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Causes and Grounds of Childbirth Fear and Coping Strategies Used by Kurdish Adolescent Pregnant Women in Iran: A Qualitative Study

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Abstract

Background: Fear of childbirth is one of the most common problems among pregnant women that can threaten their and their baby's health. Therefore, the purpose of this study was to explore the causes and grounds of childbirth fear and the strategies used by pregnant adolescent women in Iran to overcome such fears.

Methods: In this study, which was conducted among primiparous Kurdish women in Iran, conventional qualitative content analysis was used. Data were selected through purposive sampling and semi-structured interviews. Data saturation was reached with 15 participants. The Lincoln and Guba criteria were used to strengthen the research.

Results: After analyzing the data, two main categories were resulted. The first category was fear of childbirth with subcategories of fear of child health, fear of childbirth process, fears about inappropriate medical staff performance, fears about hospital environment, and postpartum fears. The second category was strategies to reduce childbirth fear with subcategories of choosing appropriate medical centers, increasing information on childbirth, avoiding stressful sources, improving self-care, getting prepared for delivery day in advance, and resorting to spirituality.

Conclusion: Pregnancy in adult age is better than adolescent age. The women's fear can be reduced by increasing their assurance about child health, providing appropriate training during pregnancy, explaining the whole process of childbirth and making it easier, improving the hospital environment and medical staff specialization, as well as providing appropriate conditions for further care and support after birth.

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Introduction

Early marriage refers to a marriage where one or both of couples have not reached the age of 18 (1). It is estimated that between 2010 and 2030, there will be 130 million early marriages, of which 14 million girls marry each year, many of whom are under 15 years of age. There are also more than 700 million women living today who are married children, unfortunately half of whom live in South Asia (2). Early marriage has many social and health consequences (3) that can change adolescent girls' life paths (4) and affect their entire future and lives (5). One of the consequences that early marriage can have is pregnancy (6). Pregnancy in adolescence is a major global problem that its effects and consequences should not be overlooked (7-9) as being recognized as one of the leading causes of death in girls aged 15-19 in developing countries (10).

Pregnancy is actually the biggest event a woman can experience that may be accompanied by fear

of childbirth (6). It is estimated that about 25% of pregnant women have childbirth fear, which is more prevalent in primiparous women (11, 12).

Approximately 33% of pregnant women have a fear of childbirth in the last trimester of pregnancy and 11 to 14% of them experience severe fear of childbirth (13). Fear of childbirth can have many complications such as depression, abortion, increase of cesarean section (14, 15), posttraumatic stress disorder (16) as well as negative effects on child health (17-19). Previous studies have shown that fear of childbirth is influenced by various factors such as mothers' beliefs and personality traits (20), concerns about child health, low educational status, lack of support during pregnancy (21), having experience of sexual and physical abuse in childhood (22), and poor knowledge and interactions with medical staff (23).

Women's fear of childbirth has increased in Iran over the past few years, and one of its main consequences has been an increase in request for cesarean section (24), so that cesarean rates in Iran are five times higher than in the rest of the world, and half of cesarean section cases have no medical reasons and are mostly due to fear of childbirth (25).

Due to the importance of childbirth fear, many studies have been conducted in this area. A systematic review by Dencker et al. in 2018 found that stress, depression, and lack of social support are associated with fear during pregnancy. Also, the causes of fear in primiparous women and multiparous women are different so that previous bad experience of childbirth is the strongest predictor of fear of childbirth in non-primiparous women. Also, there was no significant relationship between age, educational status, and ethnicity with fear of childbirth (26). In a qualitative study conducted by Abbaspour et al. on the fear of childbirth among Ahwazi women in Iran, pregnant women's fears included two categories of fear of childbirth process and concern about the complications of natural childbirth (24). In a study by Slade et al. in 2019 on fear of childbirth among pregnant women and midwives, they found that pregnant women confront fears including unpredictability of childbirth, fear of harm to the child, fear of being unable to bear the pain and fear of being alone (27).

