

Importance of Childbirth Preparation Classes in Improving Childbirth Self-Efficacy and Reducing Worry in Primigravidas

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Abstract

Background: Pregnancy and childbirth are 2 phases that are mostly associated with a high level of worry, which results in not only psychophysical disorders in mothers but also adverse fetal and/or neonatal outcomes. In such instances, self-efficacy influences all aspects of behaviors and emotional reactions in pregnant women.

Aim: This study was conducted to determine the role of attending childbirth preparation classes in reducing worry and improving childbirth self-efficacy in primigravidas.

Materials and Methods: This descriptive–analytical study was conducted on 200 primigravidas, in the gestational age of 28 to 38 weeks, who were referred to 2 antenatal care (ANC) centers in northern Iran. The participants were recruited using the quota random sampling method and were divided into 2 groups: (1) those who attended childbirth preparation classes (trained group) and (2) those who received only routine ANC (routine care group). All the participants were provided routine ANC and were suggested to attend childbirth preparation classes, conducted at the hospital, by either a doctor or a midwife. Those who wished to attend the classes were trained by 2 qualified midwives for 8 weeks. The participants were in the gestational age between 20 and 30 weeks when they enrolled for the classes.

Sociodemographic data and scores of worry and self-efficacy of study participants were collected using a demographic questionnaire, Cambridge Worry Scale, and Childbirth Self-Efficacy Inventory, respectively. The data were analyzed using

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the descriptive statistics, independent samples *t* test, and χ^2 test.

Results: The study results showed that worry and its dimensions were lower in the trained group than in the routine care group, but significant differences were observed only in the mean scores of sociomedical dimension (13.08 ± 12.04 and 17.40 ± 9.24 , respectively, $P = .005$) and total worry (24.14 ± 23.43 and 30.37 ± 19.59 , respectively, $P = .04$). The mean scores of childbirth self-efficacy were significantly higher in the trained group compared with that in the routine care group (303.66 ± 48.15 and 192.22 ± 68.08 , respectively, $P < .001$).

Conclusion: Results of the study showed a positive association between attending the childbirth preparation classes and reduction in worry and improvement in childbirth self-efficacy in primigravidas. So, encouraging pregnant women to participate in childbirth classes may help lower their worry about childbirth.

Key Words: Antenatal class, childbirth preparation class, childbirth, self-efficacy, worry, primigravida

Introduction

Pregnancy is a critical phase in women's lives, which is associated with anxiety about pregnancy and childbirth. As pregnancy is accompanied by significant biological, psychological, and social changes, it may also cause great worry to pregnant women. Worry is an essential aspect of anxiety. It is a psychologic threat that results from the expectation of undesirable events in the future, which is more prevalent in pregnant women.² The prevalence of mild and high worry is reported to be 86.4% and 13.6%, respectively, in Iranian pregnant women.³ In addition, severe worry during pregnancy not only needs psychological interventions, but it also increases the risk of undesirable maternal and fetal/neonatal outcomes.⁴

Childbirth self-efficacy is defined as the perceived ability of a woman for a successful childbirth.⁵ Low childbirth self-efficacy leads to fear of the childbirth process.⁶ Earlier studies on pregnancy did not consider "self-efficacy" as a significant factor required for childbirth; only some studies have reported about the perceived self-efficacy after childbirth.

Researchers have studied various approaches such as educational programs to promote women's physical and psychological health. It was observed that the traditional methods of educating pregnant women about childbirth did not actively improve their psychological health.⁷ Women often need antenatal education that helps in making the right decisions about the type of birth, building the skills required for childbirth and pain relief, and playing the role of a mother. In the childbirth preparation classes, the supportive techniques that help prepare pregnant women reach these goals are discussed.⁸

Aim

This study was conducted to evaluate the role of childbirth preparation classes in improving childbirth self-efficacy and reducing worry in primigravidas.

Materials and Methods

Study design

This descriptive-analytical study was conducted in 2018 on 200 pregnant women who were referred to

2 antenatal care (ANC) centers in northern Iran. The study protocol was approved by the Ethics Committee of the Mazandaran University of Medical Sciences (IR.MAZUMS.REC.1397.1487). The sample size was calculated with respect to a confidence interval of 95%, study power of 90%, dropout rate of 10%, and improvement in pregnant women's attitude by 47.5% and 25.8% in the trained and routine care groups, respectively, as reported in Toohill et al's study.⁹ Accordingly, 200 participants were recruited using the quota random sampling method, and they were divided into 2 groups: one group with 100 pregnant women who were participating in the childbirth preparation classes and another group of 100 who had received only the routine ANC. All the participants were provided routine ANC and were suggested to attend childbirth preparation classes, conducted at the hospital, by either a doctor or a midwife. Those who wished to attend the classes were trained by 2 qualified midwives for 8 weeks. The participants were in the gestational age between 20 and 30 weeks when they enrolled for the classes.

