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Effect of Communication Skill Training Based on Calgary-Cambridge Observation Model on Midwifery Students' Communication Skills

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Abstract

Background: Communication skills are of top priority for health care provider's professional traits and communication is an essential part of the midwifery care. Many studies of midwifery and midwifery students' communication skills are poor and average. This study aimed to evaluate the effects of communication skills training through the Calgary Cambridge model on communication skill among midwifery students.

Methods: This randomized controlled field trial was conducted in 2018. Thirty midwifery students were recruited using conventional sampling method from Golestan University of Medical Sciences, Gorgan, Iran. Then subjects was assigned into two experimental and control groups by stratified random allocation method. Initially, their communication skill was assessed using Queendom scale. Participants in the experimental group received communication skills training based on Calgary-Cambridge model in four four-hour sessions held twice weekly. The control group did not receive any intervention. Communication skill in both control and experimental groups was re-assessed respectively four weeks after pretest. Data were analyzed using the Mann-Whitney U test, the independent-sample t test and the paired-sample test in SPSS-16 software.

Results: The pretest mean scores of communication skill in the experimental and the control groups were respectively 122.43±9.40 and 122.29±7.81, with no significant between-group difference. At post-test, the mean score of communication skill in the experimental and the control groups was respectively 122±8.06 and 120±8.08 and the between-group difference was not significant (P=0.51).

Conclusion: Communication skills training through Calgary-Cambridge model is not effective in significantly improving midwifery students' communication skill. Therefore, to improve communication skills, this model is insufficient and may need to be modified, or it is necessary to add more intervention to this model.

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Introduction

From the patients' point of view, communication skill is a top priority of the health care providers' characteristics (1) and an important component of the midwifery care (2). Women are sensitive to their relationship with midwives. Good communication of midwives, especially at the time of admission, reduces the demand for additional care and, consequently, welfare costs (3). A good communication skill is essential for midwives for patient's evaluation and treatment (4).

Individual or interpersonal communication skills are a set of potential and actual abilities of the individual that can help to achieve acceptable and aware behaviors to reach a level of good emotional relationship. This skill makes it easier for one to interact with others in the community (5).

There are two types of communication skills. General communication skills or social communication skills (6) and communication skills related to the medical science field that health care staff, including midwives, need to understand patients' needs in addition to general communication skills. This skill is also referred to as effective communication, midwife-patient or physician-patient relationship (2).

As a key member of the health care team, a midwife should communicate effectively with patients, families, colleagues, and other staff in order to achieve their goals in providing accurate information, health education, counseling, and quality care services (2).

All human efforts and developments are aimed at promoting the health of human beings, in which the two most vulnerable groups of the community, including mothers and infants, need more attention (7). In pregnancy, delivery, and uncomplicated postpartum, care and support of these two vulnerable groups is the responsibility of the midwife (8, 9).

The results of some studies show that the medical team has moderate and in some cases poor communication skills (2, 10-12). Ahmadi et al. (2011) showed that midwifery students, Obstetrics and Gynecology interns and assistants are at the moderate level of communication (11). Tagizadeh et al. (2007) showed that the majority of midwives do not have good communication skills (13). In a study, Kaya et al. (2013) found that Istanbul Nursing and Midwifery College students' communication skills were average (14) and Katebi et al. (2016) indicated that midwives' communication skills were also moderate according to pregnant women's view (12).

There are currently six theoretical models of medical team-patient relationship-based communication skill training model, including The Bayer Institute for Healthcare Communication E4 Model, Three-function Model/Brown Interview

Checklist, Calgary-Cambridge Observation Model, Patient-centered Clinical Method, Segue framework for teaching and assessing communication skills (SEGUE) and Four-habits Model (15).

There is a great deal of emphasis today on models based on mutuality based models, including Calgary-Cambridge Observation Model. Calgary-Cambridge Guide-Based communication skills training has integrated the mutuality model best by providing health services (16). In this model, the physician and the patient play a participatory and active role in the biography process. This provides a collaborative structure for decision making and determining a treatment plan. Since this model uses both patient and physician views and information, both are satisfied and patient compliance increase with the treatment plan (16).

Calgary-Cambridge Observation Model was designed in 1996 by Kurtz from the University of Calgary, Canada, and Silverman from the University of Cambridge, UK, as a framework for planning communication skills training (17). This model combined the proper traditional clinical practice with effective communication skills (18).

"Communication Skill Training" is a well-known and reliable method in medical sciences. This course is designed to ensure better interaction with patients. Some studies have shown that communication skills of medical staff improve after attending a communication skills training course (22-29). Communication skill training leads to more effective medical training. The physicians using clinical skills to provide trust and relationship; in a shorter period of time, treat patients and help them return to social activity faster. Communication skill training, in addition to treating patients, will also improve the community health (23).

