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The Effect of Problem-Solving Skills Training on the Frequency of Selective Episiotomy among Midwives

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ABSTRACT

Background & aim: The decision on whether or not to do episiotomy is ultimately made by midwives. Problem-solving is an essential skill in the workplace situations, which help overcoming unpredictable circumstances without relying on the others. The aim of this study was to investigate the effect of problem-solving skills training on the frequency of selective episiotomy among midwives.

Methods: This randomized clinical trial was conducted on 60 midwives with a minimum of 6 months work experience at selected maternity hospitals in Mashhad, Iran in 2012. The participants were assigned into two intervention (N=30) and control (N=30) groups. The intervention included two 4-hour problem-solving skills training sessions. The midwives in the intervention group conducted two primiparous births before and two after the intervention. The control group just conducted four births. Both groups were asked to complete demographic, occupational as well as Baron problem-solving questionnaire before and after the study and their practice was assessed as selective or non-selective episiotomy based on a checklists.Data were analyzed in SPSS software (version 16) using the Chi-square, Wilcoxon and Mann-Whitney U tests.

Results: There was no significant difference between mean scores of the problem-solving skills among midwives in intervention group before and after the intervention (23.2±2.2 vs 23.1±2, P=0.320). It was the same for control group (P=0.537). Also, no significant difference was observed between the two groups regarding selective episiotomy before (P=0.847) and after the intervention (P = 0.582); although, the rate of selective episiotomy in the intervention group was higher before than after intervention (33.3% vs 41.7%).

Conclusion: Problem-solving skills training had no effects on the increased number of selective episiotomies. More research studies with larger sample size are recommend.

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Introduction

Midwife skills and experiences play an important role in the maintenance of maternal health during childbirth (1). During labor, the soft tissues of the birth canal and adjacent organs are injured. These injuries are more common among primiparous women due to the relatively thick tissues and more resistance to the baby's exit during birth (2). Episiotomy means the cut of the perineal area which is regarded as the most common surgery among the female population after cutting the umbilical cord (3-5).

Yee et al. (2014) reported the rate of episiotomy in 2500 cases as 7.5% in Chicago (7). However, over 90% of primiparous women underwent episiotomy in developing countries (8).

