

The Effect of Interactive Educational Workshops with or Without Standardized Patients on the Self-Efficacy of Midwifery Students in Sexual Health Counseling

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ABSTRACT

Background & aim: Modifications in learning systems based on the concepts of self-efficacy and self-esteem are among the suggested strategies to bridge the gap between knowledge and practice. The aim of this study was to compare the effect of two interactive educational workshops with or without standardized patients (SPs) on midwifery students' self-efficacy in providing sexual health counseling at Mashhad University of Medical Sciences, Mashhad, Iran in 2014.

Methods: In this quasi-experimental study, 62 B.Sc. and M.Sc. students of midwifery at Mashhad School of Nursing and Midwifery were randomly divided into two groups. The groups were trained, using one of two interactive educational workshops (with or without SPs) on sexual health counseling (10 hours). Data were collected, using a demographic questionnaire and a self-efficacy assessment tool. For data analysis, paired and independent t-tests were performed, using SPSS version 16.

Results: The mean scores of students' self-efficacy in providing sexual health counseling in the two groups were not significantly different at the beginning of the study ($P=0.587$), while two weeks after the intervention, the scores were significantly higher in students who participated in SP-based workshops (76.0 ± 10.9 vs. 66.7 ± 5.9 , $P < 0.0001$).

Conclusion: Although both methods could promote students' self-efficacy, the impact of workshops with SPs was more significant. Therefore, integration of this training method in midwifery educational curricula is recommended.

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Introduction

Sexual health is one of the most important aspects of family and community health, affecting people of all ages at all stages of life (1). Various studies have highlighted the importance of promoting knowledge and skills about sexual education and counseling in medical students and medical staff including midwives (2-5).

The World Health Organization considers midwives to play a substantial role in evaluating

and improving sexual health and providing counseling for families (6). However, when dealing with patients requiring sexual counseling, most physicians and midwives lack the skills or self-confidence to assess, diagnose, and treat sexual problems (3, 7).

Previous studies have demonstrated a close relationship between self-efficacy and an individual's performance in service provision.

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Since the introduction of the concept of self-efficacy in 1977 by the Canadian psychologist, Bandura, extensive research has been performed in fields of medicine, nursing, sports, and education with regard to this concept. According to Bandura, self-efficacy is the feeling of adequacy, efficiency, and competence in coping with life. In fact, meeting and maintaining the performance criteria enhance self-efficacy, while failure to meet or maintain these criteria can have debilitating effects (8).

In the realm of education, self-efficacy refers to students' beliefs regarding their ability to perform the assigned tasks. Students with high self-efficacy show more interest, effort, and endurance in fulfilling their responsibilities and are confident in their abilities (9, 10). Researchers believe that self-efficacy plays an important role in applying professional knowledge and skills (11). In fact, self-efficacy plays a mediating role between knowledge and practice (8). This role accentuates the need for novel and active educational methods, which can expand and improve students' clinical decision-making abilities, continuous and self-centered learning, and their self-efficacy.

Workshops and standardized patient (SP)-based training are among active methods which can eliminate the gap between education and practice and contribute to effective learning. Workshops are compressed, short-term training programs, with the aim to transfer knowledge and improve practical skills in particular subjects with participation of a limited number of individuals.

The aim of workshops is not merely the transfer of training messages from short-term to long-term memory, but is the active training of essential skills. According to previous studies, the closer the learning environment is to reality, the more effective learning will be (12-14). Therefore, SP or real patient can be used as a simulation method in medical sciences for training and evaluating students. Use of SP can develop the skills of novice students in a safe, stress-free environment (13, 15, 16). Another advantage of SPs is improving students' decision-making abilities and self-confidence in offering services (17, 18).

Given the scarcity of information on methods, which are associated with students' self-efficacy in

providing sexual health counseling, this study was performed to compare the effects of training by interactive workshops with or without SPs on the self-efficacy of midwifery students in providing sexual health counseling at Mashhad University of Medical Sciences, Mashhad, Iran in 2014.

Materials and Methods

In this quasi-experimental, two-group, before-and-after study, 84 eligible midwifery students at the School of Nursing and Midwifery, Mashhad University of Medical Sciences were recruited after obtaining permission from the ethics committee. The participants had passed the course of sexual dysfunction and were in the seventh semester of B.Sc. or the first or third semester of M.Sc. in midwifery.

