

Investigating the Effects of Midwife-Oriented Education and Counseling on the Type and Consequences of Childbirth in First-Time Pregnant Women with Fear of Childbirth

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Abstract

Background: Fear of childbirth is one of the major problems during pregnancy and the post-partum period that affects women's health and preference for cesarean birth.

Objectives: The present study aimed to investigate the effect of midwife-oriented education and counseling on the type and consequences of childbirth in first-time pregnant women with fear of childbirth.

Methods: The present study is a single-blind randomized controlled trial performed on 122 first-time pregnant women with fear of childbirth. The samples were selected by the convenient sampling method and divided into two intervention and control groups by the four-blocked randomization method. Data collection tools were a demographic questionnaire and the Wijma Delivery Expectancy/Experience Questionnaire (WDEQ; version A before childbirth and version B after childbirth). The intervention was performed in the form of six counseling sessions based on the Gamble approach. The data were analyzed at a significance level of 0.05 using SPSS 21 statistical software.

Results: Regarding the effect of midwife-oriented counseling on pre-partum and post-partum fear, no statistically significant difference was observed between the two groups. The rate of choosing vaginal birth in the intervention group significantly increased after receiving counseling ($p = 0.001$). The frequency of vaginal birth, childbirth satisfaction, and childbirth consequences was not statistically significant between the two groups.

Conclusion: The present counseling method can be effective in increasing choosing vaginal birth in first-time pregnant women with fear of childbirth, but further research is required to evaluate its effectiveness on the maternal and neonatal consequences.

Keywords: *midwifery counseling, fear of childbirth, consequences of childbirth*

Introduction

Despite widespread advances in midwifery science and the safe childbirth process, fear of childbirth continues to exist [1]. It has been reported that 93% of Iranian women have a fear of childbirth [2]. In another study in Iran, 6-13% of pregnant women experience severe debilitating fear [3]. Andron et al. (2017) reported the prevalence of fear of childbirth as 50.9% [4]. In

Iran, cesarean birth is three times more than global statistics, and in many studies, the most common reason for choosing a cesarean section is the fear of childbirth [5]. Fear is one of the main factors in deciding the type of childbirth [6]. The main treatment for fear of childbirth is the preparation and support of women during pregnancy and childbirth [7]. Midwife-oriented interventions [8,9], solution-oriented approaches

[10], cognitive-behavioral approach [11], relaxation [12], and holding childbirth preparation classes [13] have been proposed in various studies, and different results have been reported. The results regarding the effect of childbirth preparation classes on reducing fear of childbirth and changing attitudes toward childbirth are contradictory [13,14]. In some studies, interventions have not been successful in reducing fear of childbirth [15,16]. A meta-analysis on six preventive interventions indicated the ineffectiveness of educational interventions in reducing maternal anxiety and fear [17]. One of the new approaches is the midwife-oriented psychological, educational counseling approach, which tries to help the mother find a suitable solution to her problem by establishing the proper therapeutic relationship, strengthening social support, and positive thoughts [18]. In most studies, the frequency of vaginal birth has been investigated as the primary research goal, while the quality of childbirth and maternal and neonatal consequences are far more critical goals [19]. Therefore, considering the importance of fear of childbirth and its determinant role in the type of childbirth and maternal and neonatal consequences, the present study was conducted to determine the effects of midwife-oriented education and counseling on the type and consequences of delivery in first-time pregnant women with fear of childbirth.

Methods

This study is a single-blind randomized controlled trial conducted on first-time pregnant women referring to health centers in the city of Zanjan with fear of childbirth. The health-medical centers of Zanjan are in three categories in terms of socioeconomic status: Uptown, midtown, and downtown; from each region, 2 centers were randomly selected. The sample size was determined 50 people in each group based on Navayi and Abediyan's [20] study, with 95%

confidence and 80% power, using the following formula in each group; taking into account the 10% probability of sample loss, 60 samples were finally calculated in each group.

$$n = \frac{\left(Z_{1-\frac{\alpha}{2}} + Z_{1-\beta} \right)^2 (\delta_1^2 + \delta_2^2)}{(\mu_1 - \mu_2)^2}$$

