Original Article

The effects of lecture-based and role-playing educational methods on patient communication skills: a comparative study on nursing students

Shima Daman [1], Mohsen Faseleh Jahromi [1*] Ali Dehghani [1]

[1] Department of Nursing, School of Nursing & Midwifery, Jahrom University of Medical Sciences, Jahrom, Iran.
***Corresponding author and reprints: Mohsen Faseleh Jahromi,** Assistant Professor, Department of Nursing, School of Nursing & Midwifery, Jahrom University of Medical Sciences, Jahrom, Iran.
Email: mfaseleh@jums.ac.ir
Received: 24 Aug 2022 **Accepted:** 21 Nov 2022 **Published:** 11 Dec 2022

Abstract

Background: Patient communication skills are considered as one of the quality standards of nursing care. Educational methods play a major role in increasing nursing students' communication skills. Thus, the present study was conducted to evaluate and compare the effects of lecture-based and role-playing educational methods on patient communication skills in nursing students.

Methods: The present study was a quasi-experimental study. The statistical population of the study consisted of 42 third-year nursing students of Jahrom Nursing and Paramedical School in 2020. They were selected by using a census method and were randomly assigned to role-playing and lecture-based educational groups. Communication skills educations were held in three two-hour sessions for three weeks in both groups. Data were collected using a communication skills checklist before and one month after the intervention and analyzed using independent t-test, paired t-test and chi-square and in SPSS-21 software.

Results: The mean scores of patient communication skills in the role-playing and lecture-based educational groups were not statistically significant before the intervention ($P > 0.05$). However, after the intervention, the mean scores of patient communication skills in the students of the role-playing education group (67.38 ± 8.71) were higher compared to students of the lecture-based education group (47.00 ± 12.82) and this difference was statistically significant ($p < 0.05$).

Conclusion: Both educational methods have an effect on increasing patient communication skills in nursing students, but role-playing education was more effective than lecture-based education.

Keywords: Communication; Education; Lecture; Patients; Role Playing; Students, Nursing.

Cite this article as: Daman S, Faseleh Jahromi M, Dehghani A. The effects of lecture-based and role-playing educational methods on patient communication skills: a comparative study on nursing students. *Soc Determinants Health*. 2022;8(1):1-10. DOI: http://dx.doi.org/10.22037/sdh.v8i1.39231

Introduction

Communication skills are behaviors that help to express emotions and needs and achieve interpersonal goals (1) that lack of them can cause anxiety, depression, low self-esteem, and reduced professional achievement (2-5). There are situations in which a person has to trust another person or persons that do not know them. One of these situations is the relationship between the patient and the nurse (6). Patient communication is a process in which the patient and the nurse

interact as participants and each takes an active part in the exchange of information (7).

Appropriate communication skills in nursing help to better understand the needs and problems of clients, reduce clients' worries, reduce errors and increase clients' satisfaction and even increase the speed of recovery of patients (8). Most medical students, including nursing students, perform poorly in communicating with the patient (9, 10). Nursing students' communication skills, especially in the area of verbal and non-verbal communication, have been poorly assessed (11) and results of a study showed that the level of communication skills of medical students was at a moderate level (12).

Researches showed that more than half of the students had poor communication skills (13) and it is essential to select an appropriate teaching method in clinical disciplines such as nursing due to their interaction with the patient and the need to learn communication skills to communicate with patients. The issue of quality of education is one of the most important concerns of educational centers, especially universities (14). Thus, the professors should use various teaching methods in accordance with the educational goals (15).

Traditional teaching methods such as lectures are more teacher-centered and passive methods, while modern methods are more active and student-centered (16). Traditional passive teaching has been replaced by more active methods such as role-playing (17). It is one of the effective teaching methods leading to active learning (18, 19). In role-playing, students establish an emotional connection with playing, and since all students' senses are used in watching the play, the learning is done better (20). Since the application of role-playing in nursing and clinical education has been reported at a very low level and the type of educational method is effective in promoting patient communication skills in students, the researchers of this study decided to investigate the effects of lecture-based and role-playing educations on patient communication skills in nursing students to select the teaching method that is more effective in learning communication skills.

Methods

The present study was a quasi-experimental study conducted to evaluate and compare the effects of lecture-based and role-playing educational methods on patient communication skills in nursing students. The sample size of this study included all 44 third-year nursing students of Jahrom Nursing and Paramedical School in 2020.

Due to the small number of students eligible to enter the study, all of them were selected as a research sample by a census method and were randomly assigned to one of the lecture-based or role-playing educational methods.

Accordingly, the students with odd numbers were assigned to lecture-based group (22 people) and students with even numbers were assigned to role-playing method (22 people). Inclusion criteria of the study were willingness to participate in the study, not participating simultaneously in other studies with similar subject, and not participating in communication skills training workshops during last 6 months. Exclusion criteria included absence of more than two sessions in communication skills education sessions in the form of lecture-based and role-playing methods and unwillingness to participate in the study.