Regarding the importance of childbirth fear during pregnancy and the different factors affecting it in different societies and cultures and its detrimental effects on the mother and infant health, addressing this issue and increasing the understanding about it seem necessary. Also, whereas most studies on the fear of childbirth are quantitative and experimental (28-33), using a qualitative approach to understand its hidden aspects is of paramount importance. Although previous researches have shown that age and level of literacy have been influential variables on fear of childbirth (34), so far no research has been conducted on fear of childbirth among adolescent women and this area has many hidden aspects, and there is limited literature on it. Therefore, this study aimed to explore the causes and grounds of childbirth fear and coping strategies among pregnant adolescent women in Iran.

Methods

The present study was conducted with qualitative approach using conventional qualitative content analysis. The study participants included 15 Kurdish women in Kermanshah and Kurdistan provinces in Iran in 2019 who were under 18 years of age and were pregnant. Inclusion criteria were being under 18 years of age, first pregnancy experience, being in the third trimester of pregnancy, no history of abortion and willingness to participate in the study.

The code of ethics was received from Iran University of Medical Sciences (IR.IUMS.REC.1397.1225). Next, samples were selected through purposive sampling. Firstly, they were identified by referring to the health centers of the areas under study. Their written and oral consent to participate in the study was obtained. Semi-structured interviews were used to collect data. The place and time of the interviews were determined by the samples and the average interview duration was 60 *min*. Four of the interviews were conducted at health centers, and the rest were conducted at places such as their homes and public places like parks. After asking some demographic questions, the interviews continued with the following questions: How do you feel about being pregnant? Are you afraid of childbirth? What makes you worry about childbirth? Tell us about your fears before, meanwhile and after childbirth. How do you cope with the fear of childbirth? What can you do to reduce your fear of childbirth?

To consider the ethics, at the beginning of each session, the researchers and the objectives of the research were introduced, assuring the partici-

pants that their information would be published without mentioning their names, so that they would not be identifiable. Also, at any time when they felt tired or unwilling to continue the interview, the process of interview was stopped and postponed to another time. Their written and oral consent was taken to record the interview. Besides, since the samples were under 18 years of age, oral consent was obtained from the husbands of the samples to further adhere to the ethics of research and to avoid any sensitivities. The samples were interviewed by female researcher whenever they wanted, and the female researcher familiar with the principles of the interview and the qualitative method was selected for the interview.

After the interview with the first participant, the process of coding and analyzing the data began and continued, eventually resulting in data saturation through interview with 15 participants. Due to the fact that in qualitative research the sampling criterion is to achieve theoretical saturation, this theoretical saturation was reached in interview 15 because the codes were duplicated and no new code of interviews was obtained. In this study, none of the participants withdrew from the study. Only one participant postponed the interview to another day, and the interview was completed later.

To analyze the data, the Graneheim and Lundman method was used (35). The audio was listened to several times after the first interview, and then it was transcribed verbatim and meticulously. Then, the full text was read several times for general understanding of the content of the interview. Next, the text was subdivided into independent meanings and was indexed with certain codes. In the next step, the codes were divided into subcategories and categories according to similarities and differences. Finally, a suitable title that could cover the resulting categories was selected.

To strengthen the study and increase its transferability, the proposed Lincoln and Guba criteria were used (36). In the first phase, the researchers' long-term involvement and contact with the research field and samples was maintained, and since the corresponding author was a native of the study area and was fully familiar with the customs and traditions of the area, he communicated closely with the samples. The process of analyzing and coding the data was carried out by two members of the research team from the beginning and then in a final session, codes and categories were shared until reaching an agreement. Also, the coding and data analysis were sent to two pundits acquainted with qualitative method and expert in the fields of pregnancy and childbirth fear to improve their coding and coding process if necessary. In the end, the categories and subcategories along with part of the citations were sent to 6 previous participants to confirm whether their views and experiences were properly expressed. In the whole process of research and dissemination of the findings, it was tried to follow the proposed criteria of Tong et al. (COREQ) which are used to report the results of qualitative studies (37).