Khodadadi et al. (2013) in their study showed that nurses' communication skills improved after communication skill training (24). Zamani et al. (2004) showed that patients' satisfaction with physicians' communication skills that were trained by Calgary-Cambridge Observation Model was more than patients' satisfaction with physicians who did not receive such training (25).

Regarding the importance of communication skills in the midwifery profession, the researchers conducted a study to determine the effect of general communication skill training based on special Calgary-Cambridge Observation Model on midwifery students' general communication skills.

Methods

This study randomized controlled field trial with pre-test and post-test design was done on 30 undergraduate midwifery students of Golestan University of Medical Sciences in 2018.

Sample size in this study based on the study results of Bani Davoody et al.

(26) (2012) with a baseline score of 21.56 and a standard deviation of 11.31 in interview skills at 0.95 confidence level, 0.80 test power, and assumption of an increase of 50% (11 points) in the mean score of interviewing skill and a 20% reduction in the standard deviation of the test group; is 14 patients estimated in each group.

Thirty students were selected at the first stage by convenience method and the ability of interviewing all students was evaluated using Evans checklist. The subjects were then randomly assigned into two experimental (n=15) and control (n=15) groups based on pre-test score and semester (Figure 1). The study inclusion criteria included undergraduate midwifery students of semester 6 and 8 who were studying at Golestan University of Medical Sciences until the end of the study and the study exclusion criteria were unwillingness to attend classes and failure to attend on time to evaluate primary communication skills.

For data collection, after providing necessary explanations and purposes of the study, the participants were assured that the information contained in the questionnaires was kept strictly confidential. Each subject will have full authority to continue or withdraw from research. After obtaining informed consent from midwifery students in written form, demographic information form and Queen Trail (Dom) Communication Skills Questionnaire were completed by students in the control and experimental groups as self-report.

Given that there was a possibility of passing the given instruction by the students of the experimental group to the control group, the control group was evaluated first. Six weeks after the pre-test, Queen Trail Communication Skills Questionnaire was completed by the control group students.

Group training sessions were carried out in two groups of 7 and 8 students. Based on Calgary-Cambridge Observation Model (Table 1) (28) in four sessions twice a week in lecture, role play, group discussion, brainstorming and film screening completed by the researcher (29, 30) 4 weeks after the intervention, Queendom General Communication Skills Questionnaire was completed by the experimental group (30).

Data were gathered using demographic information form and Queendom Persian version of Communication Skills Questionnaire. This questionnaire was developed by Queendom (2004) to assess general communication skills in adults. The questionnaire contains 34 items and 5 subscales; message perception (9 items), emotion management (8 items), listening (7 items), insight (5 items) and assertiveness (5 items).

This questionnaire is scored on five-Likert scale from always (score 5) to never (score 1). The items 2, 4, 6, 9, 10, 12, 13, 17, 19, 24, 25, 28, 32 and 33 were scored reversely. The scores ranging from 34 to 170 (6) and higher scores indicate more desired communication skills (6). The validity and reliability of Persian version of Queendom questionnaire were confirmed in a previous study (6). The reliability of the questionnaire was reported 0.71 for students using Cronbach's alpha (31).

The data were analyzed in SPSS statistics for windows, version 16.0 (SPSS Inc., Chicago, Ill., USA). Shapiro-Wilk test was used for assessing normality of data, independent t-test and paired t-test were used for analysis of normal distribution and Mann-Whitney and Wilcoxon test was used at 95% confidence level for non-normal distribution data.

Table 1. Communication skills training content based on Calgary-Cambridge communication skills model

Session	Goals
1	Referrals, Statement of Rules, Basic Training of Communication Skills based on Model, Communication Skills Importance, Physician-Patient relationship, Communication Models
2	Effective communication training, interviewing, data collection and structuring
3	Train empathy, establish relationships, explain to the patient, and end the interview
4	Team work activity, training videos, commentary and discussion on model components

Results

The mean age of students was \pm No significant difference was found in demographic characteristics between the two groups (Table 2).

There was a statistically significant difference in the mean PNKAS scores of at According to the study results, the mean score of communication skills before the intervention in the control group was 122.29 ± 7.81 and 122.43 ± 9.40 in the experimental group, and no statistically significant relationship was found between the two groups in the mean of communication skills and five subscales (Table 3).

The mean score of communication skills one month after communication skill training was 120.00 ± 8.08 in the control group and 122.00 ± 8.06 in the experimental group. No statistically significant difference was found between the two groups in the mean of communication skills and five subscales (Table 3).