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The prevalence rates of episiotomy were 97.3% and 88.3% in Tehran (2009) and Mashhad (2005) at Umm al-Banin Hospital, respectively (10-12).
According to a study conducted by Golmakani (2003), only 50% of all 50 patients in the selective episiotomy group and 100% of the cases in the common episiotomy group underwent episiotomy (2). One of the reasons for the acceptance of episiotomy was the replacement of a direct surgical incision with easier repair rather than rippling tears caused by episiotomy (13).
However, the World Health Organization and the American College of Obstetricians and Gynecologists do not recommend the routine utilization of episiotomy (14,15). The midwife will only have to perform episiotomy if mothers or infants are indicative of performing an episiotomy. This is called selective episiotomy. The midwives can properly manage these situations if they have the appropriate manual and psychological skills (5.7). The influential factors affecting the routine use of episiotomy include five general concepts, such as labor factors (including personal experience, skill level, the ability to communicate with mothers and the role of labor), maternal factors (including anatomical differences and lack of co-operation), fetal factors, legal problems, fear of being reproached, as well as labor management (including lack of implementation of new methods of delivery and lack of maternal preparation) (5).
The decision on whether or not to perform episiotomy is ultimately made by those who are responsible for conducting the birth. Stress, time constraints, worries about undesirable performance, lack of experience, and adherence to interventional patterns as well as conventions are among the factors that put the labor process under pressure and avoid the midwives to perform based on her observation (5, 15).
The factors hindering midwives to perform episiotomy include the occurrence of unexpected events, acceptance of responsibility in case of failure, high workload, fear of being reproached by the authorities and decisions which are non-adaptive to work environment. These factors lead to decreased levels of midwife's self-confidence and passive behaviors instead of initiative ones. Midwives perform episiotomy due to higher levels of calmness, fewer levels of stress, and familiarity with episiotomy conditions (15). In addition, they need individual skills, human relationships, and the development of coping strategies with stressful situations in order to meet the needs of the clients (17). Occupational stress and job burnout among midwives result from the traumas that occur during delivery to the clients. The midwives who are stressed lose face lower levels of job quality and cannot say "No" (17).
An individual who uses a collaborative approach to solving interpersonal conflicts also has problem-solving skills (18). Several studies have identified problem-solving skill training as a suitable way to cope with interpersonal problems. This skill is useful in improving interpersonal relationships and preventing as well as reducing physical and psychological damage in stressful situations (19).
Solving conflicts using problem-solving skills make the two sides of the conflict feel as winners. This skill is a systematic process which analyzes stressful situations leading to proper decision making. Problem-solving skills can be very helpful in difficult situations which require critical thinking (20). Problem-solving skill is a part of decision-making skill. This skill solves the problems while taking into account the position of the person involved in stressful situations (20). Problem-solving skill is a cognitive process by which an individual tries to find the right solution for a problem.
In solving the problem, it is not necessary to find a particular solution for a particular problem. However, it is essential to find an abstract principle or law applicable to other situations using problem-solving skill (20). The founders of this approach emphasized the need for problem-solving skills training in social skills training. People who use problem-solving skills have the ability to overcome unpredictable situations and do not need to rely on others. This skill increases the use of effective coping strategies, increased collaboration, and self-control.
According to the literature, individuals use this skill in an interpersonal situation after training (19). Yee et al. (2014) reported that coping strategies and being more tolerant of physicians' ambiguity are associated with a decreased rate of episiotomy. They also suggested that more research is required on the effect of cognitive skills training on the decision of those who are responsible for conducting childbirth to perform episiotomy (7).
According to a study conducted by Abdullah Hossein et al. (2012) in Jordan, there were many barriers to perform selective episiotomy by midwives including obedience to the physician

orders, fear of being reproached by the authorities, and care center policies (21).

According to the results of several studies, this skill is learnable and can affect performance as well as cognitive skills (22, 23). Shiroudi et al. (2011) stated that problem-solving skill training increased the level of adaptation of high school female students and reduced their aggressiveness (22). Ghalyli et al. (2007) concluded that problem-solving skill training improved marital conflicts and also increased the cooperative approach in couples (23). Furthermore, problem solving skill is an issue that is involved in the decision-making process and the correct decision on the selective episiotomy will eventually lead to the enhancement of safe delivery.

Given the high prevalence of episiotomy, the fewer number of selective episiotomy, and the effect of midwife decisions on this technique, this study aimed to determine the effect of problem-solving skill training on the number of selective episiotomy in primiparous women.

Materials and Methods

This randomized clinical trial with two groups was conducted on 60 midwives working at Imam Hadi, 17 Shahrivar, and Shahid Hasheminejad hospitals in Mashhad during 2015. The study protocol was approved by the Ethics Committee of Mashhad University of Medical Sciences, Mashhad, Iran. Subsequently, the researcher referred to the abovementioned hospitals and explained the research objectives to the authorities to take the required permission for sampling. In the next step, the researcher referred to the maternity wards to identify the midwives who met the inclusion criteria for participation in the study. Written informed consents were obtained from participants and they were all informed of the research objectives and procedure as well as the confidentiality of their information.

The inclusion criteria were: 1) BSc in midwifery, 2) lack of experience of being in stressful situations, 3) lack of being under psychotherapy in the last six months, 4) lack of use of psychotropic medication at the onset of the intervention, 5) minimum of 6-month work experience in the maternity ward, 6) no systematic education regarding problem solving, 7) lack of completion of years of service during the study, and 8) no conflict with colleagues or supervisor in the past six months.