Inclusion criteria included first-time pregnant women aged 18-40 years, the 28-30th week of pregnancy, resident in the city of Zanjan, having a singleton fetus, no history of infertility, no history of chronic medical or obstetric diseases, no history of mental disorders or taking psychotropic drugs, having reading and writing literacy, a score less than or equal to 51 on the Alexithymia Questionnaire, a score equal to or higher than 66 on the Wijma Delivery Expectancy/Experience Questionnaire (WDEQ), having current mental health according to the Depression Anxiety and Stress Scale (DASS-21), including no depression (less than or equal to 13), no anxiety (less than or equal to 9), and no stress (less than or equal to 18), and attending the childbirth preparation class. Exclusion criteria included unwillingness to continue the study, lack of access due to change of residence, fetal death, pregnancy-related problems such as diabetes, hypertension, anemia, mental disorders, ultrasound indicating unhealthy fetus, termination of pregnancy or preterm childbirth before the end of the sessions, and more than two absences in counseling sessions.

Before starting the study, pregnant women completed the Personnel and Midwifery Questionnaire, the Alexithymia Questionnaire, the DASS-21, and the WDEQ (version A). One hundred and twenty-two eligible mothers were selected by the convenience sampling method and divided into two intervention and control groups by the blocked randomization method (Figure 1).

