study results, which indicate a significant level of fear of childbirth among women of reproductive age, and also its meaningful relationship with attitudes towards the concept of childbearing, it is suggested that appropriate strategies be developed to manage fear of childbirth based on the findings regarding the related factors.

**Keywords:** Prevalence, fear of childbirth, attitude towards fertility, women of reproductive age

## Introduction

Fear of childbirth is a health challenge for pregnant women that manifests as worry and anxiety before pregnancy, throughout the entire pregnancy, and during childbirth, accompanied by mild to moderate physical complications and psychological disorders. When this anxiety or fear of dying during childbirth is very intense, a phobia arises known as Tocophobia(1, 2). The prevalence of fear of childbirth (FOC) worldwide among low-risk women has been reported at 16%(3); furthermore, the prevalence of fear of childbirth, based on a review of 15 studies conducted in different cities of Iran from 2007 to 2021, varied between 17.3% (Talesh) to 30.89% (Toyserkan)(4). The percentage of prevalence of fear of childbirth in various articles and clinical research within the same timeframe differs, and this is the result of using different questionnaires in this field and their varying scoring criteria(5). The etiology of fear of childbirth is complex and multi-faceted, often relating to various psych demographic and psychological factors including a history of previous sexual abuse, traumatic past childbirth experience, history of previous miscarriage, long-standing infertility history, smoking, lack of adequate social support, poor communication skills with a partner, domestic violence, unintended pregnancy, lack of trust and concern about unpleasant behaviors of the obstetric care providers, fear of being left alone in labor, mother's non-involvement in clinical decision-making, and lack of attention from health staff to the mother's autonomy in her treatment and childbirth process(6). According to the theory of planned behavior, attitude is the first factor in shaping reproductive behavior and has an internal state that affects selected behavior and values; moreover, reproductive behavior is influenced by attitude towards childbearing, subjective norms regarding the desire for children, and the individual's perception of their ability to engage in reproductive behavior(12, 13). A positive attitude towards childbearing is a prerequisite for the intention to have children(14). Changes in attitudes towards childbearing are not solely due to economic issues and the costs of childbearing, but the complexity of various dimensions of the issue and the influencing factors create a different perspective on this topic(15, 16). Despite the fact that fear of childbirth and its negative consequences on pregnancy can be a significant barrier to women's childbearing, studies conducted in Iran on women of reproductive age have identified social and economic factors as the most important barriers to childbearing(20); while individual and obstetric factors, particularly fear of childbirth, have been less emphasized in such research or have not been specifically addressed, and in cases where they were studied, they led to contradictory results. Furthermore, the studies conducted so far have not been updated based on demographic differences in society and their resulting impacts. Therefore, considering the importance of fear of childbirth, its multiple negative consequences, and its effect on women of reproductive age's attitudes toward childbearing, as well as the differences in the prevalence and related factors in different regions of Iran (7), this study was conducted with the aim of determining the status of fear of childbirth and its relationship with attitudes toward childbearing among women of reproductive age in Kermanshah city in 2023–2024

## Methodology

The present study is descriptive-analytical in nature. The research population included married women of childbearing age (15–49 years) who had visited comprehensive health service centers in Kermanshah city in 2023–2024. In this study, a multi-stage random sampling method was used. First, Kermanshah city was divided into three areas based on the information obtained from the Kermanshah health center: low-income (4 health centers), semi-affluent (14 health centers), and affluent (6 health centers) in social and economic terms. Then, the number of health care centers in each area was determined and the sample size was taken proportionally to the population covered in each area. To this end, two centers each were randomly selected through a lottery method from the low-income and affluent areas, and 4 centers from the semi-affluent area (a total of 8 centers) from the list of comprehensive health centers in Kermanshah city. After visiting the selected centers, the researcher extracted the list of married women aged 15–49 who met the study criteria using the information from Health Electronic Information system and with the help of health monitors, and systematically selected eligible individuals. They were invited to the health center by phone to complete the questionnaire and entered the study. The inclusion criteria for the study included informed consent to participate in the study, married women of childbearing age (15–49 years), no known previous mental illness, having fertility capability (no infertility), and literacy adequate for reading and writing. The exclusion criterion was incomplete completion of the questionnaires. To determine the sample size based on previous studies(13) considering a prevalence of fear of childbirth at 50%, an error of 5%, and a precision of 4%, a sample size of 600 individuals was needed for estimating the outcome of interest. According to the health center information of Kermanshah County, the population of married women of reproductive age between 15–49 years in the underprivileged area was 18,077, in the semi-privileged area 71,063, and in the privileged area 30,179. Therefore, the sample size proportionate to the population was estimated to be 74 individuals in the underprivileged area, 403 individuals in the semi-privileged area, and 123 individuals in the privileged area.