On the other hand, the participants who had experiences of being in stressful situations and those who did not participate in the pre- or post-test, and did not attend the training workshop for more than two hours were excluded from the study.

The data were collected using a demographic form asked for midwives' personal and occupational information and Baron's problem-solving questionnaire. The personal characteristics of mothers were also collected through forms (including information about pregnancy, delivery stages, neonate, as well as episiotomy), a checklist for indications for episiotomy measurements, and a scale to measure pelvic floor muscle strength. This scale is utilized to determine the muscle strength of the pelvic floor. The scores within the range of 3-12 indicate degrees of muscle strength in the pelvic floor. Baron's problem-solving questionnaire consists of five questions that are measured based on a five-point Likert scale (from fully agree, agree, to some extent agree, disagree to completely disagree). Some questions are scored in reverse order. The minimum and maximum scores on this scale are 6 and 30, respectively. A score of 6 is the minimum score indicating the lowest level of skill in problem-solving and a score of 30 is the maximum score indicating the highest level of ability in this skill. The score of 18 is also defined as the median and mean level of problem-solving skills.

This questionnaire has been standardized in Iran by Samui et al. Moreover, its validity and reliability have been confirmed in numerous studies (24). The reliability of this questionnaire was estimated at 0.987 using Cronbach's alpha coefficient. Moreover, the content validity of the interview forms, observation checklists, and the scale for pelvic floor muscle strength measurements was confirmed in this study. The inter-rater reliability of the pelvic floor muscle strength measurements was determined at 0.1. The samples included four postpartum mothers before (n=2) and after the intervention (n=2).

In total, four postpartum mothers were under control by each midwife. The sampling was performed according to convenient accessibility and inclusion and exclusion criteria. The participants were then asked to pick one envelop out of 60 closed envelopes which were either intervention (n=30) or control (n=30). Subsequently, the midwives were randomly assigned into two groups of intervention or control groups. The midwives were initially asked to complete the demographic forms and Baron's problem-solving questionnaire. Subsequently,

each midwife conducted two primiparous births (singleton, cephalic, term, and without anomaly) under the supervision of the researcher.

The deliveries after posttest were checked in the control group to avoid the interference of data obtained from the intervention group. The midwives in the control group conducted four births (i.e. two births were conducted on pretest and the two others were performed on posttest). Afterwards, the training session were held and two births were evaluated in the intervention group. Subsequently, all participants were asked to complete the questionnaire. The researcher determined perineum length and pelvic floor muscle strength using the scale for pelvic floor muscle strength measurement

Fetal heart rate, volume as well as the dose of oxytocin, and uterine contractions were controlled and determined in terms of distance, duration and severity during the first and second stages of labor. During delivery, the researcher checked the checklist for episiotomy indications and decided whether the postpartum mothers required episiotomy or not. The researcher then waited for the midwife decision. If the midwife decided to perform an episiotomy, the researcher asked for the reason behind it.

The researcher then completed the forms related to delivery, episiotomy as well as the neonate. Subsequently, the researcher determined the selective or non-selective episiotomy indications based on the checklist. In case of observing any exclusion criteria (i.e., labor dysfunction, abnormal vaginal bleeding, manual pressure to the uppermost part of the uterus during labor, and lack of pregnant women cooperation during labor) the postpartum mothers were excluded from the study. After the pre-test, two problem-solving training workshops were held for four hours by a researcher accompanied by a psychologist as an observer.

The purpose of the workshop was to make midwives familiar with the overall problem-solving skill as a key social skill. The first session was a brainstorming session to generate general ideas about problem-solving skills. Subsequently, the problem-solving skill was explained in the form of the lecture using presentation aids like Power Point slides.

Considering the situations requiring problem-solving skills, the midwives went through step-by-step problem-solving skill for the scenario under consideration. Following the teamwork, one person as a reporter presented the results to everyone and answered the scenario questions. After the results were quoted, the researcher discussed the problem-solving stages; meanwhile, the feedback was given on the results of the teamwork.