The subjects were selected using stratified random sampling, based on their marital status and academic semester. Then, the students in each stratum were randomly assigned to two groups using the table of random numbers, and each group participated in one of two interactive workshops with or without SPs. Students who did not complete the questionnaires before or two weeks after the training or refused to fully participate in the courses were excluded from the study. A total of 22 students were excluded from the study due to their unwillingness to continue the study, interference of the intervention with their academic roles, and transfer to other universities.

Finally, 62 students remained in the study, 36 of whom were allocated to the SP group and 26 to the non-SP group. Data collection tools included a questionnaire on demographic characteristics and academic history of the students and a researcher-made tool for assessing the students' self-efficacy. The questionnaires were prepared based on the latest scientific literature including books and articles in the field of sexual counseling.

The self-efficacy tool consisted of 24 items on the students' feeling of competence and self-efficacy in different aspects of sexual health counseling. The items were graded on a five-point scale, ranging from completely agree (score 4) to completely disagree (score 0). The questionnaire was completed by the students before starting the training sessions.

The validity of the demographic and self-efficacy questionnaires was evaluated and confirmed via content validity by ten members of the scientific board. Also, the reliability of self-efficacy questionnaire was confirmed through internal consistency (Cronbach's $\alpha=0.9$). The total score of self-efficacy in providing sexual health counseling was 96. The scores were graded as follows: poor (score: 0-24), moderate (score: 24-48), good (score: 48-72), and excellent (score: 72-96).

Five different scenarios were planned in the workshops and five SPs were trained to play these scenarios, each concerned with communication, taking sexual history, disease diagnosis, and decision-making regarding a specific condition or disorder. The training sessions were held for 10 hours in form of a two-day workshop for each group. On the first day, theoretical subjects (e.g., counseling techniques, taking sexual history, sexual counseling for healthy individuals, sexual counseling during pregnancy, lactation, and adulthood, and counseling on different sexual disorders) were presented, using lectures, slideshows, and question-answer method for five hours.

On the second day, students in the SP group were divided into five sub-groups, each consisting of 6-7 students practicing with an SP for 30 min; afterwards, all the students were gathered as a large group. One student from each small group, as the group representative, interacted with the SP in the presence of all students and took the patient's sexual history, diagnosed the condition, and proposed the preferred therapeutic approach. Then, other students discussed the case and gave their comments. At the end of each session, the status of the presented case was summarized by the researcher in collaboration with the students.

In the non-SP group, the students were divided into five sub-groups and the five mentioned scenarios were presented in form of written cases. After discussions about each case in small groups, the students gathered as a large group. One student from each small group repeated the process of sexual history taking and presented the findings of small-group discussions including the possible diagnosis and the preferred therapeutic approach. Then, the

students discussed the case, and finally, the results were summarized by the researcher in collaboration with the students.

Duration of training on the second day was five hours in each group. Theoretical and practical training in both groups was mainly performed by the researcher (M.Sc. student in midwifery counseling); also, a small part of the training was presented by a professor of reproductive health. Two weeks after the training, the self-efficacy questionnaire was again completed by the students of both groups.

For statistical analysis, the gathered data were entered to SPSS version 16.0. The mean scores of self-efficacy questionnaire, obtained by the students in each group before and after the intervention, were compared by paired t-test. Also, the difference in scores between the two groups was analyzed by independent t-test. In case the data were not normally distributed, Wilcoxon and Mann-Whitney tests were performed. P-value less than 0.05 was considered statistically significant.

The subjects were assured about the confidentiality of the data and the results were presented in general. Also, the participants were able to withdraw from the study at any time.

Results

The students' age ranged between 21 and 41 years. The mean age of the participants was 25.5 ± 4.8 years in the SP group and 25.6 ± 4.9 years in the non-SP group. However, Mann-Whitney test results showed no significant difference between the two groups in terms of the mean age ($P=0.95$).

As demonstrated in Table 1, the majority of students in the two groups were in the seventh semester of B.Sc. in midwifery. Chi-square test results showed that academic semester and educational level were not significantly different between the two groups (Table 1). Also, regarding marital status, the majority of the students in the two groups were married. However, Fisher's exact test results showed no significant difference between the two groups in terms of marital status ($P=0.203$).