$$d = 0/04$$
$$Z_{(1-\alpha/2)} = 1/96$$
$$P = 0/050 \times 0/04$$
$$n = (Z_{(1-\alpha/2)}^2 \times p(1-P)) / d^2 = 600$$

### Data Collection Tools:

- Individual Information Form: This form includes individual and demographic questions about participants.
- Wijma Delivery Expectancy/Experience Questionnaire: This questionnaire contains 33 questions and 6 factors including lack of positive prediction, fear, lack of self-efficacy, loneliness, fear of fetal injury, and lack of control, which are measured using a six-option Likert scale (never to always). To calculate the score of each subscale, the scores of each item related to that subscale are summed up, and to calculate the overall score of the questionnaire, all item scores are summed together. The score range for this questionnaire was between 0 to 165.
- Questionnaire "Scale of Attitude Towards Fertility and Childbearing": The Attitude Scale Towards Fertility and Childbearing (AFCS) has three constructs (the importance of fertility for the future, childbearing as an obstacle in the present, and social identity) and 27 items that are scored on a five-point Likert scale ranging from "strongly agree" to "strongly disagree". A higher score indicates a more positive attitude towards fertility and childbearing. The psychometrics of this tool were carried out by Ba'ezat and colleagues in 2015(23).
- Data Analysis:** The data were analyzed using STATA software version 14. For descriptive analysis of quantitative variables, the indices of mean and standard deviation, as well as qualitative and grouped data, were reported in terms of frequency and percentage. To determine the prevalence of fear of childbirth, the ratio of the number of women identified based on the Wijma Delivery Expectancy/Experience Questionnaire to the total number of women studied was calculated. Considering that attitude was examined quantitatively, linear regression was used at a significance level of 0.05 to determine the relationship between fear of childbirth and other variables with attitude (the dependent variable under study).

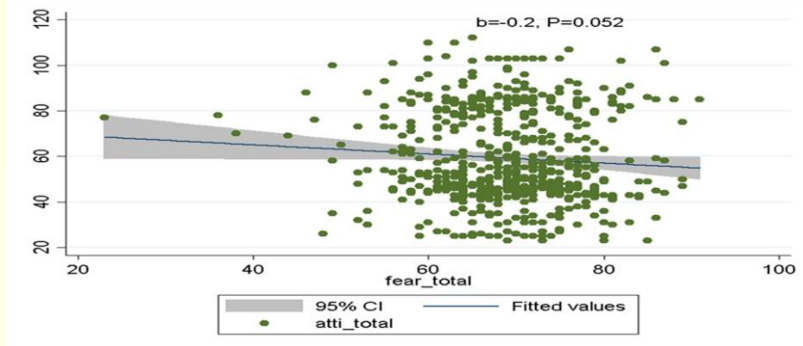
## Results

In this study, 600 eligible married women with an average age of 31.50 ± 7.35 years participated. The average fear of childbirth was estimated to be 69.55 ± 8.021 based on the classification of the childbirth fear questionnaire and the expectations of childbirth according to the Wijma Delivery Expectancy/Experience Questionnaire, with the status of fear of childbirth as follows: mild (0.33), moderate (30.17), severe (66.83), and clinical (2.67). According to the research findings, there is no significant correlation between the quantitative demographic variables of the age of the woman and her spouse, monthly income, and duration of marriage with the fear of childbirth (P>0.05). In the study of the relationship between qualitative demographic variables and fear of childbirth, the findings showed that there was no significant relationship between qualitative demographic variables such as women's education and occupation, as well as their spouse's education and housing status with fear of childbirth (P>0.05). However, there was a significant relationship between the qualitative variable of spouse's occupation and fear of childbirth (P<0.05). Additionally, a significant relationship existed between qualitative fertility variables like the number of childbirths, number of living children, and their gender with fear of childbirth (P<0.05), while no significant relationship was found between the type of childbirth, history of abortion, and number of pregnancies with fear of childbirth (P>0.05). Based on the simple linear regression model regarding the number of children, the relationship between not having children and having two or more children with the variable of fear of childbirth is significant. However, it should be noted that the average fear of childbirth among mothers who had no children or are single children is less than that of mothers with two or more children. Additionally, the fear of childbirth in individuals who had a cesarean delivery was, on average, 0.02 higher than that of individuals with natural delivery, although this is not significant. With an increase in the number of pregnancies (b=–0.43) and also with an increase in women's educational level (b+=0.66), the average fear of childbirth decreases and increases respectively, although the relationship is not significant. The analysis of variance test shows that there was no significant relationship between variables such as education level and women's occupation, as well as education level and spouse's occupation, and housing status with attitudes towards childbearing (P> 0.05). There was also a significant relationship between the number of pregnancies, number of births, number of living children, gender of children, and type of delivery with attitudes towards childbearing (P < 0.05), but no significant relationship was found between the history of miscarriage and attitudes towards childbearing (P> 0.05).

