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Effect of Counseling with Skills Training Approach on Maternal Self-efficacy and Infant-care Behavior: A Randomized Controlled Trial

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ABSTRACT

Background: Self-efficacy and infant-care behavior are the most important indicators of the successful transition of a woman into the maternal role. This study aimed to determine the effect of counseling with the skills training approach on maternal self-efficacy and infant-care behavior.

Methods: The present randomized controlled trial was conducted on 68 women visiting health centers in 2019 in Tabriz, Iran. Participants were divided into intervention and control groups through block randomization based on the number of parities (one or two parities) and type of delivery (Cesarean section or normal vaginal delivery). The intervention group received 4 counseling sessions. The maternal self-efficacy and infant-care behavior questionnaires were completed before and two weeks after the intervention.

Results: There was no significant difference between the groups in terms of socio-demographic characteristics (P>0.05). After the intervention, the mean±SD values of total maternal self-efficacy score were 35.6±5.7 and 30.9±1.9 in the intervention and control groups, respectively. Based on the ANCOVA test with baseline control, the mean was significantly higher in the intervention group than the control group (mean difference (MD): 2.9; 95% Confidence Interval (CI): 0.8-5.1; P=0.08). After the intervention, the mean±SD scores of infant-care behavior in the intervention and control groups were 78.9±3.8 and 76.2±3.6, respectively. Moreover, based on the ANCOVA test with baseline control, the mean value was significantly higher in the intervention group than the control group (MD: 2.8; 95% CI: 1.6-4.1; P<0.001).

Conclusion: Counseling was effective in maternal self-efficacy and postpartum infant-care behavior. Therefore, it is recommended to use this method for the promotion of the health of mothers and their neonates.

Keywords: Counseling, Infant-care behavior, Mothers, Postpartum period, Self-efficacy

Introduction

Postpartum is a period of transition that marks a turning point by introducing a new member to the family. During this period, mothers adapt themselves to the postpartum changes and a new family structure (1), experience a change in their physiological and psychological functions, and get accustomed to their maternal role (2).

Self-efficacy is one of the important indicators in the successful transition of a woman to the maternal role and the predictors of a mother's behavior (3). This refers to the individual's belief in their abilities to achieve certain levels of success regarding particular functions (4). In addition, maternal self-efficacy refers to one's belief in her own ability to be an effective and efficient mother, which is heavily influenced by motherly love, self-esteem, and the mother's perception of her merits (5). Self-efficacy directly affects the quality of the care given to the infants (6). In this regard, a study performed by Teti *et al.* indicated that mothers with high self-efficacy were successful in caring for their newborn despite suffering from postpartum depression (5). Mothers with high self-efficacy are more

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stable when encountering problems and challenges in the care of their infants. A high level of maternal self-efficacy is associated with maternal role satisfaction and low rates of postpartum depression. In addition, maternal role dissatisfaction leads to a decrease in women's self-efficacy and the adoption of a negative attitude toward infants (7). In two studies conducted in Iran, the score of maternal self-efficacy was higher than moderate (the mean scores were 33.8 and 32.1 from the achievable score range of 10-40 in studies conducted by Mirghafourvand et al. (8) (2018) and Fathi et al. (2018) (9), respectively.

Fathi et al. in their study showed that maternal self-efficacy is one of the variables affecting maternal functional status (9). The results of another study showed that self-efficacy affects the quality of infant care (8). Therefore, increased maternal self-efficacy may improve maternal functional status and maternal adaptability during the postpartum period.

Infant care is one of the areas of maternal performance that includes meeting all physical needs of infants, such as feeding, clothing, and bathing as well as making decisions for the future health of the infants. The neonatal medical measures and provision of a safe home are examples of prospective decisions regarding neonates (10). In addition to promoting the infant's physical and mental health, mothers should consider newborn care as one of their routine responsibilities. Although maternal role could be profoundly satisfactory, it is associated with many challenges. Accordingly, postpartum dysfunction might impede the optimal infant growth, so an adequate assessment of postpartum function is required to provide valuable information on mothers' ability to meet their maternal role (11).