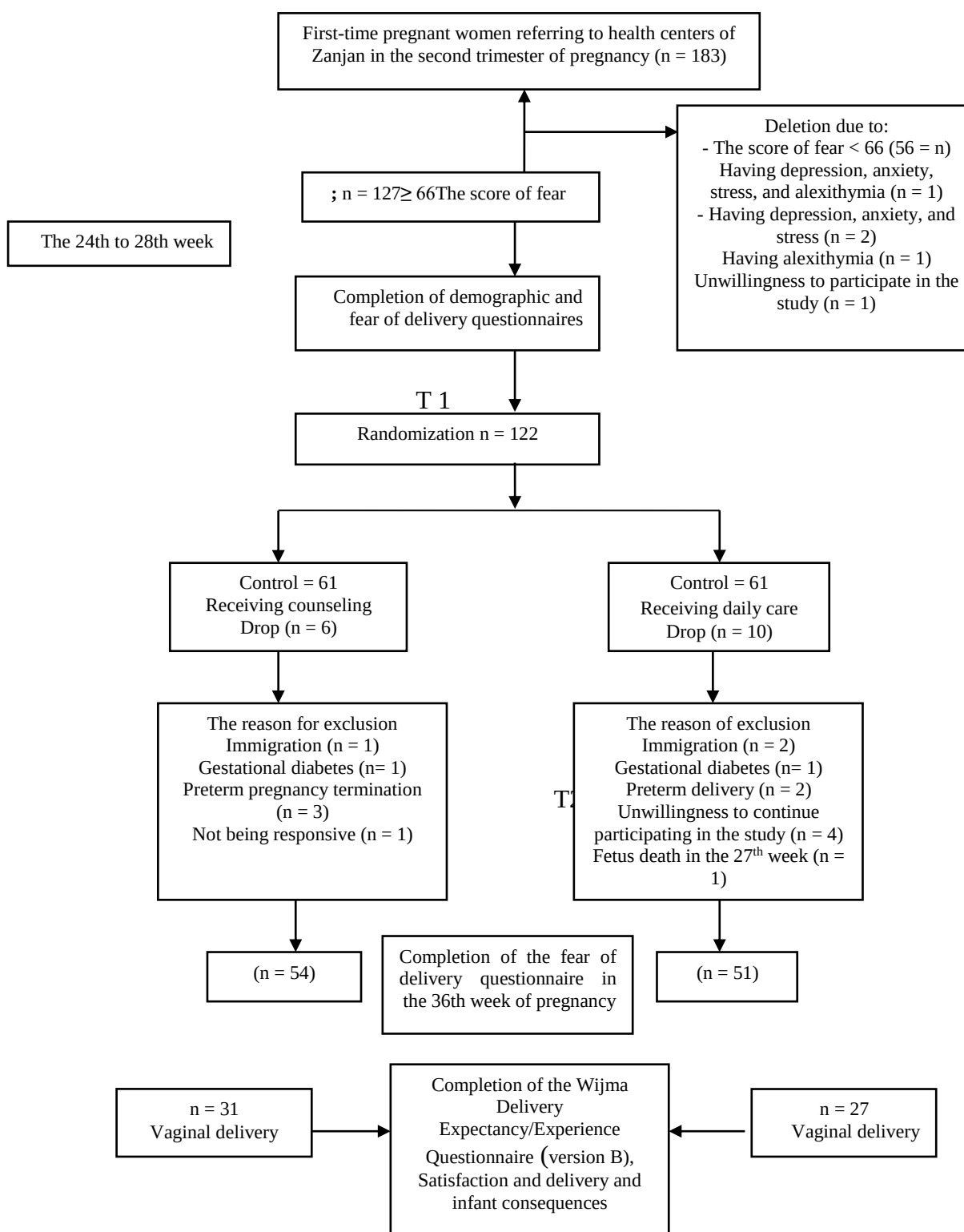


Figure 1: Flow Diagram of the Progress Through the Phases of a Parallel Randomised Trial of two Groups

In the intervention group, face-to-face group counseling was held in eight-to-ten-people groups, in five sessions (60 to 90 minutes) in the 31st to 35th weeks of pregnancy, and one telephone counseling session was held in the 36th week of pregnancy individually to summarize the materials. At the 36th week of pregnancy, the WDEQ (version A) was completed in both groups in-person by a trained questioner unaware of the individuals' grouping. The content of the counseling sessions in the intervention group included establishing a therapeutic relationship between midwife and mother, accepting the mother's perceptions, supporting and encouraging the mother to express her feelings, clarifying ambiguities and misunderstandings, establishing a relationship between emotions and behaviors, reviewing the childbirth process, strategies of receiving social support, strengthening positive approaches, and discovering solutions. The samples in the control group received routine care as well as a booklet containing the issues raised in the counseling sessions. During 72 hours after childbirth, the WDEQ (version B) and the childbirth satisfaction questionnaire were completed in both groups. Maternal and neonatal consequences were extracted from mothers' files by the researcher.

The research tools included the demographic questionnaire (17 questions), the WDEQ (version A before childbirth and version B after childbirth), the Toronto Alexithymia Scale (TAS-21) [21], the DASS-21, and the Mackey Childbirth Satisfaction Rating Scale (CSRS).

The WDEQ has two versions: Version A and version B. Version A measures the mother's perceptions and expectations of childbirth during pregnancy, and version B measures the childbirth experience. Both questionnaires involve 33 items, scored on a 6-point Likert scale from 0 (not at all) to 5 (often), and ranged between 0 and 165. The 33 items on the Likert scale include the minimum and maximum scores of 0 and 165, respectively, and a score of 66 and higher indicates an intense fear of childbirth [22]. The content validity, reliability, and structural validity of both versions of the questionnaire have been confirmed in Iran by Mortazavi (2017). The results of confirmatory factor analysis did not confirm one of the factors of the original WDEQ; therefore, the Iranian version consists of 32 items. Cronbach's alpha

coefficients for the Persian version of the WDEQ (version A and version B) were reported as 0.914 and 0.919, respectively [23].

The TAS is a 20-item self-assessment questionnaire with three dimensions: Difficulty in identifying feelings (DIF; 7 questions), difficulty in describing feelings (DDF; 5 questions), and external-oriented thinking (EOT; 8 questions). Questions are scored on a 5-point Likert scale from 1 (strongly agree) to 5 (strongly disagree), with a minimum score of 20 and a maximum of 100. Scores of 61 and higher indicate the existence of alexithymia, scores between 52 and 60 show the possibility of alexithymia, and scores of 51 and lower denote no alexithymia [24]. The cut-off point is indeed 51. In the Persian version of the TAS, Cronbach's alpha coefficients for the total scale and the subscales of DIF, DDF, and EOT have been calculated as 0.85, 0.82, 0.75, and 0.72, respectively [21].

The DASS-21 is used to assess negative emotional states of depression, anxiety, and stress in the individual. Each of these subscales has 7 questions, and each question is scored from 0 to 3. The validity and reliability of this questionnaire in Iran have been evaluated by Samani and Jowkar (2007), having reported the test-retest validity for depression, anxiety, and stress to be 0.80, 0.76, and 0.77, and the Cronbach's alpha for the mentioned subscales to be 0.81, 0.74, and 0.78, respectively [25].