Results

In total, 15 pregnant women participated in this study, whose demographic information is listed in table 1. Two main categories and 11 subcategories emerged from data analysis (Table 2) which are

Table 1. Demographic information of participants

Number	Pregnancy type	Pregnancy week	Residency	Educational status	Occupational status	Age
1	Intended	35	Urban	High school	Student	17
2	Intended	34	Rural	Middle school diploma	Homemaker	17
3	Intended	32	Rural	Middle school diploma	Homemaker	16
4	Unintended	32	Rural	Elementary	Homemaker	17
5	Unintended	36	Rural	Elementary	Tailor	17
6	Intended	34	Rural	Elementary	Homemaker	17
7	Unintended	34	Urban	Middle school diploma	Student	16
8	Intended	38	Nomadic	Illiterate	Homemaker	17
9	Intended	36	Urban	Middle school diploma	Hairstylist	17
10	Unintended	37	Urban	High school	Student	17
11	Intended	37	Rural	Middle school diploma	Hairstylist	17
12	Intended	33	Rural	Middle school diploma	Homemaker	16
13	Unintended	38	Rural	Elementary	Homemaker	16
14	Unintended	36	Urban	High school	Student	17
15	Intended	34	Rural	Illiterate	Homemaker	16

Table 2. Categories, subcategories and codes emerged from interviews

Categories	Subcategories	Codes
Fear of childbirth		
	Fears of baby health	Fear of child being defective, fear of child death, fear of child suffocation at childbirth, fear of umbilical cord wrapped around the baby's neck
	Fear of the childbirth process	Fear of labor pain, fear of acting improperly during labor, fear of being left alone in the hospital environment, fear of the delivery bed, fear of the room called "pain room", fear of fecal excretion in natural childbirth, fear of pain of injection for numbness, fear of late delivery, fear of preterm delivery, fear of unpredictable delivery, discrepancy between delivery date in sonography and fetal weight and the last period
	Fears about inappropriate medical staff performance	Fear of wrongdoing by medical staff, fear of switch of babies at birth at hospital, fear of inappropriate behavior of medical staff
	Fears about hospital environment	Fear of not having proper hospital facilities to protect the baby, fear of dirty hospital environment and becoming ill, fear of power or water outage at hospital during childbirth, fear of earthquake and destruction of hospital during childbirth
	Postpartum fears	Fear of body deformity, fear of inability to protect the child, fear of imbalance between education and job after childbirth, fear of husband's inappropriate behavior after childbirth, fear of lack of emotional support from her husband's family, fear of postpartum infections, fear of financial inability
Women's strategies to reduce fear of childbirth		
	Choosing appropriate medical centers	Looking for a good physician, a good midwife or a good hospital
	Increasing information on childbirth	Getting help from the internet, talking with mothers who have experienced a good and comfortable delivery, reading books, watching videos about childbirth, attending instructional classes, visiting the hospital where childbirth is going to happen
	Avoiding stressful sources	Keeping away from people who have had a difficult childbirth, avoiding the medical centers where friends have had a bad childbirth experience before, avoiding mothers who have recently given birth to children with physical or mental disabilities
	Improving self-care	Regular visits to local health centers, frequent ultrasound scans, following the doctor's instructions on taking medicines, improving nutrition, smelling aromatic herbs that can soothe the mother such as spike lavender, exercising
	Preparing for the delivery day in advance	Getting help from relatives, providing baby equipment a few months before birth, providing items needed for delivery day a few months before delivery, reserving the vehicle that is due to go to hospital in advance, setting aside money needed for delivery day
	Spirituality	Praying, listening to the Quran, nurturing the thought that dying at childbirth is martyrdom

indicated with citations.

Fear of childbirth: The first category obtained from the data was the fear of childbirth. In fact, pregnant women were afraid and worried about childbirth conditions.

Fears of baby health: Having a healthy baby is one of the biggest concerns of pregnant mothers, which can in many cases lead to anxiety and fear of childbirth, so that this anxiety sometimes causes daydreaming because it deeply affects people.

"I am very scared of having a baby with birth defect. Sometimes, I dream that my baby has a problem, I get too stressed" (P 9). "I am scared that the baby's cord will wrap around its neck during delivery and cause it to choke" (P 7).

Fear of the childbirth process: The process that must take place to give birth to a baby is a great stress for many women that causes them to worry and be afraid of childbirth.

"I'm afraid of the pain of childbirth, it's said that it is very painful" (P 7). "I'm so scared to be alone in a room and waiting for my baby to be born. I wish my husband could come inside" (P 1). "I am worried about not knowing exactly when it is born, and I am afraid that bad conditions will happen" (P 8). "I am afraid of being in pain so much that I can't control myself and do an ugly thing" (P 13).

Fears about inappropriate medical staff performance: Fear of medical personnel's mistreatment and human errors at the hospital was one of the common fears among the women under study.