According to the study results, in the control group the mean score of communication skills before communication skill training was 122.29 ± 7.81 and 120.8 ± 0.08 after communication skill training and no statistically significant difference was found between the mean scores of communication skills and five subscales before and after communication skill training.

In the experimental group, communication skill total score before communication skill training was 122.43 ± 9.4 and 122 ± 8.06 after communication skill training and statistically significant difference was found between the mean of communication skills and five subscales before and after communication skill training (Table 4).

Table 2. Communication skills training content based on Calgary-Cambridge communication skills model

Group		Experimental		Control		Total		P value
		N	%	N	%	N	%	
Marital status	Single	57.8	8	78.6	11	67.9	19	0.225
	Married	42.9	6	21.4	3	32.1	9	
Residence place	City	71.4	10	71.4	10	71.4	20	1.00
	Village	28.6	4	28.6	4	28.6	8	
	< 2	8	28.6	4	28.6	4	28.6	
Family income (million RIs.)	2-4	16	57.1	8	57.1	8	57.1	0.736
	4-6	1	3.6	1	7.1	0	0	
	6-8	2	7.1	1	7.1	1	7.1	
	8-<	3.6	3.6	0	0	1	7.1	
Attend communication skills course	64.4	13	13	35.7	8	Yes	5	0.256
	53.6	15	15	64.3	6	No	9	

Table 3. Comparison of the communication skills score before and after the intervention in the two groups

Variable	Group	Before		After		P value*
		M \pm SD	M \pm SD	M \pm SD	M \pm SD	
Message perception	Control	34.07 \pm 2.97	33.36 \pm 3.34	0.856		
	Experimental	33.71 \pm 3.22	33.79 \pm 2.51			
Emotion management	Control	28.50 \pm 3.43	28.29 \pm 2.86	0.671		
	Experimental	28.43 \pm 2.65	28.43 \pm 2.62			
Listening	Control	24.57 \pm 2.34	25.07 \pm 1.73	0.303		
	Experimental	25.79 \pm 2.80	25.00 \pm 2.57			
Insight	Control	17.36 \pm 2.30	16.21 \pm 1.92	0.112		
	Experimental	16.93 \pm 2.01	16.36 \pm 2.43			
Assertiveness	Control	17.79 \pm 1.12	17.07 \pm 2.09	0.246		
	Experimental	17.57 \pm 2.24	18.43 \pm 1.69			
Total communication skills	Control	122.29 \pm 7.81	120.00 \pm 8.08	0.207		
	Experimental	122.43 \pm 9.40	122.00 \pm 8.06	0.720		

Table 4. Comparison of mean communication skill score based on five subscales between the two groups before and after the intervention

Variable	Group	Before		After		P value*	
		M \pm SD	M \pm SD	M \pm SD	M \pm SD	Before	After
Message perception	Control	34.07 \pm 2.97	33.36 \pm 3.34	0.95	0.89	0.76	0.70
	Experimental	33.71 \pm 3.22	33.79 \pm 2.51				
Emotion management	Control	28.50 \pm 3.43	28.29 \pm 2.86	0.95	0.89		
	Experimental	28.43 \pm 2.65	28.43 \pm 2.62				
Listening	Control	24.57 \pm 2.34	25.07 \pm 1.73	0.22	0.93		
	Experimental	25.79 \pm 2.80	25.00 \pm 2.57				
Insight	Control	17.36 \pm 2.30	16.21 \pm 1.92	0.60	0.86		
	Experimental	16.93 \pm 2.01	16.36 \pm 2.43				
Assertiveness	Control	17.79 \pm 1.12	17.07 \pm 2.09	0.60	0.07		
	Experimental	17.57 \pm 2.24	18.43 \pm 1.69				
Total communication skills	Control	122.29 \pm 7.81	120.00 \pm 8.08	0.98	0.51		
	Experimental	122.43 \pm 9.40	122.00 \pm 8.06				