The CSRS includes 29 questions in four areas of the mother's satisfaction with her self-performance, midwives performance, infant status, and overall satisfaction with the childbirth experience, which are answered on a 5-point Likert scale in the point range of 29-145: Scores of 29-58 are categorized in the dissatisfied group, 59-115 in the favorable satisfaction group, and 116 or higher in the completely satisfied group. The validity of this questionnaire has been confirmed in Iran with $r=0.96$ [26]. The questionnaire's validity has also been confirmed by the content validity method, and its reliability has been confirmed by calculating Cronbach's alpha $\alpha = 0.8$ in Zanjan [27].

Maternal and neonatal consequences included the type of childbirth, duration of childbirth stages, the use of oxytocin, post-partum hemorrhage, the use of epidural or spinal analgesia, birth weight, Apgar scores, and interventions in the third stage

evaluated by a researcher-made questionnaire based on the mother's medical file. A demographic questionnaire consisted of contextual variables, including age, the spouse age, marriage age, gestational age, the education level of mother and spouse, the occupation of mother and spouse, the pregnant mother's life with spouse, family's housing status, and monthly income, mother's health insurance particularly supplementary insurance, the preferred pregnancy, the willingness to participate in childbirth preparation classes, the place of referral for receiving pregnancy care, and the use of cigarette by the pregnant mother and spouse, and also a question to assess the type of preferred childbirth at the beginning of the study and after the intervention was included in it.

Results

Demographic characteristics were homogeneous

Finally, after completing and collecting the questionnaires, data analysis was performed using SPSS statistical software (version 21). The normality of the research variables was determined by the Kolmogorov-Smirnov test. The variables of age, gestational age, fear of childbirth, the total score of satisfaction with childbirth, the mother's satisfaction with her self-performance, infant and midwife status had a normal distribution, and other variables did not follow the normal distribution. The independent t-test, the Mann-Whitney U test, the chi-square test, and the Fisher test were used to compare the two groups based on normality, and repeated-measures analysis of variance was used to compare the fear of childbirth in the two groups. A p-value less than 0.05 was considered significant.

in the intervention and control groups. (Table 1).

Table 1: The comparison of demographic characteristics between the two groups

Quantitative Variable	Intervention Group		Control Group		P-Value
	Mean	Standard Deviation	Mean	Standard Deviation	
Age (year)*	25.53	5.63	25.51	4.71	0.98
Spouse age (year)**	30.87	4.68	31.12	3.60	0.76
Marriage age (year)*	21.44	5.75	21.09	5.39	0.68
Spouse income (million tomans)**	2.61	1.55	2.74	1.300	0.624
Qualitative Variable	Number	Percentage	Number	Percentage	P-Value
Occupation***	Housewife	50	92.59	49	96.08
	Employed	4	7.41	2	3.92
Spouse occupation****	Employed	48	88.89	46	90.20
	Unemployed	6	11.11	5	9.80
Education level****	Diploma and lower	29	53.70	21	41.17
	University education	25	46.30	30	58.83
Spouse education level****	Diploma and lower	29	53.70	24	47.06
	University education	25	46.30	27	52.94
Housing status****	Owner	17	31.48	13	25.49
	Leased	25	46.29	23	45.10
	Family leased	12	22.22	15	29.41

*T-test-

**Mann-Whitney U test-

***Fisher test-

****Chi-square test

There was no significant difference between the two groups in terms of midwifery characteristics

($P > 0.05$) (Table 2).

Table 2: The comparison of midwifery characteristics between the two groups

Variable		Intervention Group		Control Group		P-Value
		Number	Percentage	Number	Percentage	
Deciding to get pregnant*	Wanted	42	77.8	43	84.3	0.46
	Unwanted	12	22.2	8	15.7	
Type of preferred childbirth*	Vaginal	40	74.07	40	80.39	0.49
	Cesarean	14	25.93	10	19.61	
Participation in pregnancy classes*	Yes	48	88.89	44	86.27	0.772
	No	6	11.11	7	13.73	
Source of getting information*	Medico	21	38.91	23	45.11	0.738
	Midwife	17	25	16	31.39	
	Other	16	29.59	12	23.50	
Insurance*	Yes	46	85.19	46	90.2	0.557
	No	8	14.81	5	9.19	
Supplementary insurance*	Yes	19	35.18	10	19.61	0.085
	No	35	64.82	41	80.39	
Type of insurance**	No insurance	4	7.41	1	1.96	0.308
	Social security	40	74.07	43	84.31	
	Other	10	18.52	7	13.73	
Care receiving place*	Health center	24	44.44	21	41.17	0.276
	Hospital, Physician office, and health center	30	55.66	30	58.83	