"I'm afraid the doctor or midwife will do something wrong that makes me and my baby die" (P

6). "I am very worried that the baby in the hospital will be switched at birth with other children" (P 9). "My sister used to say that her doctor's behavior was not good for her at all, they've insulted her a lot, so I'm so scared their behavior will be so bad to me, I can't stand it" (P 14).

Fears about hospital environment: Since the Kurdish areas in Iran are part of the deprived areas and they are deprived of having well-equipped hospitals, most of them were afraid of hospital environment and events that could happen on the day of delivery which could endanger their and their child's health.

"I am scared of power outage or earthquake at hospital during my delivery, thus I absolutely die" (P 6). "Our city hospital is not very good. It's very dirty. I am scared that my baby gets sick or I get an infection there" (P 15).

Postpartum fears: Women's fears are not only about getting pregnant. Giving birth to a baby and how relatives and family members deal with it especially their husband, can be stressful, and since most of these women are very young, they are worried that they will not be able to take care of their child appropriately.

"I am very scared that my body gets deformed after childbirth" (P 10). Participant No.6 said, "I fear that I have infection and it takes a long time to get rid of the infection" (P 6). "I'm scared that our families take less care of me and my baby and stay with us for a little while" (P 1). "I'm scared that my baby will be born and I can't take care of it properly. Then, everyone thinks I'm still a kid" (P 3).

Women's strategies to reduce fear of childbirth: Another category that emerged from the data was strategies that pregnant women used to reduce their fear of childbirth, which included the following subcategories.

Choosing appropriate medical centers: Many participants tried to choose a good and well-known hospital, doctor, and midwife for delivery to reduce the fear of childbirth in order to avoid problems on the day of delivery.

"I would like to give birth in a private, well-run hospital, so I'm less concerned about the health of my child and myself" (P 7). "I am not giving birth in our own city. I am going to a good doctor in Kermanshah and I'm under his supervision so I feel more comfortable" (P 15).

Increasing information on childbirth: Women were trying to become more aware of childbirth by increasing their information in different ways, and since most of these women had little knowledge because of their age, more familiarity with childbirth could reduce their stress and fear of the unknown of childbirth.

"I had no knowledge of childbirth. When I found out I was pregnant, I got shocked. So I went to my cousin who had just given birth and got a lot of information from her" (P 8). "Since I found out that I was pregnant, I have been reading about pregnancy on various websites all the time; also I got a book so I feel less scared" (P 1). "The hospital has given us a series of training classes that I went to all sessions. It was very good, making me less afraid of childbirth" (P 12).

Avoiding stressful sources: Pregnant women attempted to control their fear of childbirth by avoiding people who had experienced a bad delivery or had recently given birth to disabled children.

"My sister had a difficult delivery so whenever she was telling about her delivery tears came to my eyes. So whenever she wanted to talk, I stopped her and told her not to talk" (P 11). "Seeing a child who was born with a disability increases my fear of childbirth, so I try to stay away from mothers who gave a birth to a disabled child" (P 3).

Improving self-care: Pregnant women tried to reduce their stress and fear of childbirth by paying more attention to their health status and following the doctor's instructions and providing the conditions for a successful delivery.

"I'm very careful about following my doctor's instructions to make it comfortable for me and I'm taking care of myself a lot" (P 6). "I try to get assured about my son's health by doing diagnostic sonography continuously" (P 7). "I try to keep my health at a high level by exercising, doing special exercises and considering my diet in order not to have problem on the day of delivery. In this way, I feel better and less worried about my delivery day" (P 14).

Preparing for the delivery day in advance: Some of the women in the study were trying to reduce their fear of childbirth by providing the necessary equipment for themselves and the child for the day of delivery as well as reserving the vehicle

and coordinating with a family member to accompany them on the delivery day.

"I prepared all the supplies I need for the day of delivery a month ago so I feel better and if my childbirth happens suddenly, I won't worry anymore" (P 2). "My older sister promised to stay with me for a week and then I'll go to my mom till fortieth day after birth. This way I feel relaxed and I'm not worried about how to look after my baby" (P 3).

Spirituality: The women tried to get closer to God through religious activities and this way become more relaxed. They also thought that women who die during childbirth are martyrs and go to heaven, the idea which reduced their fears.