The mean score of students on the theoretical course of sexual disorders (passed in previous semesters) was 17.2 ± 1.3 (out of 20) in the SP group and 17.0 ± 1.9 in the non-SP group. The

Table 1. Academic semester, educational level, and marital status of the students in the two groups

Variables	Groups				Test results
	SP workshop		Non-SP workshop		
	N	%	N	%	
Academic semester and educational level					
Seventh semester of B.Sc.	17	47.2	11	40.7	$\chi^2=0.9$ df=2 P=0.616
First semester of M.Sc.	11	30.6	7	25.9	
Third semester of M.Sc.	8	22.2	9	33.3	
Total	36	100	27	100	
Marital status					
Single	14	38.9	16	59.3	Fisher's exact test Chi-square test=2.9 P=0.203
Married	21	58.3	11	40.7	
Divorced	1	2.8	0	0	
Total	36	100	27	100	

Table 2. Comparison of the self-efficacy of midwifery students in providing sexual health counseling before and two weeks after the intervention

	Self-efficacy score				Test results
	SP workshop		Non-SP workshop		
	Mean±SD	N	Mean±SD	N	
Before the intervention	42.6±14.9	36	44.8±17.0	27	t=-0.5 df=61 P=0.587
After the intervention	76.0±10.9	36	66.7±5.9	26	t=4.3 df=56.3 P<0.001
Difference before and after the intervention	33.4±15.6	36	21.9±16.4	26	t=2.8 df=61 P=0.005
Paired t-test results	t=-13.8 df=35 <0.001P		t=7.8 df=26 <0.001P		

results of independent t-test showed that the two groups were not significantly different in terms of the mean score on the theoretical course of sexual disorders (P=0.573).

In total, 8.3% (n=3) of the participants in the SP group and 11.1% (n=3) of the subjects in the non-SP group had the experience of counseling with clients suffering from sexual disorders. Fisher's exact test results showed that the two groups were not significantly different with respect to the frequency of providing sexual health counseling to clients (P=1.000).

As table 2 shows the independent t-test results showed no statistically significant difference in the mean score of self-efficacy before the intervention between the two

groups (P=0.589). However, two weeks after the intervention, a statistically significant difference was observed in the mean score of self-efficacy in the two groups (P<0.001). Also, two weeks after the intervention, the mean scores of self-efficacy in the SP group were significantly higher than the non-SP group, based on independent t-test results (P=0.005).

Diagram 1 shows that students' self-efficacy before the intervention was excellent in 2.8% (n=1) of the participants in the SP group and 3.7% (n=1) of students in the non-SP group. The results of Fisher's exact test showed that the two groups were not significantly different in terms of self-efficacy in providing sexual health counseling before the intervention (P=0.761). However, after

Table 3. Students' mean scores of each item in the self-efficacy questionnaire before and two weeks after the intervention in the two groups

Variables	Groups			
	SP group		Non-SP group	
Items	Mean±SD		Mean±SD	
I am able to:	After training	Before training	After training	Before training
1- Talk easily about sexual issues with people.	3.0±0.5	2.2±1.1	3.4±0.6	2.2±1.1
2- Gain people's trust to speak about their sexual problems without feeling embarrassed.	3.0±0.3	2.3±0.9	3.5±0.6	2.4±1.1
3- Take complete sexual history of the patient.	2.9±0.2	1.8±1.1	3.4±0.6	1.5±1.0
4- Completely explain the sexual response cycle to the patient.	3.0±0.3	1.9±0.9	3.4±0.6	1.6±0.9
5- Provide sexual counseling for healthy individuals.	3.0±0.3	1.8±0.9	3.4±0.5	1.9±1.1
6- Identify the factors affecting sexual responses.	2.8±0.5	1.8±0.9	3.3±0.5	9.1±1.1
7- Provide complete sexual counseling during pregnancy.	3.1±0.4	1.6±1.0	3.3±0.7	1.7±1.1
8- Provide complete sexual counseling during the postpartum period.	3.0±0.8	1.5±1.0	3.3±0.7	1.8±1.0
9- Provide complete sexual counseling for the elderly.	3.0±0.5	1.5±0.9	3.4±0.6	1.7±1.0
10- Identify sexual desire disorders in women.	2.8±0.6	1.5±0.9	3.2±0.7	1.6±1.0
11- Identify sexual motivation problems in women.	2.8±0.5	1.5±1.0	3.3±0.7	1.5±0.9
12- Identify orgasmic dysfunctions in women.	2.9±0.5	1.7±0.9	3.3±0.7	1.4±0.8
13- Identify vaginismus.	3.0±0.4	2.2±1.0	3.5±0.5	1.8±1.0
14- Identify dyspareunia.	3.1±0.3	2.3±1.0	3.5±0.5	2.0±1.0
15- Provide suitable treatment for sexual desire disorders.	3.0±0.3	1.5±0.8	3.2±0.7	1.3±0.9
16- Provide suitable treatments for sexual motivation problems in women.	2.8±0.6	1.4±0.8	3.1±0.8	1.3±0.8
17- Provide suitable treatments for orgasmic disorders in women.	2.7±0.5	1.5±0.8	3.1±0.8	1.2±1.8
18- Provide suitable treatment for vaginismus in women.	2.9±0.3	1.7±0.9	3.4±0.6	1.4±1.0
19- Provide suitable treatments for dyspareunia in women.	2.9±0.4	2.0±0.9	3.4±0.6	1.8±1.0
20- If a person with the mentioned disorders requires help, I refer her to the experts.	2.8±0.5	2.3±0.9	3.3±0.7	2.4±1.0
21- I fully understand the subject presented in the training course and have shown good functionality in the skill-related test.	2.7±0.6	1.6±0.8	2.8±0.7	1.4±0.8
22- I am familiar with scientific sources and relevant studies.	2.1±0.8	1.4±0.9	2.7±1.0	1.3±0.8
23- I know how to ask for help when I do not understand the subject or the related experiences.	2.6±0.5	1.8±1.1	2.9±0.9	1.9±0.8
24- As a participant in the workshop, I have a responsibility to learn the subject under discussion.	2.9±0.5	2.6±1.0	3.3±0.7	2.4±1.1
25- Total score	9.7±5.66	44.8±17.0	76.0±10.9	42.6±14.9