Subsequently, another scenario was presented to the teams, and the participants were asked to list the most important problems they faced in the last month in the workplace and at home. They were also required to use the learned skills to solve the problems as homework. The homework was checked on the second training session. Eventually, a general summary of the two-session workshop was presented.

On the second session, the researcher initially checked the participants' homework. Following this, the second session was held focusing on the problem-oriented solutions and its difference with compatible and incompatible excitement-based solutions. Then, brainstorming was made and a lecture was given by the researcher. In the next stage, two unreal scenarios were presented and the groups began discussing on the solutions.

During the meeting, the midwives were asked to discuss their experiences regarding the need for this skill in interpersonal situations. The concluding remarks were drawn after the two-session workshop. An associate advisor provided the researcher with the training manual developed by Ladan Fata and Mehrdad Kazemzade Atofi. Moreover, the researcher participated in the problem-solving training workshop and was qualified by the research advisor.

Two weeks after the training sessions, the posttest (completion of the questionnaire, forms and control of two deliveries) was held similar to the pretest. A total of 240 deliveries were controlled before (n=120) and after the intervention (n=120). The sample attrition in the population of midwives were from 64 to 60 cases due to the unwillingness to continue the study or lack of attendance at one of the training sessions. Regarding the group of postpartum mothers, no sample attrition was observed. In case of exclusion, another woman was replaced immediately. The data were analyzed in SPSS software (version. 16) through the Chi-square, Mann-Whitney U, Fisher's exact, and Wilcoxon tests. P-value less than 0.05 was considered statistically significant.

Results

According to the obtained results, there was no difference between the two groups of midwives regarding work experience, employment status, and career interest. The mean age of the midwives was obtained at 29.3±0.6. The results of Mann-Whitney U test showed no significant difference between the two groups regarding age (P=0.694) and work experience (P=0.917, Table 1).

Table 1. Mean ±SD age of midwives in intervention and control groups

	Intervention n=30	Control n=30	Total n=60	Mann-Whitney U test results
	mean±SD	mean±SD	mean±SD	
Age(year)	30.4±8.0	28.1±4.6	29.3±6.6	U=423.5 P=0.694
Work experience (year)	6.2±1.2	4.6±0.7	5.4±0.7	U=443.0 P=0.917

Regarding the employment status, most midwives in the intervention (40.0%) and control (56.6%) groups were contractor employees. The Chi-square test results showed no significant difference between the intervention and control groups regarding the employment status of midwives which was not statistically significant (P=0.619, Table 2). The majority of the midwives in the intervention (43.4%) and control groups (56.7%) reported moderate level of career interest. According to the results of the Mann-Whitney U test, there were no significant differences between the two groups regarding the career interests (P=0.120, Table 2).

Table 2. Frequency of midwives regarding employment status and career interest in the intervention and control groups

	Intervention n=30	Control n=30	Total n=60	Fisher's exact test results
	Number (%)	Number (%)	Number (%)	
Employment status				
Permanent	3(10.0)	3(10.0)	6(10.0)	χ^2=2.0 P=0.619 Fisher's exact test results
Casual	4(13.3)	2(6.7)	6(10.0)	
Apprentice	11(36.7)	8(26.7)	19(31.7)	
Contractor	12(40.0)	17(56.7)	29(48.3)	
Career interests				
Very interested	6(20.0)	2(6.7)	8(13.3)	U=353.5 P=0.120 Mann-Whitney U test results
Interested	10(33.3)	9(30.0)	19(31.7)	
Moderately interested	13(43.4)	17(56.6)	30(50.5)	
Poorly interested	1(3.3)	2(6.7)	3(5.0)	

Mann-Whitney U test results showed no significant differences between the intervention and control groups regarding the mean age of postpartum mothers before (P=0.200) and after the intervention (P=0.893, Table 3). Moreover, no significant difference was observed between the two groups regarding perineum length and pelvic floor muscle strength score (Table 3).