Counseling is an important intervention for raising awareness and improving the behavioral habits in people (12). In fact, during counseling sessions, the principles and practices of choosing, planning, and leading a reasonable and successful life are taught to the clients (13). It can be said that counseling is defined as a professional relationship between a counselor and one or more clients, the aim of which is to help them better understand and adapt to their environment, and solve emotional and interpersonal problems (14). Since acquiring new knowledge and skills is necessary to deal with physical changes and changing social expectations, using appropriate counseling approaches for teaching different skills, including a skills training approach, seems to be beneficial. This is an educational and cost-effective approach that could be applied in places, such as public schools, family centers, outpatient clinics, public health centers, and family planning centers (15). Skill-based education indirectly leads to profound ideological changes in the attitudes of clients towards themselves and results in the development and use of higher education methods, including the use of audio and video tools, reading materials and other educational techniques and makes the person aware of their lack of skill in doing some work (16). This method is used to enhance extensive interpersonal communication skills, solve various problems, (17) such as smoking (18), and improve the psychiatric rehabilitation efficiency (19).

To obtain optimal infant care, mothers need to have higher self-efficacy (5). Promoting the mothers' knowledge and abilities regarding infant care will improve the care of infants and children and reduce the number of children who are exposed to damages caused by inadequate parental roles (20). According to Bandura's theory, the adoption of appropriate strategies and the provision of educational interventions or counseling can improve the mothers' self-efficacy and capability to acquire the necessary knowledge and skills. Training and counseling help women learn about parenting experiences that ultimately lead to an increase in the quality of their family life (5).

Given that several information sources are recommended to promote self-efficacy (21), and by establishing counseling based on these sources, many maternal and children outcomes could be improved by promoting self-efficacy and infant care. Moreover, the client education and counseling program in Iran is not in a favorable status and patient education is either not implemented or is implemented in an irregular manner (22). Therefore, it was sought to determine the effect of skill-based counseling (that has not been studied previously using this approach) on infant-care behavior and maternal self-efficacy, to take steps towards the improvement of maternal self-efficacy and infant-care behavior and promote the health of mothers and their children.

Methods
Study Design and Participants
This was a randomized controlled trial with two parallel groups conducted on 68 women visiting Tabriz health centers from February to

May 2019.

Inclusion criteria consisted of 1) female gender, 2) first or second delivery, 3) >80 maternal function score, 4) mother's ability to care for her infant, 5) health of the infant, 6) willingness to attend counseling sessions, 7) lack of neonatal anomalies (including diagnosed physical and mental anomalies), 8) at least secondary school educational, and 9) natural postpartum period until entering the study. On the other hand, exclusion criteria consisted of 1) uncertainty of the ability to attend all counseling sessions, 2) change of residence to another city, 3) infliction with a cardiovascular disease, 4) hypertension, 5) infliction with liver disease and other chronic conditions according to the participants, 6) hospitalization of the infants, 7) unresolvable breastfeeding problem, 8) <12 postpartum depression score, 8) neuropsychiatric disorders, and 9) recent calamities, according to the mother.

This research was part of a more comprehensive study in which maternal self-efficacy and infant-care behavior were examined as secondary outcomes, and the sample size was determined based on the initial outcome. According to Barkin et al. (23), using G*power software, given m_1=80 (maternal functioning mean score), and a 20% increase in the mean intervention-induced maternal functioning score (m_2=96), sd_1=sd_2=17, α=0.05, power=95%, the sample size was 31, and by considering a 10% attrition rate, the final sample size was 34 participants in each group. In total, 68 participants were selected for two groups (intervention and control groups).

Sampling

After receiving permission from the Ethics Committee of Tabriz University of Medical Sciences (code of ethics: IR.TBZMED.REC. 1397.789) and registering the study at the Iranian Registry for Clinical Trials (IRCT201207180 10324N49), sampling was conducted by the first author. There are 85 governmental health centers in Tabriz that all the women who have delivered a baby in this city have health records in them. Sampling was conducted in 13 health centers with different socio-economic status. The authors selected women who experienced their first or second delivery by using medical records and visiting health centers three weeks postpartum. Subsequently, they invited these women via a phone call to visit health centers at the specified time and provided them with a brief explanation

of the research and its importance. After visiting the health centers, the author began to register those who were interested in participating in the study. Then, more detailed information was provided on the objectives, importance, and benefits of participating in the study as well as the stages of research implementation. If they were interested and prepared for regular and continuous participation and met the inclusion criteria, they could sign the informed consent. They were asked to complete the Edinburgh Postnatal Depression Scale (EPDS), and if they scored less than 12 in this questionnaire, they were required to complete other questionnaires, including socio-demographic, midwifery, infant-care behavior, and maternal self-efficacy questionnaire (MSQ). The women who scored more than 12 on EPDS were referred to a psychiatrist for further evaluation. Two weeks after the last counseling session, the post-test infant care and maternal self-efficacy questionnaires were completed by the participants in both the counseling and control groups.