* Independent t-test or Mann-Whitney test

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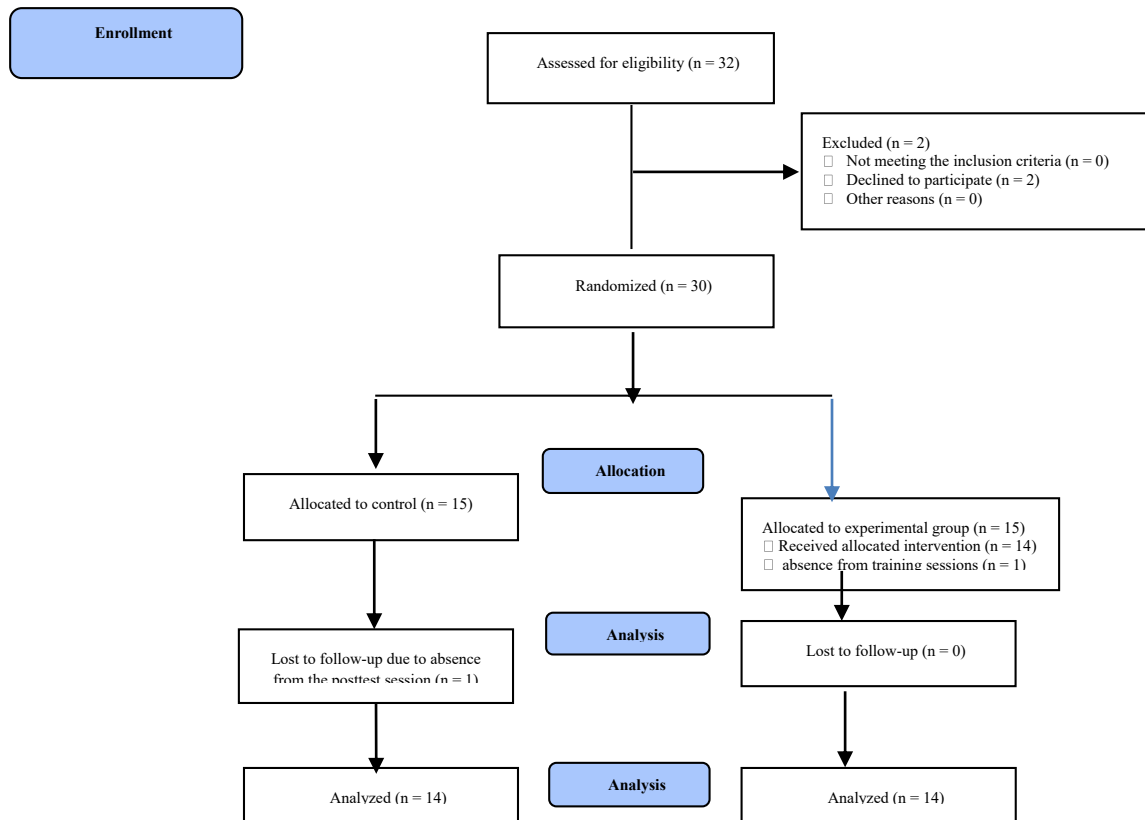


Figure 1. The flowchart of the study's inclusion, allocation and follow-up

Discussion

This study was conducted to determine the effect of communication skills training based on Calgary-Cambridge model on general communication skills of midwifery students at Gorgan University of Medical Sciences. The study results showed that communication skills training based on Calgary-Cambridge model had no significant effect on the mean score of general communication skills and its subscales (message perception, emotion management, listening, insight, and assertiveness) after the intervention.

The above results were not consistent with the study results of Zamani et al. (2004) (25). The study results showed that communication skill training based on Calgary-Cambridge Observation Model improved patient satisfaction with the communication skills of trained physicians. The present study examined physicians' communication skills through their patients' satisfaction and view. While in the present study, midwifery students' communication skills were examined from their own point of view as self-report. The study also examined physicians' communication skills when communicating with patients and in patient registration sessions, but the present study examined students' communication skills in all aspects, not just patients.

The results of the present study were not consistent with the study results of Rezaie et al. (2003) (32). The researchers showed that teaching communication skills to nurses had a positive effect on improving their communication skills in the experimental group after the intervention. The difference between the results of this study and the present study may be related to communication skill training to nurses. In this study, communication skill training to nurses was for 7 hours a day, but in the present study, special communication skills training was based on Calgary-Cambridge Observation Model to midwifery students, with a greater focus on the patient interview and registration skills.

Also, the results of present study was not consistent with Khodadadi et al. (2012) study (24). Khodadadi et al. (2012) showed that communication skill training is effective on improving nurses' communication skills. In this study, as in a study by Rezaie et al. (2003), communication skills were taught to nurses working in Tabriz hospitals for two months.

Special Communication Skill Training based on Calgary-Cambridge Observation Model is a specialized method aimed to enhance the medical-related specialized skills of midwifery students and can be used to improve the specialized skills. Baniaghil et al. (2018) showed that Special Communication Skill Training based on Calgary-Cambridge Observation Model was effective on midwifery students' medical-related specialized interviewing skills (33).

The limitations of the present study were the lack of teamwork in the first to third educational sessions and home exercises.

Conclusion

According to the finding, communication skills training based on Calgary-Cambridge Observation Model had no significant effect on communication skills and its five subscales. Therefore, to improve communication skills, this model is not sufficient and may need to be modified, or it is necessary to add more intervention in order to enhance the communication skills.

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