Table 3. Mean±SD of age, perineum length, pelvic floor muscle strength score, and duration of the first and second stages of labor before and after the intervention in two groups

Variable	Before intervention		After intervention	
	Intervention	Control	Intervention	Control
	mean±SD	mean±SD	mean±SD	mean±SD
Age (year)	22.8±3.2	22.1±2.8	22.1±2.8	22.1±4.0
Mann-Whitney U test results	U=1557.5 P=0.200		U=1774.5 P=0.893	

Perineum length (mm)	44.3±4.1	43.3±4.8	44.1±4.9	44.0±4.6
Mann-Whitney U test results	U=1672.5 P=0.500		U=1704.0 P=0.610	
Pelvic Floor Muscle Strength Score	8.2±0.7	8.2±0.8	8.3±0.7	8.4±0.8
Mann-Whitney U test results	U=1788.5 P=0.947		U=1643.5 P=0.327	
Duration of the First stage of labor (min)	261.2±63.3	278±72.3	261±71.3	264.0±75.4
Mann-Whitney U test results	U=15.9.0 P=0.125		U=1762.5 P=0.843	
Duration of the second stage of labor (min)	36.8±25.9	30.9±7.7	30.4±9.3	28.4±10.5
Mann-Whitney U test results	U=1615.5 P=0.330		U=1584.5 P=0.256	

According to the Chi-square test results, there was no significant difference between the two groups regarding the neonate's gender before (P=0.361) and after the intervention (P=0.715, Table 4). Based on Fisher's exact test results, there was no significant difference between the two groups in terms of assisted delivery before the intervention (P=1.000). In addition, according to the Chi-square test results, no significant difference was observed between the two groups in terms of assisted delivery after the intervention (P=1.000, Table 4). Furthermore, the Chi-square test results showed no significant difference between the two groups in terms of shoulder dystocia before the intervention (P=1.000). Moreover, according to Fisher's exact test, there was no statistically significant difference between the two groups in terms of shoulder dystocia after the intervention (P=1.000, Table 4).

Table 4. Demographic characteristics of primiparous women, neonates' gender, assisted delivery, and shoulder dystocia before and after the intervention in the intervention and control groups

Variable	Before intervention		After intervention	
	intervention	control	intervention	control
	Number (%)	Number (%)	Number (%)	Number (%)
Educational status				
Illiterate	3(50.0)	6(10.0)	2(3.3)	2(3.3)
Elementary and secondary school degree	22(36.7)	20(33.30	20(33.30	15(25.0)
Diploma	25(41.7)	28(46.7)	26943.3)	32953.3)
Higher education	10(16.7)	6(10.0)	12(20.0)	11(18.3)
Mann-Whitney U test results	P=0.461		P=0.586	
Occupation				
Farmer	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Worker	0(0.0)	0(0.0)	2(3.3)	4(6.7)
Employed	2(3.3)	0(0.0)	7(11.7)	2(3.3)
Self-employed	16(26.7)	8(13.3)	11(18.3)	10(16.7)
University student	5(8.3)	5(8.3)	4(6.7)	5(8.3)
Housewife	37(61.7)	47(78.3)	36(60.0)	39(65.0)
The Chi-square test results	χ^2=5.857 P=0.103 df=3		χ^2=3.723 P=0.475 df=4	
Gender				
Female	33(55.0)	28(46.7)	29(48.3)	31(51.7)
Male	27(45.0)	32(53.3)	31(51.7)	29(48.3)

Fisher's exact test results	χ^2=0.834 P=0.361 df=1		χ^2=0.133 P=0.715 df=1	
Assisted delivery				
Yes	1(1.7)	0(0.0)	0(0.0)	1(1.7)
No	59(98.3)	60(100.0)	60(100.0)	59(98.3)
Test results	**P=1.000		χ^2=1.395 P=1.000 df=1	
Shoulder dystocia				
Yes	1(1.7)	1(1.7)	4(6.7)	3(50.0)
No	59(98.3)	58(96.7)	56(93.3)	57(95.0)
Test results	χ^2=1.009 P=1.000 df=2		**P=1.000	