Inclusion criteria

The study included primigravidas who were aged between 18 and 35 years; in the gestational age of 28 to 38 weeks; living with spouse; did not experience any stressor such as abnormal findings on the fetal screening test and history of infertility; had at least a high school diploma; did not have any addiction to drugs; did not lose any close relatives during the past 6 months; and had good psychophysical health. For the trained group, primigravidas who attended at least 5 sessions of the childbirth preparation classes were included.

Exclusion criteria

Women with high-risk pregnancy (eg, bleeding, intra-uterine growth restriction, hypertension, preterm labor signs, multiple gestations, and history of a threatened abortion); unwanted pregnancy; who were not willing to participate in the study; who did not complete the questionnaire; who discontinued the childbirth classes; and those who were participating in any other educational programs were excluded from the study.

Study procedure

The data were collected using a demographic questionnaire, Cambridge Worry Scale (CWS), and Childbirth Self-Efficacy Inventory (CBSEI). The demographic questionnaire included women's age, job, level of education, gestational age, residence location, income level, and preferred type of delivery. The CWS assesses the amount of worry and causes of nonpathologic worries during the pregnancy. The CWS was based on a 6-point Likert scale ranging from 0 (no worry) to 5 (very high worry) and was self-reported by the study participants. The CWS has been translated into various languages, and its reliability and validity have been confirmed in different populations with different cultural backgrounds. Mortazavi and Akaberi¹⁰ translated the CWS from English to Persian using the backward-forward method and improvised the Persian version by adding 22 extra questions after psychometric assessment, based on the Iranian culture. The questions in the CWS were categorized into 4 groups: (1) sociomedical; (2) health of the pregnant woman and someone close, and the relationship between them; (3) fetal health status; and (4) socioeconomic dimensions. Concurrent validity was evaluated using the Spielberger State-Trait Anxiety Inventory. Furthermore, a content validity ratio of > 0.62 , a content validity index of > 0.80 , and an impact score of ≥ 1.5 were determined by a panel of experts. Cronbach's alpha value was 0.88.¹⁰ As the study included pregnant women of different gestational ages and those belonging to different populations, and as the CWS is a flexible instrument, the "worry about abortion" portion was omitted. In addition, the study participants were in the late stage of pregnancy, and the total score of worry ranged between 0 and 105 in this study. For categorizing the intensity of worry, the total score was divided by the total number of questions; so a score of ≤ 3 was considered "low worry" and a score of > 3 was considered "high worry".

The CBSEI measures the pregnant woman's confidence in coping with childbirth pain (self-reported by the study participants). Khorsandi et al¹¹ developed a native version of the CBSEI based on the Iranian culture, in which the scoring is based on the 10-point Likert

scale that includes 36 questions in 2 parts (each part consisting of 18 questions)—outcome expectancy (1 = totally useless and 10 = quite useful) and self-efficacy expectancy (1 = absolutely uncertain and 10 = absolutely certain). The content validity was confirmed by an expert panel, and the construct validity was confirmed using the confirmatory factor analysis. The Cronbach's alpha values were 0.92 and 0.88 for the total score and subscale, respectively.¹¹

After selecting eligible pregnant women for the study, each of them was given a form that had information about the objectives and the procedures followed in the study and a written consent form. After receiving information about the study procedure, those who were willing to participate in the study were asked to fill out CWS and CBSEI.

Statistical analyses

The data collected were entered in the SPSS version 21.0 software (IBM Corp, Armonk, NY, USA) and were analyzed using the descriptive (mean, standard deviation, and frequency) method and analytical statistics, that is, using independent samples *t* test and χ^2 test. A *P* value of .05 was considered significant for all the questionnaires.

Results

In this study, 2 groups of pregnant women were assessed (100 pregnant women in each group). In both the groups, most of them were housewives, residing in urban areas, had a high school diploma, and had a moderate economic level. There were no significant differences between both the groups regarding demographic characteristics (Table 1). Furthermore, compared with the pregnant women in the routine care group, the pregnant women who attended the childbirth preparation classes preferred normal vaginal delivery (NVD) and were certain about the type of delivery they wanted to undergo. The difference between the 2 groups was significant about preferred type of delivery ($P < .001$).