"I often try to calm myself down by listening to the Quran and reading it" (P 4). "One of the things I do when I get upset is to pray more times. They say that God is more responsive to the prayers of pregnant women" (P 3). "When I think that if something happens to me at childbirth and I die, I'll go to paradise, I feel less scared" (P 11).

Discussion

This study was conducted with a qualitative approach and the aim of discovering the causes and grounds of childbirth fear and coping strategies among adolescent pregnant women in Iran. Fear of endangering the health of children was one of the common fears of the women in this study, which is consistent with previous research in this area (38, 39). In fact, many women considered themselves responsible for the health of their babies and were more concerned about the health of their infants than about their health. Compared to previous studies, fear of child health was more prevalent in this study because adolescent women had their first pregnancy experience. Some of them were not physically and even mentally ready to be a mother and this lack of readiness could jeopardize the baby's health and increase their anxiety.

Another result was fear of childbirth process. The steps and things that need to be done to give birth to a baby are stressful for many women, and since things like preterm birth (Also known as premature birth) may interfere with this process, it heightens this fear. Previous research has also shown that fear of labor pain and loneliness has been one of the most common fears in pregnant women (40, 41). A study in Nigeria has also shown that pregnant women are afraid of labor pain and experience both urinary and fecal incontinence in natural childbirth (42). This finding adds to previous research that since adolescent women have little experience with the delivery process itself, this process can make them fear.

Another fear of the women was fear of inappropriate medical staff performance, including mistakes and inappropriate behaviors that may occur during childbirth. Since the samples lived in deprived areas suffering from lack of specialized and qualified physicians, they feared medical errors and also the inappropriate behavior of midwives and nurses during childbirth. In the Heimstad et al.'s study, pregnant women had concerns about inappropriate treatment by medical staff (23). Sjögren et al.'s research also points out the lack of trust in midwifery staff as one of the common fears in pregnant women (43). This finding adds to previous studies that skilled physicians and medical staff who know how to deal with pregnant mothers can have a significant impact on reducing women's fear of childbirth.

Fear about hospital was another fear of the women under study. Most of the women in this study criticized the facilities they saw in their city hospital and were actually worried that something would happen on the day of birth that would endanger their and their children's health. It goes without saying that, due to the large earthquake that struck the region two years ago and still followed the aftershocks, pregnant women were very afraid that another earthquake would happen again on the day of their childbirth and would destroy the hospital. In the study of Abbaspour et al., fear of hospital environment and problems that may occur at the hospital during the day of delivery were the fears of pregnant women in Iran (24). Compared with previous studies, this study revealed that not only the expertise of physicians and their behavior is important for pregnant women, but also the improved medical equipment of hospitals can be effective in reducing women's fear of childbirth.

Postpartum fear was another fear of pregnant women. Since women need more care and support after childbirth, and childbirth can deprive a person of their social activities for some time, this can be fearful for women. Since some of the samples in this study were students, they feared that they would not be able to continue their education after giving birth and would be deprived of school for ever. Some cases were concerned about the

change in body structure after childbirth and were actually afraid that the changes that would occur after childbirth would affect their sex relations with their husbands. In the research of Haines et al., dissatisfaction with marital relations was one of the fears of pregnant women (44). Also, in the study of Abbaspour et al., which was conducted among Iranian pregnant women, the fear of childbirth complications, especially the fear of deformed shape of body and genitalia and fear of decreased sexual satisfaction of husband were the main factors of fear of childbirth (24). In Poikkeus et al.'s study, pregnant women were concerned about the complications of labor (45).

Fear of being excluded from social activities such as attending school, *etc*. after childbirth was one of the notable results of this study that had not been addressed in previous research. Because there were bans on married women in some local schools, they worried that they would not be able to continue their education after childbirth.

Another category that emerged from the data was the strategies that women in the study used to reduce their fear of childbirth. One of the strategies that women applied to reduce the fear of childbirth was to choose the good health centers and medical staff. In fact, they had the impression that by choosing the right medical centers and skilled doctors they could increase the chances of health for themselves and their babies during childbirth. By doing so, they reduced their fear of childbirth. In the Klabbers et al.'s study, interactions between nurses, midwives, and physicians with pregnant mothers were one of the determinants of fear of childbirth (46). In Larsson et al.'s study, a good relationship with the medical staff was one of the effective factors in reducing fear of childbirth (47).