* The Chi-square test
** Fisher's Exact test

Regarding the problem-solving ability, the mean score of midwives' problem-solving ability was obtained at 23.2±2.2 before the intervention. However, the Mann-Whitney U test revealed no significant differences between the two groups regarding problem-solving ability before the intervention (P=0.320). The mean score of midwives' problem-solving ability was 23.1±2.5 after the intervention.

The Mann-Whitney U test results did not show any significant differences between the intervention and control groups regarding the mean score of problem-solving ability after the intervention (P=0.537). With respect to the results of within-group comparison obtained from Wilcoxon test, there was no significant difference between the mean scores of the problem-solving ability before and after the intervention in the intervention group (P=0.375). Moreover, no significant difference was observed between the mean scores of the problem-solving ability before and after intervention in the control group (P=0.196, Table 5).

Table 5. Mean±SD of midwives' problem-solving ability and its comparison before and after the intervention in the intervention and control groups

		Intervention mean±SD	**Control mean±SD**	**Total mean±SD**	**Between group test results**
Problem solving ability	Before intervention	22.9±2.2	23.5±2.3	23.2±2.2	384.5=U* P=0.320
	After intervention	23.3±2.4	22.8±2.5	23.1±2.5	U=409.0 P=0.537
	Within group test results	**Z=-0.9 P=0.375	Z=-1.3 P=0.196		

* Mann-Whitney U test (U)
** Wilcoxon test (Z)

Furthermore, Fisher's exact test results showed no significant difference between the two groups regarding the need for episiotomy before and after the intervention in the groups with and without episiotomy (Table 6).

Table 6. Necessity for episiotomy before and after the intervention phase in groups with and without episiotomy

Variable		Intervention (necessary episiotomy) Number	Control (necessary episiotomy) Number	Fisher's exact test results
Before intervention	With episiotomy	13	6	0.999=P
	Without episiotomy	2	0	
After intervention	With episiotomy	11	15	0.444=P
	Without episiotomy	1	0	

According to the results obtained from the Chi-square test, there was no significant correlation between the two groups (P=0.408) regarding the increased number of episiotomy (P=0.408) and perineal status in case of no episiotomy. About half of the postpartum mothers who did not undergo episiotomy had healthy perineum. The results of this study showed that problem-solving skill training had an effect on the general skills of midwives; however, it was not significant.

Moreover, the training had no significant effects on the frequency of selective episiotomy and did not lead to an increased number of selective episiotomy.

Discussion

The present study aimed to determine the effect of midwives' problem-solving skill training on the frequency of selective episiotomy in primiparous women. The results showed that the training sessions had an effect on the increase of problem-solving ability in the intervention group; however, it was not significant. In addition, the training sessions did not lead to an increased number of selective episiotomy.

Since there was no similar study in this domain, each variable was individually compared with that in similar studies. Shahbazi et al. (2011) conducted a study to determine the effect of problem-solving skills training on the stress tolerance in nursing students. In total, 43 students completed Baron's emotional intelligence questionnaire. The intervention group participated in six 2-hours problem-solving training sessions for six weeks. The emotional intelligence questionnaire was completed immediately after the training and two months later. The results showed a significant difference between the mean scores of stress tolerance obtained immediately after and those obtained two months after the intervention in the intervention group (P<0.01).

Moreover, there was a significant difference between the two groups regarding the mean scores of stress tolerance according to the Baron's questionnaire before, immediately, and two months after the problem-solving training (P<0.001). The results of this study showed positive effect of the problem-solving training program on stress tolerance among students (25).