Table 2 lists the scores of worry and its dimensions. Although the scores were lower in the trained group

Demographic Characteristic		Trained Group, n (%)	Routine Care Group, n (%)	<i>P</i>
Age, y		27.04 ± 4.51 ^a	26.06 ± 4.95 ^a	.14
Gestational Age, wk		33.92 ± 3.37 ^a	33.70 ± 3.61 ^a	.65
Job	Employed	6 (6.0)	4 (4.0)	.51
	Housewife	94 (94.0)	96 (96.0)	
Level of Education	High school diploma	59 (59.0)	70 (70.0)	.10
	University degree	41 (41.0)	30 (30.0)	
Residence Location	Rural area	32 (32.0)	40 (40.0)	.23
	Urban area	68 (68.0)	60 (60.0)	
Income Level	Low	9 (9.0)	15 (15.0)	.33
	Medium	51 (51.0)	52 (52.0)	
	High	40 (40.0)	33 (33.0)	
Preferred Type of Delivery	NVD	86 (86.0)	56 (56.0)	.000
	CS	4 (4.0)	23 (23.0)	
	Uncertain	10 (10.0)	21 (21.0)	

^aMean ± standard deviation.
CS, cesarean section; NVD, normal vaginal delivery.

Worry and Its Dimensions	Trained Group (Mean ± SD)	Routine Care Group (Mean ± SD)	<i>P</i>
Sociomedical	13.08 ± 12.04	17.40 ± 9.24	.005
Health of the Pregnant Women and Someone Close, and the Relationship Between Them	2.71 ± 3.91	2.87 ± 4.23	.78
Fetal Health Condition	4.20 ± 4.85	5.07 ± 4.55	.19
Socioeconomic Status	4.15 ± 5.50	5.03 ± 5.92	.27
Total Score of Worry	24.14 ± 23.43	30.37 ± 19.59	.04

compared with that in the routine care group, significant differences were noted only for the sociomedical dimension and total worry scores. But most of the pregnant women in both the groups were worried about childbirth (Figure).

Childbirth self-efficacy and its dimensions were significantly higher in the pregnant women who attended the childbirth preparation classes compared with those who only received the routine care (Table 3).

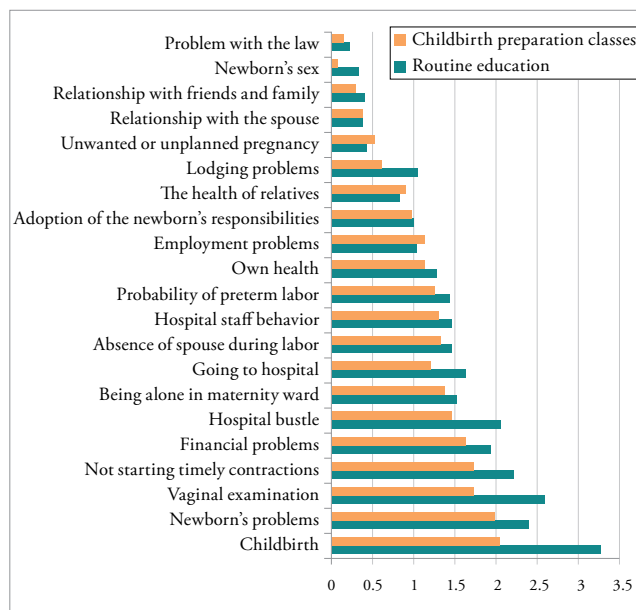


Figure. Ranking the Causes of Pregnant Women's Worry in Both the Groups

Table 3. Comparison of the Self-Efficacy in Pregnant Women in Both the Groups

Childbirth Self-Efficacy	Trained Group (Mean ± SD)	Routine Care Group (Mean ± SD)	P
Pregnancy Outcome	160.73 ± 23.33	112.24 ± 39.02	< .001
Self-Efficacy	142.93 ± 28.56	79.98 ± 35.59	< .001
Childbirth Self-Efficacy (Total Score)	303.66 ± 48.15	192.22 ± 68.08	< .001

A significant inverse correlation was observed between the worry and childbirth self-efficacy ($r = -0.236$; $P = .001$).

Of the 200 study participants, 51.8% reported that their health care practitioners were the major source of information about their pregnancy and childbirth; 9.1% mentioned Instagram, WhatsApp, and Telegram; 8.6% mentioned relatives and friends; and 2.5% mentioned television and radio as their source of information. The remaining 28% obtained information from > 1 source.