Randomization and Intervention

Participants were assigned to the intervention and control groups through block randomization based on the number of parity (one or two) and type of delivery (cesarean section or normal vaginal delivery) with a block size of 4, 6, and a 1:1 assignment ratio. To hide the allocation sequence, the researchers made use of the allocation concealment method. Therefore, the type of intervention was written on a piece of paper and placed in a series of consecutively numbered, sealed, and opaque envelopes which were used to assign sequentially enrolled participants to intervention groups.

The intervention group was provided with counseling using the skills training approach. Accordingly, four weekly counseling sessions were held for four consecutive weeks from the fourth week of the postpartum for groups of 4 to 6 in selected health centers. Each session lasted 60-90 min on average. In all the counseling sessions, it was sought to take advantage of the counseling principles and techniques for effective communication, and the counseling sessions atmosphere was full of respect and intimacy to strengthen the self-esteem of the participants and provide a platform for participation of individuals in group discussions. The main topics of the counseling sessions include:

Session 1: Introduction; expression of the objectives of the plan; consideration of the point

of view of the clients; attention to the main problems and mental conflicts; listening to their views; talking about postpartum maternal functioning, including self-care and mother's mental health

Session 2: Infant care

Session 3: Mother-child interaction

Session 4: Social support, management of physical, psychological, and care needs, compliance with responsibilities

Before each session, a survey was conducted to see how much the participants have learned and the teachings of the previous session were practiced. The intervention was completely performed as it was planned. The compliance of participants with the intervention was assessed on the basis of the assignment table of mothers. The participants practiced the weekly topics of counseling during the week and completed the assignment table. At the beginning of each session, the previous session's assignments were collected by the researcher and the issues were discussed according to the group discussion method. The control group received routine postpartum care.

The Data Collection Tools

In this study, socio-demographic and obstetrics questionnaires, maternal self-efficacy scale, Edinburgh postnatal depression scale, and infant-care behavior questionnaire were used to collect data.

Socio-demographic and Obstetrics Characteristics Questionnaire

This questionnaire includes items on the age of women and their husbands, number of their children, the child's gender, education level of the women and their husbands, employment status of women and their husbands, adequacy of income, type of delivery, amount of support of the spouse and family, and intended or unintended status of the pregnancy. The validity of this questionnaire was determined through content and face validity.

The maternal self-efficacy questionnaire focuses on maternal practices in infant care, which has 10 items, including 9 maternal-function-related and one general item. Based on the Likert scale, each item has 4 options: 1) worse than the others, 2) almost worse than the others, 3) as well as the others, and 4) better than the others. The higher scores indicate higher self-efficacy. Based on the studies conducted by Teti, the validity of this questionnaire was $\alpha=0.79$ in a pilot study with $\alpha=0.86$ in the original study (5). Psychometrics evaluation of the self-efficacy

questionnaire was performed by Mirghafourvand et al. (2016) in Iran (24). In the study by Jamalivand et al. (25), Cronbach's alpha coefficient and intraclass correlation coefficient (ICC) were equal to 0.82 and 0.89, respectively.

Edinburgh Postnatal Depression Scale: It is one of the most widely used tools for measuring postpartum depression. The questionnaire includes 10 four-option items that are scored on a scale from 0 to 3; therefore, a total score of 0-30 is obtained. Accordingly, a score of 13 or more is diagnosed as postpartum depression (26, 27). The Farsi version of this questionnaire is acceptable and is a reliable instrument for measuring postpartum depression. In a study conducted by Montazeri et al., using a re-test method, the questionnaire reliability and the Cronbach's alpha coefficient were obtained at 0.77 and 0.8, respectively. A score of 12 or more was considered as the indicator of maternal depression (26).