*Chi-square test

**Fisher test

According to Table 3, there was no significant difference between the two groups before the intervention. After the intervention, 88.9% of mothers in the intervention group and 45.1% in the control group tended to have a vaginal birth

($p=0.001$). After childbirth, there was no significant difference between the two groups regarding the type of childbirth performed ($p=0.646$)

Table 3: The comparison of the type of preferred childbirth between the two groups before the intervention, after the intervention, and after the childbirth

Variable	Temporal Juncture		Intervention Group		Control Group		P-Value
			Number	Percentage	Number	Percentage	
Type of preferred childbirth	Before intervention*	Vaginal	40	74.1	41	80.4	0.441
		Cesarean	14	25.9	10	19.6	
	After intervention*	Vaginal	48	88.9	23	45.1	0.001
		Cesarean	6	11.1	28	54.9	
	Type of childbirth performed (follow-up)	Vaginal	31	57.4	27	52.9	0.646
		Cesarean	23	43.6	24	47.1	

*Chi-square test

No significant difference was observed between the control and intervention groups in terms of childbirth satisfaction, duration of childbirth's different stages, Apgar score in the first and fifth minutes, and infant weight. Also, there was no

significant difference in the variables of type of childbirth, delivery of the placenta, bleeding after birth, infants' hospitalization in the Neonatal Intensive Care Unit (NICU), and post-partum interventions between the two groups (Table 4).

Table 4: The comparison of childbirth consequences between the two groups

Variable	Intervention Group		Control Group		P-Value
	Mean	Standard Deviation	Mean	Standard Deviation	
Duration of the first stage	482.90	177.37	440.00	175.32	0.712
Duration of the second stage	38.23	7.80	31.78	11.09	0.037
Duration of the third stage	8.23	3.06	8.11	5.37	0.303
The first minute Apgar	8.94	0.23	8.80	0.57	0.146
The fifth minute Apgar	9.94	0.23	9.86	0.53	0.609
Infant weight	2845.00	963.82	3158.90	616.96	0.189
Overall satisfaction	101.200	20.28	108.69	18.07	**0.153
Satisfaction of mother's performance	31.47	7.81	34.33	5.53	**0.119
Satisfaction of infant's situation	13.10	3.03	13.41	2.00	0.947
Satisfaction of midwife's performance	27.87	6.89	31.42	7.24	**0.182
Type of childbirth*	Vaginal	31	57.40	27	52.94
	Emergency cesarean	3	5.56	9	17.64
	Cesarean	20	37.04	15	29.42
Delivery of the placenta*	spontaneous	31	57.4	24	47.1
	Manual Removal of the Placenta	23	42.6	27	52.9
Bleeding after birth*	Low	15	27.8	9	17.6
	Medium	38	70.4	40	78.4
	Intense	1	1.8	2	4
Infants' hospitalization in the Neonatal Intensive Care Unit*	Yes	6	11.1	9	17.65
	No	48	88.89	42	82.35
Post-partum interventions*	Yes	54	98.04	50	100
	No	0	1.96	1	0

*Number and percentage were reported for qualitative variables marked with.

**Independent t-test

The results of repeated measures test in the assessment of time-group interaction showed a significant difference between the periods of before the intervention, after the intervention, and 72 hours after childbirth in the rate of fear of childbirth ($P=0.001$). There was a statistically significant difference in terms of the group factor. Regarding the interaction of time and group, there

was no statistically significant difference in the trend of changes in the scores from before the intervention to after the intervention and 72 hours after childbirth ($P=0.152$), showing that the changes of variables within the intervention and control groups have not followed a different trend (Table 5).