Another strategy for women was to raise awareness about childbirth. In fact, the women in the study were trying to overcome their fears by raising their awareness and information about childbirth. They tried to gain information by attending instruction classes, reading books, watching movies, visiting the hospital where they would give birth, and so on. Past research has shown that lack of awareness is one of the causes of fear of childbirth (48-50). Aksoy et al.'s research also showed that raising women's awareness of childbirth is one of the effective strategies to reduce childbirth fear (18). In fact, education in pregnancy is a very good way to reduce the fear of childbirth because it gives women enough opportunity to raise awareness about pregnancy and childbirth (51, 52). Bryanton et al. showed that familiarity with the hospital environment is one of the effective ways to reduce the fear of childbirth in pregnant women (48).

Avoiding stressful sources was another strategy of women. The women in the study attempted to reduce their fear by avoiding individuals or environments that made them fearful of childbirth. In a study by Romero et al., pregnant women stated that the fear of childbirth was initially caused by hearing stories from friends and relatives about their bad childbirth experiences (53). This finding adds to previous studies that hearing and seeing stories and stimuli that evoke negative feelings of delivery can lead to more stress. So, medical advisers can invite the women with a good childbirth experience to the pregnancy education classes to tell their memories to pregnant women. In this way, good experiences of childbirth can be incorporated into their memories.

Another strategy for women to reduce their fear of childbirth was to improve self-care. In fact, women were trying to provide good delivery and comfortable conditions in order to overcome their fears by following the instructions of the doctor and whatever was recommended for them such as exercise, proper nutrition, and so on. The positive effect of specific exercises and good nutrition on a successful delivery has been proven in previous studies (54-56). The positive impact of self-care during pregnancy has also been demonstrated in a study by Dziegielewski and Jacinto in 2018 (57).

Providing suitable conditions for delivery day a few months ago was another strategy of women. The women in this study tried to overcome the fear of unpredictability of childbirth through coordination with a family member for delivery day and providing everything they and their children need for the day of childbirth. In fact, they tried to reduce their fear of childbirth by providing the necessary conditions and providing the conditions to gain postpartum social support. In previous research, planning for the day of delivery and providing the needed facilities were women's strategies to reduce childbirth fear (47, 58, 59). The positive effects of social support on pregnant women during childbirth and later were indicated in the study of Spoozak et al. (30). The findings of their study revealed that since adolescent women have no experience of pregnancy, their postpar-

tum worries may be greater than those of other pregnant women. Thus, creating a supportive environment for postpartum period can reduce their fear of childbirth.

Resorting to spirituality as another strategy of women to reduce childbirth fear, which has received less attention in previous research, is one of the new findings of this study. As a matter of fact, pregnant women were trying to get close to God by performing religion practices, also by spiritualizing the pregnancy by this thought that pregnant women are extremely innocent and have an uplifted position before God, and if something bad happens to them, God will send them to the paradise. They were trying to overcome their fear of childbirth through these thoughts and beliefs.

Conclusion

Pregnancy in adult age is better than adolescent age. The results showed that adolescent pregnant women are involved with the fear of childbirth. Their fears include fears of child health, fear about childbirth process, fears about medical staff, hospital-related fears, and postpartum fears. These women also use strategies such as choosing appropriate medical centers, increasing information on childbirth, avoiding stressful sources, improving self-care, getting prepared for day of delivery, and resorting to spirituality to alleviate or reduce these fears. So raising assurance about child health, giving appropriate instruction during pregnancy, clarifying the whole process of delivery and making it easier, improving the hospital environment and medical staff expertise, improving medical staff relationships with pregnant women, and providing appropriate conditions for more care and support for women after pregnancy as well as training their husbands to understand and support their wives after pregnancy can reduce their fears.

This is the first qualitative study on maternity fear among adolescent pregnant women in the Kurdish regions of Iran. Its second strength is that author of the article is the native of the region and familiarity with the culture of the people of the region is the third strength. Limited access to participants who had the criteria to enter the study and population dispersion of the studied geographical environment were the limitations of the research. It is suggested that the results of this study be used in an intervention study to reduce the fear of childbirth.

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Conflict of Interest

The authors declare that there are no conflicts of interest.

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