Variables	Average (standard deviation)				Statistical test	P-value
	Mild 0-37 38-45	Moderate 38-45 46-54	Severe 55-64 65-74	Clinical 75-84 85-94		
Women Age	38(9.89)	36.12(8.06)	31.61(7.01)	31.93(7.31)	0.72	0.540
Husband Age	41(7.07)	36.12(8.20)	36.18(7.56)	36.87(7.24)	0.30	0.824
Monthly Income	10(14.14)	15.17(8.82)	15.53(9.15)	18.5(10.15)	0.90	0.440
Duration of marriage	11(12.72)	10(7.35)	9.98(6.55)	10.25(6.84)	0.02	0.995

Variables	Average Difference	Average Difference	p-value	Confidence interval 95 percent	
				Lower limit	Upper limit
Woman's employment	-0.756	0.519	0.146	-1.777	0.513
Woman's education	0.667	0.416	0.310	-0.155	1.485
Number of pregnancies	-0.435	-1.135	0.223	-1.136	0.263
Number of living children	-6.825	2.265	0.004	-11.074	-2.171
Only child	-0.986	0.996	0.323	-2.942	0.970
Two or more children	-2.044	1.017	0.045	-4.042	-0.046
Type of Delivery	4.931	2.380	0.024	0.649	9.213
Natural delivery	-1.413	2.245	0.529	-5.824	2.997
Cesarean section	0.024	0.729	0.973	-1.409	1.475

Variables	Average Difference	Average Difference	p-value	Confidence interval 95 percent	
				Lower limit	Upper limit
Women's Age	-0.422	0.220	0.056	-0.856	0.010
Husband's Age	0.215	0.208	0.303	-0.194	0.625
Woman's Education	-1.158	-1.136	0.309	-3.390	1.074
Monthly Income	-1.183	0.082	0.570	-5.724	2.906
Marriage Duration	-1.413	2.245	0.529	-5.824	2.997
Husband's job	14.076	6.271	0.020	2.159	26.99
General Work Employee	13.076	6.608	0.048	0.0975	26.05



## Discussion and Conclusion

In the present study, the results showed that the average fear of childbirth in the surveyed women was 69.055 ± 8.021, which was categorized into subgroups based on the scoring of the fear of childbirth questionnaire used in the study as follows: mild (0.33), moderate (30.17), severe (66.83), and clinical (2.67). Meanwhile, in the systematic review study by Moradi et al. (2022), aimed at determining the prevalence of fear of vaginal childbirth in Iran, the results indicated that the prevalence of fear of childbirth varied between 17.3 – 89.30 percent, with the lowest prevalence of fear of childbirth reported in Talesh (17.3 percent) and the highest in Tuyserkan (89.30 percent). Furthermore, the prevalence of fear of childbirth with mild intensity ranged from 22 to 39.07 percent, the prevalence with moderate intensity ranged from 19.6 to 54 percent, and the prevalence with high intensity ranged from 6 to 59 percent(4), which is somewhat different from the results of the present study. This discrepancy is more evident in clinical fear of childbirth, where only 2.67 percent of women in our study fell into this group. In the study by Shahbakhti et al. (2020), aimed at determining the prevalence of tokophobia worldwide, the prevalence of tokophobia among 18 different countries was reported to be 14 percent (1), which shows a significant difference compared to the global statistics and the findings of the present study. In another cross-sectional study conducted in Eastern Ethiopia by Darj et al. (2023) on 476 participating pregnant women, the results indicated that 25 percent of them had fear of childbirth(24). The results obtained from the searched studies do not align with the present study. Perhaps the unique social and cultural characteristics of the communities, the differing methodologies of the two mentioned studies, the age distribution of the sampling, and also the differences in the time frame of the studies conducted compared to the present research are among the important reasons for this discrepancy in the estimated prevalence of fear of childbirth. Based on the research findings, there is a significant and inverse relationship between demographic variables such as the number of births, the number of living children, the gender of the children, and the occupation of the spouse with the level of fear of childbirth. It was reported that as the number of births and living children in the research samples increased, the fear of childbirth scores decreased. The current study also showed that there was no significant relationship between the age of the woman, the level of education of the woman and her spouse, the woman's occupation, history of miscarriage, and fear of childbirth. The study by Taheri et al. (2013), which aimed to investigate the causes of fear of childbirth among 130 women in Shahrekord, demonstrated that fear of childbirth had a significant inverse relationship with the number of births, such that as the number of births in women increased, their fear of childbirth scores decreased. Furthermore, there was no significant relationship between the variables of the woman's age, the level of education, and her occupation(25), which aligns with the current study.

**Conclusion :** utilizing the findings of the present study in designing interventions by reproductive health specialists and senior midwifery consultants could be effective in reducing and managing fear, as well as increasing the pleasantness of the childbirth process. This, in turn, would lead to an increase in population growth and fertility rates, as well as an improvement in women's attitudes toward childbearing in future society.

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