The Infant-care behavior questionnaire, developed by Jamalivand et al. (25), consists of 22 items that are scored based on the Likert scale ranging from 4 (always) to 1 (never). The acceptable range of scores was 8-22 and the validity of the questionnaire was measured by Jamalivand et al. through the content validity index and content validity ratio, which were obtained at 0.95 and 0.99, respectively. Moreover, the Cronbach's alpha coefficient and ICC were estimated at 0.76 and 0.85, respectively.

Analysis of the Data

After collecting data from all participants, the data were analyzed using SPSS software (version 24). The normality of quantitative variables was evaluated through Kolmogorov–Smirnov test which showed that all of them were normal. Chi-square, chi-square for trend, independent t-test, and Fisher's exact test were used to assess the consistency of the two groups in terms of socio-demographic features. The two groups were compared in terms of maternal self-efficacy and infant-care behavior scores before the intervention using the independent t-test. Furthermore, ANCOVA with baseline control was used after the intervention. A paired t-test was used to compare intra-group score change of maternal self-efficacy and infant-care behavior. A p-value of less than 0.05 was considered statistically significant.

Results

A total of 100 women were evaluated based on qualitative criteria, 68 of whom were eligible to

participate in the study, who were divided into intervention and control groups. All the participants in the intervention and control groups were followed up to the end of the study (2 weeks after the end of the intervention) and there was no attrition in the study (Figure 1).

There was no significant difference between intervention and control groups in terms of socio-demographic and obstetrics data. The mean±SD values regarding the age of the participants in the intervention and control groups were 29.8±5.4 and 29.1±4.7, respectively. Moreover, the mean±SD values regarding the age of the spouses in the intervention and control groups were 33.6±5.3 and 33.4±3.5, respectively. More than half of the participants in both groups had two children and in half of the cases, the children were female (47.1% and 52.9% in the intervention and
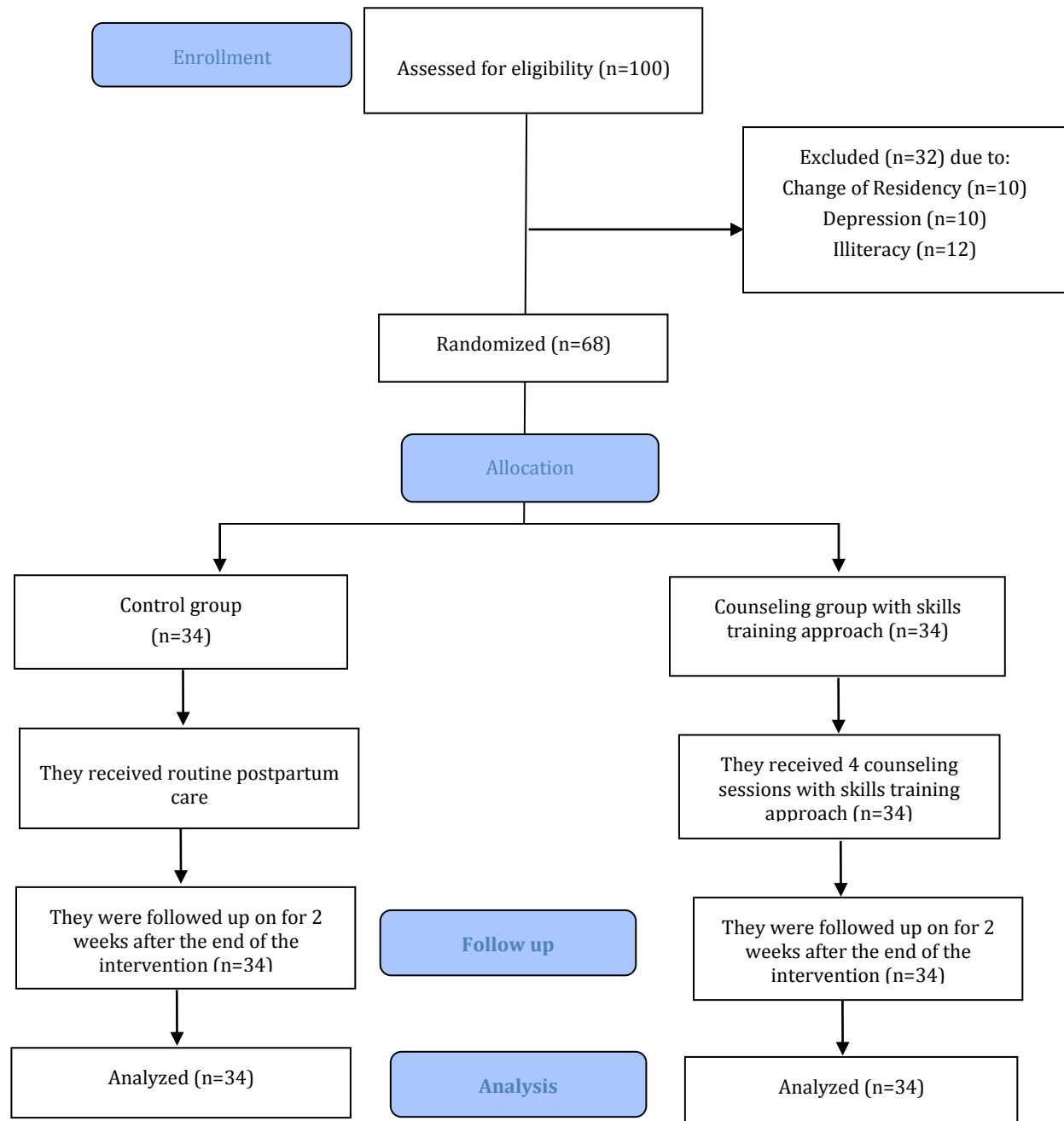
Figure 1. Flowchart of the study