the intervention, the subjects' self-efficacy was excellent in 55.6% (n=20) of the students in the SP group and 14.8% (n=4) of the students in the non-SP group. The Chi-square test results showed a statistically significant difference between the two groups in terms of the frequency of self-efficacy level after the intervention (P=0.001).

The students' responses to each item (24 items) of the self-efficacy questionnaire were compared between the two groups by Mann-Whitney test. The results showed no significant difference between the two groups in any of the items of the questionnaire before training, whereas after two weeks of training, significant differences were found between the two groups in the scores of items other than 7, 8, 15, 17, 21, and 23 (in favor of the SP group) (P=0.001) (Table 3).

Discussion

In the present study, the effects of training by interactive workshops with and without SP on self-efficacy of midwifery students were compared. The results showed that the mean score of self-efficacy in providing sexual health counseling services was not significantly different between the midwifery students in the two groups before the intervention, and most of the students in both groups had moderate self-efficacy.

However, after the intervention, the mean score of self-efficacy was significantly higher in students who participated in SP-based workshops, compared to students who participated in workshops without SP. Also, the level of self-efficacy improved (to good and excellent levels) after the intervention in both groups.

In the SP group, 44.4% and 55.6% of the subjects showed good and excellent levels of self-efficacy, while in the non-SP group, 85.2% and 14.8% of the participants were at good and excellent levels, respectively. The results showed that applying SP in interactive workshops significantly increases the effectiveness of training. Although no previous research has compared the effects of workshops with and without SP on students' self-efficacy, several studies have assessed the effects of some active teaching methods on students' self efficacy.

In this regard, in a study by Jarzemyk and McGrath (2008), use of patient-based active training in the clinical environment improved the students' self-efficacy, compared to the control group (19). Also, in a study by Sinclair and Ferguson (2009), after the intervention, nursing students' self-efficacy in care provision for patients with acute conditions was higher in the experimental group (trained by lectures and SPs), compared to the pre-intervention period and the control group (trained only through lectures) (20).