Table 5: Mean and standard deviation of the scores of fear of childbirth between the two groups

Variable	Period	Intervention		Control		Time-Group Interaction P-Value*	(The groups' Effects During Time) P-Value*
		Mean	Standard Deviation	Mean	Standard Deviation		
Fear of childbirth	Before intervention	84.65	17.52	79.59	19.20	0.152	0.001
	After intervention	79.29	8.62	82.78	16.81		
	The first 72 hours after postpartum	64.81	26.35	55.52	22.47		

*Repeated-measures analysis of variance

Discussion

Based on the findings of this study, midwife-oriented counseling had a significant effect on choosing the type of childbirth to increase choosing vaginal birth, which is consistent with the results of Sharifzadeh et al. (1397) [10] and Larson et al.'s (2017) studies [28]. Although no decrease was observed in fear of childbirth in the intervention group in the present study, the tendency of members in this group to choose vaginal birth increased. Perhaps other parameters besides fear of childbirth, including the mother's awareness and knowledge of the vaginal birth process and its benefits versus cesarean section, play a role in choosing the type of childbirth. Given the unique psychological characteristics of each mother, increasing mothers' knowledge, and creating a correct understanding of their competencies and abilities, the present counseling method apparently can play a role in preferring the type of childbirth.

Midwife-oriented counseling in this study had no significant effect, at least statistically, on reducing fear of childbirth. This finding is inconsistent with several studies, including Firoozan et al. (2020) [29], Larson et al. (2018) [30], and Ghazayi et al. (2016) [11]. On the other hand, some reports have not confirmed the role of counseling in reducing anxiety and fear. Research has shown that childbirth preparation training reduces anxiety and fear during pregnancy, and by discontinuing this training, its effect gradually decreases, and anxiety and fear increase again [21]. Findings on the effect of childbirth preparation classes on reducing fear of childbirth and attitudes toward childbirth are also contradictory [13,14]. In Hapio

et al.'s (2017) study, there was no significant difference in fear of the members of the intervention group compared to that of the control group [15]. Coopers et al.'s (2014) meta-analysis showed the ineffectiveness of six types of educational interventions on mothers' anxiety and fear [17].

Limited clinical trials have been performed on Gamble's counseling approach, so comparing the results of the present study to other various interventions may not be helpful. However, it seems that several factors can play a role in not reducing the fear of childbirth of mothers in our intervention group. One of these issues can be the non-implementation of the continuous midwifery care model in our country, causing our pregnant mothers, despite receiving adequate training and support during pregnancy, not to be cared for during childbirth by midwives, which can affect mother's experience, fear, and anxiety. Another influential issue in the process of conducting this research was the occurrence of the coronavirus pandemic (COVID-19), during which pregnant mothers were considered high-risk groups, and the anxiety, stress, and fear caused by it could be an interfering factor in the present research because many training programs to the mothers of the intervention group could not be implemented in the hospital. For example, the presence of a companion during the pandemic in the maternity hospital was forbidden, or interventional measures to reduce mothers' length of hospitalization were increased, which could affect the results of this study. An increased prevalence of anxiety and depression in pregnant women during the COVID-19 pandemic has been reported in various

studies. Corbett et al.'s (2020) study showed that COVID-19 disease led to increased anxiety in pregnant women [31]. Also, Wu et al.'s study in China indicated that the prevalence of COVID-19 disease led to an increased rate of depression in pregnant women [32]. The social distancing plan, traffic restrictions, and quarantine have increased the rate of anxiety and worry in pregnant mothers during the outbreak of the disease [33]. Sa'adati et al. (2020) also estimated the anxiety of pregnant mothers in the third trimester at the time of the COVID-19 outbreak to be more than in the first trimester [34]. Therefore, considering this issue, it is recommended to repeat the present study after the end of the pandemic.

In the present study, the type of childbirth was not significantly different between the two groups, which was not consistent with the results of Jourabchi et al. (2018) [35] and Najafi et al.'s (2016) studies [13]. In Tofighi et al.'s (2010) study, 68.8% of mothers had chosen vaginal birth before training, which reached 80.6% after training, but only 57.6% succeeded in performing vaginal birth [36]. On the other hand, the demand for elective cesarean sections increased due to elevated anxiety during the COVID-19 outbreak [33]. In many of these interventional studies, the psychological factors influencing choosing the type of childbirth, such as fear of childbirth or mothers' self-confidence and self-efficacy, have changed, but ultimately, the type of childbirth has not changed. Although choosing the type of childbirth seems to be more than a personal decision, other factors such as the physician, the prevailing conditions in the community, the economic status, the type of insurance, the influential individuals, and the hospital of the childbirth are also influential. During the COVID-19 pandemic, pregnant women went to private hospitals due to hospitalization of COVID-19 patients in public hospitals and fear of being infected with coronavirus, while the process of vaginal and cesarean births in private and non-private hospitals is very different. In Ahmadnia et al.'s (2009) study, 63.6% of deliveries in private centers were by cesarean section; this rate was 32% in public hospitals. Of the total cases of vaginal births, only 11.8% were performed in private hospitals and the rest in public centers [37]. In the present study, only 5% of the mothers in the intervention group referring to private