Table1. Socio-demographic and obstetrics characteristics of the study groups

Variable	Intervention (34=n) Number (percent)	Control (34=n) Number (percent)	p-value
Age#	29.8 (5.4)	29.1 (4.7)	0.601*
Age of the Husband#	33.6 (5.3)	33.4 (33.6)	0.830*
Parity			0.808†
One	15 (44.1)	16 (47.1)	
Two	19 (55.9)	18 (52.9)	
Child Gender			0.628†
Girl	16 (47.1)	18 (52.9)	
Boy	18 (52.9)	16 (47.1)	
Occupation			0.356‡
Housewife	33 (97.1)	30(82.2)	
Employed	1 (2.9)	4 (11.8)	
Occupation of the Husband			0.063†
Worker	9 (26.5)	4 (11.8)	
Employee	6 (17.6)	13 (38.2)	
Shopkeeper	5 (17.4)	9 (26.5)	
Others	14 (41.2)	8 (23.5)	
Education			0.171§
Secondary school	4 (11.8)	2 (5.9)	
High school	2 (5.9)	2 (5.9)	
Diploma	18 (52.9)	14 (41.2)	
Academic	10 (29.8)	16 (47.1)	
Education of the Husband			0.259§
Elementary	2 (5.9)	0	
Secondary school	4 (11.8)	1 (2.9)	
High school	3 (8.8)	2 (5.9)	
Diploma	14 (41.2)	14 (41.2)	
Academic	11 (32.4)	17 (50.0)	
Income			0.149§
Completely enough	3 (8.8)	8 (23.5)	
Somewhat enough	30 (88.2)	25 (73.5)	
Not enough	1 (2.9)	1 (2.9)	
Support of the Husband			0.190†
Too much	11 (32.4)	6 (17.6)	
Much	12 (35.3)	10 (29.4)	
Medium	7 (20.6)	8 (23.5)	
Low	4 (11.8)	6 (17.6)	
Very little	0	4 (11.8)	
Support of the Family			0.064‡
Too much	12 (35.3)	9 (26.5)	
Much	15 (44.1)	8 (23.5)	
Medium	4 (11.8)	7 (20.6)	
Low	3 (8.8)	5 (14.7)	
Very little	0	5 (14.7)	
Unwanted pregnancy			0.604†
Yes	12 (35.3)	10 (29.4)	
No	22 (64.7)	24 (70.6)	

\# Mean (Standard deviation)

§Chi square for trend   * Independent t-test   ‡ Fisher's exact test   † Chi-square test

control groups, respectively). Furthermore, most of the participants were housewives (97.1% and 82.2% in the intervention and control groups, respectively). Regarding their spouses, about one-third of them were self-employed (41.2% and 23.5% in the intervention and control groups), and about 32.4% and 50% of them had academic education in the intervention and control groups, respectively. The majority of women in both groups had moderate economic status (88.2% and 73.5% in intervention and control groups, respectively). About one-third of the participants in both groups enjoyed a great amount of spousal support (35.3% and 29.4% in the intervention and control groups, respectively). Moreover, about one-third of women in both groups experienced unintended pregnancy (35.3% and 29.4% in the intervention and control groups, respectively) (Table 1).