Discussion

In this study, the association between attending the childbirth preparation classes and its effect on reducing

the worry about pregnancy and improving the childbirth self-efficacy expectancy was assessed in primigravidas. The study results showed that the worry was less and the childbirth self-efficacy was high in the trained mothers. Among various dimensions of worry, only the sociomedical dimension score was significantly low in the trained mothers. The study conducted by Rastegari et al¹² reported decreased worry about maternal role after attending 1 session in person and 2 sessions of telephonic counseling. A few other studies^{6,9} have not considered the “worry” factor significantly but reported mostly about pregnant women’s anxiety and fear about childbirth. The cohort study conducted by Ghazaei et al⁶ in Iran revealed a positive association between attending childbirth preparation classes and reduction in fear in pregnant women. An interventional study by Toohill et al⁹ also reported a decrease in the anxiety and fear in pregnant women after attending childbirth preparation classes. Some aspects of the pregnancy worry are related to the law (eg, personal disputes) or financial and occupational problems, but childbirth preparation classes are not expected to be effective on these issues. Attending the childbirth preparation classes may result in a positive attitude toward childbirth.¹³ The study by Bagherian-Afrakoti et al¹⁴ showed that group counseling (a psychologic intervention, which differs from that of childbirth preparation classes) to pregnant women improved their knowledge and attitude toward childbirth. Improved knowledge and attitude with the help of the childbirth preparation classes may reduce worry.^{9,15,16}

In our study, the intensity of worry was not very high for any of the factors mentioned in the questionnaire, and the values were close to those reported in the study conducted by Mortazavi and Akaberi.¹⁰ Studies conducted by Brunton et al⁴ and Mortazavi and Akaberi¹⁰ in different cities in Iran reported a 13.6% and 2.6% reduction in worry in pregnant women after childbirth preparation classes, respectively. This difference in the percentage reduction could be due to differences in the classification of worry intensity or population differences. In line with Gourounti et al’s¹ findings, the most common causes of worry were about the childbirth process and fetus-related problems in our study also. According to Mortazavi and Akaberi’s study¹⁰

conducted in Iran, being alone in the labor ward (without any family members) was the major cause of worry, which was in the seventh position in our study. This difference may be due to changes in the health care policies in maternity wards in recent years. According to the new policy, a doula (a trained individual to assist a woman before, during, and just after childbirth) is allowed to be with pregnant women in the labor ward.

Our study results showed that childbirth self-efficacy was higher in the pregnant women who participated in the childbirth preparation classes compared with those who received only the routine ANC. It has also been reported that the antenatal education and childbirth preparation classes are effective in increasing self-efficacy.^{5,9,15-17,18} Routine ANC is usually limited to regular clinical assessments, periodic laboratory tests, and advice based on the condition. But childbirth preparation classes discuss supportive techniques that help pregnant women build the skills to deal with pregnancy problems and make the childbirth process a smooth experience. Group training and open interactions among pregnant women help improve knowledge and receive support from each other.⁶ Speaking their mind and expressing their thoughts among homogeneous people may help in emotional evacuation and also identify a valuable, useful, and unique character of themselves by helping or guiding each other. In such situations, their self-esteem increases, and they find themselves more confident to face the new experience.⁶

In addition, pregnant women in the trained group had more clarity on the type of delivery they want to undergo because of high childbirth self-efficacy. These pregnant women also mentioned their doctors and midwives to be the most frequent sources of information pertaining to childbirth. So, along with giving care, doctors and midwives play an important role in giving consultation (about selecting the right childbirth method) to the mothers. In addition to preparing pregnant women physically for childbirth, they must be helped to prepare psychologically by reducing their anxiety. For these women, mass media such as radio and TV as well as social media networks were other important sources of information. According to Rastegari et al,¹⁸ a

high number of pregnant women are increasingly using the Internet and social media to obtain information. But childbirth preparation class is an excellent platform to provide the right information and change their misconceptions about the entire process. Some women reported their family and friends being the only source of information. As in most of these instances, information obtained from such sources could be false and nonscientific, it is necessary to ask them about the source of information and give them the necessary guidance to take medical advice from reliable sources.

Conclusion

The findings of our study revealed that attending childbirth preparation classes may reduce pregnant women's worry and anxiety, in particular the sociomedical dimension. In a majority of the mothers, the main reasons for worry were fear about the childbirth process and fetus health-related problems. Hence, knowing the reasons behind their worry and providing appropriate medical advice are very important. The pregnant women who attended childbirth preparation classes apparently had high childbirth self-efficacy compared with those who received only routine care. This was because of the supportive techniques taught and skills they gained in the childbirth preparation classes.

The fact that we assessed the pregnant women's worries and their causes is the strength of our study. The possibility of neglecting some aspects of worry (eg, worry about physical changes or body image, medical interventions during labor, and accepting the paternal role by the spouse) because of the restrictions in the CWS is a limitation of our study. Therefore, cohort and clinical studies are required to investigate the correlation of the childbirth preparation classes with pregnant women's worries and self-efficacy.

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