Since the condition of patients in terms of Coronavirus status and communication is more appropriate in the surgical and post-CCU wards of Ostad Motahhari and Peymanieh hospitals affiliated to Jahrom University of Medical Sciences, they were selected as the research environment for this study. Also, due to the existence of patients with Covid-19 in the post-CCU ward at the time of intervention by role-playing method, the research environment for the role-playing education group was

considered to be only the surgical ward for this group. Also, educational classes were held in Ostad Motahhari and Peymanieh teaching hospitals affiliated to Jahrom University of Medical Sciences.

The educational content is summarized as follow:

Session 1: Familiarity with the definition of communication, types of communication, components of the communication process and communication noise, communication levels, communication forms, types of communication, and effective factors in communication.

Session 2: Communication barriers, ways to improve the message and eliminate communication barriers, patient communication with special needs, recording communication, communication tools and interpersonal communication skills (interaction behavior analysis)

Session 3: Familiarity with the Calgary-Cambridge guide (starting the session, collecting information, communicating with patient, describing the illness and planning for treatment, ending the sessions

The method of the work in the lecture group was question & answer and interactive lecture method, in which teaching aids such as projector, whiteboard and PowerPoint were used. A master student (researcher) provided the same content as a play for the role-playing group. The method of work in the role-playing group was as follows:

Step 1 (group preparation): First, the objectives and method of evaluation were explained to the students. Also, before the educational classes, the students' communication skills with the patient and caring behaviors were examined.

Step 2 (selecting providers): Five students from each group were selected as role players (patient, patient companion, instructor, ward manager, student 1 and student 2). Then, pre-prepared scenarios were taught to the selected students. After rehearsing and gaining personal preparation in the presence of researcher and approval, they were prepared to play their role. Step 3 (Staging): In the staging step, one of the wards of Ostad Motahhari Teaching Hospital was selected as the stage.

Step 4 (Preparing the viewers): To prepare the viewers, procedure, tasks and the way of asking questions and discussing were explained to other students in the same group.

Step 5 (Playing the role): On the fourth or fifth day, the role was played for 45 minutes out of formal classes time.

Step 6 (Discussion and Evaluation): The discussion and evaluation was done by the viewers and all points were applied and role-playing was repeated and it was discussed and re-evaluated.

Step 7 (Generalizing and presenting of experiences to other situations and people): The communication skills of nursing students in the patient's bedside were re-assessed by the observer, based on the checklist in Ostad Motahhari and Peymaniyeh teaching hospitals individually in the lecture-based and role-playing groups by the evaluation team one month after the training classes. Sessions of both educational methods (role-playing, lecture) were held in teaching hospitals of Ostad Motahhari and Peymanieh affiliated to Jahrom University of Medical Sciences.

Data collection tools in the present study included two sections, including one questionnaire with five questions (age, gender, marital status, no history of participating in workshop and patient communication seminar during the last 6 months) and one communication skills checklist with 29 items in 5 sections: interview initiation (7 questions), interactive skills (8 questions), problem follow-up (5 questions), description of the patient's current illness (5 questions) and ending the interview (4 questions). Sabzevari et al., standardized this checklist in 2005 (21). The scientific validity of the

research tool was confirmed by the content validity method and with the opinion of ten professors of Tehran and Kerman universities, so that the validity coefficient of the items varied from 0.87-1 and the total coefficient of the tool was 0.9.

The results of observations were scored in three structures of yes, no and no problem for each item. The scoring scale was a 4-point scale ranging from 0 to 3, so that the option "desirable" received score 3, the option "semi-desirable" received score 2, the option "undesirable" received score 1 and the option "no" received score 0 and the option "no problem" was eliminated from the calculation (because the calculation of the score was based on the number of observations, by eliminating the unobserved items, the effect of non-observation was different from the zero scale and in fact became ineffective).

The sum of scores were obtained from different domains and the whole checklist for each person, and finally it was reported as a percentage. In fact, the percentage obtained for each domain expressed the degree of desirability. According to the formula, the number of questions was obtained based on the performance of nursing students on the patient's bedside, which were recorded as "yes" (desirable, semi-desirable, and undesirable) and "no" in the checklist and the maximum score given to each question was score 3. Therefore, according to the following formula, we determined the desirability percentage for each checklist domain.

$$\frac{\text{sum of scores obtained} \times 100}{\text{number of questions} \times \text{maximum score given to each question}}$$

The mean scores of patient communication skills and its domains vary from 0-87.

To determine the reliability of the research tool, the inter-rater reliability method was used.

Accordingly, the researcher and one of the clinical instructors simultaneously observed and scored the commination skills of 20 students.