Heydari et al. (2011) conducted a study titled "Effectiveness of problem-solving skills training on decision making skill among Medical Emergency students ". In total, 60 Medical Emergency students participated in this study and were randomly assigned into two groups of intervention (n=30) and control (n=30). The intervention group participated in eight 2-hours problem-solving skill training sessions. The results of the abovementioned study showed lower levels of decision-making skills among Medical Emergency students. Moreover, problem-solving skills training resulted in the improvement of decision-making skill. The mean scores of decision-making skill increased from 8.66±1.89 to 11.36±1.62. However, the control group observed no improvement in decision-making skill. The results of this study

showed the effect of problem-solving skills training on the improvement of decision-making skill among Medical Emergency students (26). The results obtained from the studies by Shahbazi and Heidari are not consistent with the findings of this study. The observed discrepancy can be attributed to the longer duration and greater number of training sessions. Moreover, it can be explained by financial, personal, and interpersonal problems as well as social issues. Accordingly, it can be concluded that training sessions did not have any effects on midwives' decision making process regarding performing a selective episiotomy (27).

Furthermore, another justification can be attributed to the sample population in the study conducted by Shahbazi and Heidari. This study was conducted on university students who were not employees and were more willing to learn new skills. Shiroodi et al. (2011) conducted a study with pre- and-posttest design entitled "Comparison of the effectiveness of assertiveness and problem-solving training on the level of adaptation and aggression among high school female students". In total, three 90-min training sessions were held and the results showed the effect of the training on the increased level of adaptation and decreased level of aggressiveness among female high school students (22).

Ghalili et al. (2007) concluded that problem-solving skill training improved marital conflicts and increased cooperation among couples. In total, six training sessions were held focusing on problem-solving methods and barriers to implementation, problem-solving stages, raising problems, solution implementation, and common problems and issues among couples. The results showed the effect of problem-solving training on the emotional reaction which is one of the most important factors raising problems among people.

Problem-solving skill training helps people learn how to allocate sufficient time to think about their reactions in difficult interpersonal situations and balance their emotional responses. The author asserts that avoidance, denial, surrendering, and dominating are ineffective strategies to solve conflicts which is a win-lose approach.

In addition, he suggests problem-solving skill as a win-win approach to solve conflicts. The results of the study by Rabee, Shirudi, and Ghalili are not in line with the findings of the present study due to the greater number of training sessions, more time for practicing, and difference between participants and educational content provided in the workshops.

Abdullah Hossein et al. (2012) stated that there were many barriers to the selective episiotomy by midwives, including obedience to physician's orders, fear of being reproached by the authorities, and care center policies. Education, interaction and sharing experience between physicians and midwives can be effective in changing performance. They also reported that education and raising the awareness of postpartum mothers led to a decrease in the number of episiotomies (21).

In addition, they reported that authorities and physician's orders were among the factors inhibiting the midwives from performing based on the observations (21). The results of the current study showed that in 20-30% of the deliveries, other physicians or midwives encouraged the person who was responsible for conducting the birth to perform episiotomy or not. In addition, 25% of the physicians or midwives recommended an episiotomy.

The results obtained from the study conducted by Abdullah Hossein show that mother collaboration with the person who is responsible for conducting the birth is one of the factors that help midwife care for mother during labor (21). According to the results of the current study, about 50% of midwives make a moderate relationship with the postpartum mothers, which can be one of the reasons for the low frequency of selective episiotomy in this study.

In this study, more than half and 30% of the midwives were contractor and apprentice employees, respectively, and the majority of them had low work experiences. These can result in a lack of performing based on observations and evidence. Furthermore, more than half of the midwives were moderately interested in their profession, which could prevent them from making an effective relationship with postpartum mothers and led them searching for conditions without challenges. The results showed that 33.3% and 41.7% of the episiotomies were performed selectively before and after the intervention, respectively, in the intervention group.