The mean±SD values of total maternal self-efficacy score before intervention were 33.6±3.2 and 30.9±1.9 in the intervention and control groups, respectively, and based on the independent t-test, there was a significant difference between the two groups (P<0.001). After the intervention, the mean±SD values of

Table 2. Comparison of maternal self-efficacy in the intervention and control groups before and after the counseling

Variable	Intervention (34=n) Mean (SD‡)	Control (34=n) Mean (SD‡)	Inter-group comparison Mean difference (95% Confidence Interval)	p-value
Maternal self-efficacy (Score range: 10-40)				
Before the intervention	33.6 (3.2)	30.9 (1.9)	2.7 (1.5 to 4.0)	<0.001*
Two weeks after the end of the intervention	35.6 (5.7)	30.9 (1.9)	2.9 (0.8to5.1)	0.008†
Intra-group comparison Mean difference (95% Confidence Interval); P□	1.9 (0.06to3.8); 0.043	-0.02 (-0.7 to 0.6); 0.925		

* Independent test   †ANCOVA test   ‡ Standard Deviation   □Paired sample t-test

Table 3. Comparison of Infant-care behaviors in the intervention and control groups before and after the consultation

Variable	Intervention (34=n) Mean (SD‡)	Control (34=n) Mean (SD‡)	Inter-group Mean difference (95% Confidence Interval)	p-value
Infant-care behaviors (Score range: 22-88)				
Before intervention	77.1 (4.5)	77.3 (4.1)	-0.2 (-2.3 to 1.9)	0.843*
Two weeks after the end of the intervention	78.9 (3.8)	76.2 (3.6)	2.8 (4.1 to 1.6)	<0.001†
Intra-group comparison Mean difference (95% Confidence Interval); P□	1.85 (0.6 to 3.1); 0.006	-1.05 (-1.9 to -0.2); 0.012		

* Independent test   †ANCOVA test   ‡ Standard Deviation   □Paired sample t-test

total maternal self-efficacy score were 35.6±5.7 and 30.9±1.9 in the intervention and control groups, respectively, and based on the ANCOVA test with baseline control, it was significantly higher in the intervention group than the control group (mean difference (MD): 2.9; 95% Confidence Interval (CI): 0.8-5.1; P=0.08). According to the paired t-test, no significant change was observed in the control group in terms of maternal self-efficacy mean score, however, a statistically significant change was observed in the intervention group from pre- to post-intervention (Table 2).

The mean±SD scores of total newborn care behavior before the intervention were 77.1±4.5 and 77.3±4.1 in the intervention and control groups, respectively. Moreover, based on the independent t-test, there was no significant difference between the two groups (P=0.843). After the intervention, the mean±SD scores of newborn care behavior were 78.9±3.8 and 76.2±3.6 in the intervention and control groups, respectively. Based on the ANCOVA test with baseline control, this value was significantly higher in the intervention group than the control group (MD: 2.8; 95% CI: 1.6-4.1; P<0.001). According to the paired t-test, a statistically significant change was observed in terms of infant-care behavior mean score from pre- to post-intervention stages in the two studied groups (Table 3).

Discussion

The results of this study showed that counseling with skills training approach led to improvements in maternal self-efficacy, infant-

care behaviors, and the health of mothers and their children.

The results of this study showed the positive effect of counseling with skills training approach in promoting maternal self-efficacy. Given the lack of a study regarding the effect of this counseling approach in this area, the results of other studies that investigated the effects of other educational methods, such as educational software and training booklets (25), simulation and video-based education (28), telephone education interventions (29), educational videos (30), and psychoeducation program (31) were reported to confirm the findings of this study. In a study by Jamalivand et al. (2016), on 126 pregnant women (two intervention groups including educational software and training booklet and a control group), the results indicated the effectiveness of both the software and booklet in enhancing maternal self-efficacy (25). In addition, a study conducted by Asadollahi et al. (2016) which investigated the effect of simulation-based and video-based education on the self-efficacy of mothers regarding bathing preterm infants indicated that both simulation- and video-based education helped the mothers in this regard (28). Moreover, according to a randomized controlled trial by Chaves et al. (2015), telephone education intervention was effective in enhancing maternal self-efficacy (29). Similarly, the results of a clinical trial conducted by Joventino et al. (2016) in Brazil showed that educational videos had a significant effect on maternal self-efficacy (30). Furthermore, the results of a study conducted by Shorey et al. (2012) showed that the implementation of a postnatal psychoeducation program improved