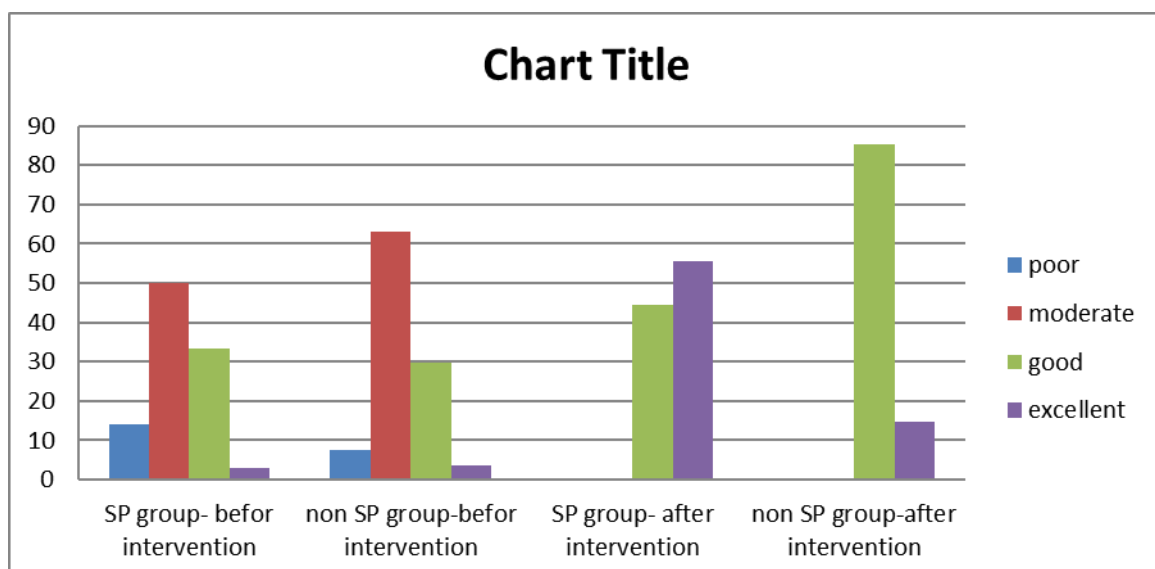


Diagram 1. Distribution of students in two groups, based on the levels of self-efficacy in providing sexual health counseling before and two weeks after the intervention

In consistence with the results of the present study, Pike (2010) showed that use of patient-based active training in the hospital environment could improve the self-efficacy and communicative skills of nursing students (21). Also, a study by Chlan showed that use of patient-based active training could improve the self-efficacy of nursing students and enhance their skills in applying complementary medicine (22).

On the other hand, Schwartz (2007) and Zeric (2003) revealed that use of patient-based methods did not have any advantages over traditional training methods and highlighted the need for further research on this subject (23, 24). Also, in a study by Lupi et al. (2012), workshops had no significant impact on the students' clinical competence, compared to the conventional method (25).

Although the three aforementioned studies evaluated the effects of SP on education, they differed from the present study in terms of dependent variables, study subjects, and educational content. The first mentioned study assessed the skills of medical students in the diagnosis and treatment of coronary heart disease and cardiopulmonary resuscitation, the second study evaluated the skills of first-year students of speech-language pathology in communication and diagnosis/treatment of language disorders, and the third study focused on medical students' communicative skills, ethics, and counseling for parturient women with special conditions.

Mohammadi Rizi et al. (2014) performed a study to compare the effects of training by demonstration and conventional methods on the self-efficacy of midwifery students. The results showed that the mean score of self-efficacy was significantly higher in the intervention group, compared to the control group. The improvement in self-efficacy score was 89% in the intervention group and 23% in the control group ($P=0.014$). The results showed that the demonstration method could promote midwifery students' self-efficacy in the management of labor stages (26).

In a study by Karbaschi and colleagues (2012) in Tehran, Iran on 50 first-year students of nursing, practical learning of students in both groups of presentation (25/41) and self-education (16/19) significantly improved,

indicating the influence of both educational methods on students' learning. The majority of participants in the presentation group were at excellent or acceptable learning levels, while in the self-education group, most subjects were at low and moderate levels (27).

Moreover, the results of two previous studies showed the effects of interactive methods in comparison with the conventional method on midwifery students' skills, self-confidence, and anxiety in intrauterine device insertion. In these studies, the students trained by role playing or the simulation method had significantly better skills than the control group. These findings revealed the effectiveness and advantages of interactive teaching methods (14, 28). Previous studies have also shown that active training, based on the learners' personal experiences, significantly increases the rate of learning, personal satisfaction in communication, and interpersonal skills (29, 30).

Modifications in learning systems based on the concepts of self-esteem and self-efficacy are among important strategies to bridge the gap between knowledge and practice (31). In educational systems, interactive methods of training should be taken into account and more attention should be paid to the impact of these methods on self-efficacy as a means of improving students' skills and performance (26).

One limitation of this study was the difference in students' mental ability to learn the presented materials, which could eventually influence their knowledge. This shortcoming was controlled as much as possible by random allocation of samples to the two groups. Also, the major sample dropout in one group was another limitation of this study; however, the confounding factors remained unaffected in the two groups.

Conclusion

The results of the present study showed the greater effectiveness of interactive SP-based workshops, compared to workshops without SPs in improving students' self-efficacy in sexual health counseling, which is a prerequisite for attaining and improving professional independence, skill acquisition, and performance. Therefore, this method could be used by instructors to modify the educational programs and promote students' self-efficacy.

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Conflicts of Interest

The authors declare no conflicts of interest.

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