Moreover, the rates of selected episiotomies were 35.0% and 48.3% before and after the intervention, respectively, in the control group. The Chi-square test showed no significant difference between the intervention and control groups regarding the prevalence of selective episiotomies before the intervention (P=0.847). Moreover, no significant difference was observed between the two groups

regarding the frequency of selected episiotomy after the intervention (P=0.582).

Rezaei et al. (2010) compared selective and common episiotomy groups regarding vaginal rupture. In total, 986 primiparous women participated in the study and fetal distress and use of vacuum extractor were the indications for performing an episiotomy. The results showed a significant difference between the group with selective episiotomy and the group with common episiotomy regarding the duration of the second stage of labor, first-degree perineal tear, and labia minora tear (P=0.0001).

However, there were no differences between these two groups regarding the severity of grades 2, 3, and 4 tears. It seems that the limited use of episiotomy is a more logical technique to reduce perineal tearing during birth (29). Lin Yi (2014) found an association between coping strategies and better tolerance of physician ambiguity with a decreased number of episiotomies.

They recommended that further research should be conducted on the effect of cognitive skills training on the ones who are responsible for conducting birth regarding the use of episiotomy (6). Golmakani et al. (2003) conducted a study on 100 postpartum mothers to determine the number of perineal injuries in this population with common and selective episiotomies. The researcher in the intervention group performed episiotomy on women who had the indications for an episiotomy. The findings of this study showed that 12 patients (24%) in the selective episiotomy group and 50 (100%) subjects in the common episiotomy group underwent episiotomy (P<0.0001).

According to the results, there was a significant difference between the selective group (62%) and the common group (100%) regarding perineal injuries (P<0.0001). In this study, the two groups were homogeneous in terms of the variables affecting perineum injury. The results of this study showed that a limited number of episiotomy based on the indications resulted in fewer injuries to the perineum (2).

Khani et al. (2008) conducted a study to investigate the views of people who are responsible for conducting birth on routine episiotomy. The results indicated the factors influencing the use of routine episiotomy. Moreover, they revealed that making changes in clinical performances, such as routine episiotomy was difficult. They suggested that midwives, university students, and mothers should be educated regarding performing an episiotomy (4).

In a qualitative study conducted by Al-Qamari et al. (2016), it was concluded that the majority of the people who were responsible for conducting the birth performed episiotomy due to unintended perineal tear, reduced effects of shoulder dystocia, and easier repair of episiotomy. The results of this study show that health care providers do not perform based on the evidence (30).

There are different reasons explaining the discrepancies between the results of this study and the findings of the studies conducted by Rezaei, Golmakani, Khani, and Al-Qamari. These include factors that can have an effect on changing the clinical performance of episiotomy.

In a study conducted by Golmakani, the delivery was performed by one midwife in both groups; therefore, it was not possible to consider the role of her as one of the factors influencing selective episiotomy.

According to the results of the study performed by Khani, maternal and fetal factors as well as the person who was responsible for conducting birth were under control and homogeneous in this study. Therefore, it can be concluded that the legal problems and fear of being reproached by the authorities are among the possible reasons for the decreased number of selective episiotomies. The study limitations include the differences in personal and psychological characteristics as well as manual skills among midwives. Moreover, anatomical differences in mothers and their lack of preparation during pregnancy can be regarded as other limitations of this study. Finally, the fewer number of training sessions led to another limitation in this study. On the other hand, one of the strengths of this study includes the supervision of 240 deliveries in postpartum mothers and the presence of the researcher at the mother's bedside from the onset of the active phase of labor until the end of labor.

Conclusion

This study aimed to determine the effect of problem-solving skill training on the frequency of selective episiotomy in primiparous women. The results of this study showed that problem-solving skill training had no effect on the increase in selective episiotomy. Moreover, no significant difference was observed between two groups regarding the frequency of selective episiotomy before and after the intervention. Therefore, it is suggested that more training sessions be conducted by professional experts in this field.

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Conflict of interest

The authors declare no conflicts of interest.

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