maternal self-efficacy significantly compared to the control group (31). Different education or counseling approaches were used in the above-mentioned studies; however, their results are consistent with the findings of the present study, which indicate the positive impact of educational programs in enhancing maternal self-efficacy. One study found that increasing maternal self-efficacy also had a positive effect on the language skills of children, regardless of the educational content. These findings support the importance of maternal self-efficacy and show an appropriate way to increase maternal self-efficacy and improve the health of children and developmental outcomes (32).

The results of this study showed the effect of counseling with skills training approach in promoting infant-care behaviors. Similarly, the results of a randomized controlled trial by Kuo et al. (2004) indicated the positive effect of online educational program on infant care awareness compared to the routine training (33). Furthermore, the findings of a study conducted by Bagherinia et al. (2014) indicated the effect of an educational package in the improvement of infant care (one of the functional status subdomains) and maternal self-confidence of primiparous women (34). However, according to the study performed by Jamalivand et al. (2016), no difference was observed regarding the mean score of infant-care behavior between the intervention (educational software and booklet) and control groups (25). Since there is a direct relationship between self-efficacy and infant care (9) and mothers are responsible for the health of their infants and themselves in the postpartum period (25), counseling can help mothers to change their attitudes and improve their abilities to care for their children by increasing self-efficacy and interpersonal communication skills (16).

In this study, the self-efficacy score in the control group did not change before and after the reception of the routine care. In a longitudinal study in Australia, the changes in maternal self-efficacy had been assessed in first-time mothers from late pregnancy to 24 weeks postpartum. There was a significant difference in terms of maternal self-efficacy between 24 weeks with 3 and 6 weeks postpartum but there was no significant difference between maternal self-efficacy at week 24 with weeks 9, 12, 15, 18 and 21 (35). Bandura stated that adverse emotional states of mothers might compromise their self-efficacy judgments (36). Since in the present study we did not assess the emotional status of mothers

after the intervention, the lack of change in maternal self-efficacy in the control group may be attributed to common emotional status during the postpartum period. We suggest that the longitudinal studies be conducted to assess the changes in maternal self-efficacy during the postpartum period while controlling the effect of the emotional status of mothers.

The self-efficacy of mothers and the infant-care behavior are important indicators of the successful transition of a woman to the maternal role and important predictor of the behavior of mothers. Therefore, by promoting maternal self-efficacy and infant-care behavior through counseling with skills training approach, it is possible to improve many of the maternal-child outcomes.

The strengths of this study include observing all the principles of a clinical trial, including random allocation and hidden allocation, which were conducted to prevent bias. Moreover, given that the type and number of deliveries are stratified in this study, it can be generalized to women who experience their first and second delivery, either natural delivery or a cesarean section. Another strength of this study was that samples were chosen from different health centers with different socioeconomic status and lack of sample loss.

Given that this study was conducted on non-depressed women with secondary school and upper education, the results of this project could not be generalized to depressed and illiterate women or t with elementary education. Furthermore, due to the nature of the intervention, the participants and researchers were not blinded which may be a possible cause of performance bias. However, the researcher observed all ethical considerations in the conduction of the present study.

Conclusion

The results of this study indicated that counseling with skills training approach for women during the postpartum period leads to improved maternal self-efficacy and infant-care behavior. Given that women play a significant role as mothers and wives, and postpartum period is one of the most important periods in their lives, and since self-efficacy directly affects the quality of care given to the baby, there should be a way to minimize postpartum physical and emotional problems to increase maternal awareness of self-efficacy and infant-care behaviors. Therefore, health centers can use specialized counselors

to provide counseling services for postpartum mothers.

Conflicts of interest

The authors declare no conflict of interest.

Ethical approval

The study was approved (IR.TBZMED.REC. 1397.789) in the ethics committee of Tabriz University of Medical Sciences.

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