hospitals performed a vaginal birth, while in one of the public hospitals, 71% of the mothers in the intervention group referring to that hospital performed a vaginal birth. It seems that although mothers' preference and ability are very effective in vaginal birth, they cannot determine the fate of childbirth alone, and factors related to the childbirth environment, policies of medical centers, and attitudes and motivations of human resources all also play a role in the childbirth outcome.

The childbirth satisfaction rate was not statistically significant between the two groups. Some factors affecting childbirth satisfaction include pain relief methods [38], hospital environment [39], respectful treatment and attention to emotional needs [40], the constant presence of a familiar person [41], number of vaginal examinations [42], and type of educational and non-educational hospitals [38]. One of the inevitable issues during this study was the occurrence of the COVID-19 pandemic when the presence of an accompanying midwife was prevented, which could affect mothers' satisfaction. Another critical issue is that the CSRS has been designed only for vaginal birth; therefore, we could not assess mothers' satisfaction independently of the childbirth method. It is recommended that future studies deal with designing questionnaires that measure childbirth satisfaction independently of the childbirth method.

There was no statistically significant difference between the two groups regarding comparing some childbirth and neonatal consequences. In this study, only the second stage of the childbirth variable was significant, which could be due to chance. In Tusi et al.'s (2013) study, training mothers during pregnancy and performing relaxation with the Benson method improved the Apgar coefficient in the first and fifth minutes after birth [43]. The reason may be due to differences in the type of interventions. In Jourabchi et al.'s (2018) study, group counseling could not improve pregnancy outcomes [35].

A serious and important issue in this study was that the WDEQ (after the childbirth) only includes vaginal births and does not include cesarean sections, creating limitations for the present study. Of course, following such a restriction, the designers of this questionnaire have designed

another questionnaire that can be evaluated during childbirth and independently of the type of childbirth, although this questionnaire was published after the completion of our research. Therefore, it is suggested that this questionnaire be also used in future research.

Another essential and influential issue that we seriously encountered while performing this study was the COVID-19 pandemic that coincided with our study. It may also affect the results of the present study because pregnant women were considered the most at-risk groups in this pandemic, leading to creating many problems, such as banned group sessions of childbirth preparation classes, special situations in hospitals due to the absence of companions, and increased childbirth interventions to reduce mothers' length of hospitalization, all of which can influence the results of the present study. In order to control this limitation, counseling sessions were held in a larger physical space with proper ventilation and observing health protocols, as well as a smaller number of groups (5 people in each group). Also, anxiety, stress, and fear due to COVID-19 could be disturbing factors in the present research.

Given the prevalence of coronavirus pandemic at the time of conducting this study and its effect on the results of the present study, researchers can use the results regarding the COVID-19 effect on stress, fear of childbirth, and the consequences of pregnancy and the childbirth of first-time pregnant mothers in their studies and re-study the subject of the present research after COVID-19 completion: Conducting a study in a three-group clinical trial that in one group, in addition to pregnancy counseling, constant care in childbirth is also performed. Designing questionnaires that are applicable for mothers with cesarean birth to examine childbirth satisfaction independently of the type of childbirth and designing questionnaires to assess fear of childbirth independently of the type of childbirth that can also be used for mothers with cesarean birth are also suggested.

Conclusion

Midwife-oriented counseling based on Gamble's approach led to increased women's preference for vaginal birth; however, no statistically significant results were observed in the frequency of vaginal birth, fear of childbirth, and maternal and neonatal

consequences. It is recommended that after completing the COVID-19 pandemic, this study be performed again with larger sample size.

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Conflict of interest

The authors of this article state that there is no conflict of interest in this study.

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