The coefficient of agreement (kappa coefficient) between the two observers for the items was obtained at 0.7-1 and it was obtained at 0.94 for total items. To assess the internal consistency of the tool, Cronbach's alpha coefficient was used, which was obtained between 0.9 and 9.94 and it was obtained at 0.92 for total items (21). This tool was also used in the study conducted by Baghcheghi et al., and its validity and reliability (Cronbach's alpha equal to 0.85) were confirmed (22). The researcher divided the students into two groups of role-playing and lecture-based educational methods and measured the variables of communication skills in students before and one month after the intervention.

In the present study, ethical considerations such as obtaining permission of the ethics committee of Jahrom University of Medical Sciences (IR.JUMS.REC.1399.056), stating the objectives of study, confidentiality of information, freedom to participate in the study, and obtaining informed written consent of nursing students to participate in the study were observed in this study. After collecting and coding the data, they were analyzed in SPSS-21 software at a significant level of 0.05 and the research hypothesis was analyzed based on the information obtained from paired t-test and independent t-test.

Results

In the lecture-based group, one of the students did not participate in two sessions of educational classes, and in the role-playing group, one of the students did not participate in any of the training classes. Thus, these two students were excluded from the study. Table 1, shows the frequency of underlying variables in the lecture-based and role-playing groups. They are similar in terms of underlying variables (The ward of internship, gender, marriage, age) before the intervention. Results showed that most students in role-playing group were male (61.9%) and most students in lecture-based group were

Table 1. Frequency of underlying variables in lecture-based and role-playing education groups

Underlying variables		Educational Group				p-value
		Lecture-based (n=21)		Role-playing (n=21)		
		f	%	f	%	
Ward of internship	Surgery	18	85.7	21	100.0	0.352
	post CCU	3	14.3	0	0.0	
Gender	male	10	47.6	13	61.9	0.072
	female	11	52.4	8	38.1	
Marital status	single	19	90.5	15	71.4	0.238
	married	2	9.5	6	28.6	
History of participating in workshop and seminar	no	21	100.0	21	100.0	-
	yes	0	0.0	0	0.0	
Age		SD ± mean		SD ± mean		*0.343
		22.71 ±2.24		22.76 ± 1.22		

*Mann-Whitney test was performed

female (52.4%). Most of the students in the lecture-based group (90.5%) and in the role-playing group (71.4%) were single. None of the students had a history of participating in the workshop and communication skills seminar in the last six months. Table 1, presents other underling variables of students separately for two groups.

Based on Table 2, the results of independent t-test showed that before the intervention, there was no statistically significant relationship between the mean scores of communication skills in students of lecture-based and role-playing groups (p= 0.882). However, one month after the intervention, the results of independent t-test showed that there was a statistically significant relationship between the mean scores of communication skills of students of lecture-based and role-playing groups (p = 0.001).

In the lecture-based and role-playing educational groups, the mean communication skills with the patient after the intervention increased compared to before the intervention. The results of statistical analysis with paired t-test showed that the means of communication skills in students, one month after the intervention compared to before the intervention, were significantly different (p <0.05). Accordingly, the mean score of communication skills in the role-playing education group was statistically better than the lecture-based education group one month after the intervention.

The results of independent t-test showed that the mean scores of communication skills in the dimensions of interview initiation skills, interactive skills, problem follow-up, description of the patient's current illness and ending the interview were not significantly different between lecture-based and role-playing groups (p >0.05) Table 3. However, the results showed that there was a statistically significant difference between the lecture-based and role-playing groups in terms of interview initiation skills, interactive skills, problem follow-up, description of the patient's current illness, and ending the

Table 2. Comparison of the mean scores of communication skills in the lecture-based and the role-playing groups before and one month after the intervention

Variable	Time	Group				p-value
		Lecture-based education group		Role-playing educational method		
		mean	SD	mean	SD	
Patient communication skills	Before	33.67	7.90	34.05	8.56	0.882
	One month after intervention	*47.00	12.28	*67.38	8.71	0.001

*Intragroup comparison before and after intervention with P-value less than 0.05 (paired t-test or nonparametric Wilcoxon test)

Table 3. The mean score of communication skills in students based on different domains of communication skills in lecture-based and role-playing groups before and one month after the intervention

Variable	Time	Education group				*P*-value
		lecture-based		role-playing		
		mean	SD	mean	SD	
Interview initiation	Before	8.95	3.06	8.76	2.91	0.837
	After	11.86	3.05	15.33	3.75	0.003
	P-value	0.003		0.001		
Intercative skills	Before	12.14	3.92	13.52	4.06	0.268
	After	17.19	5.17	23.10	1.67	0.001
	P-value	0.009		0.001		
Follow-up problem	Before	7.43	3.11	8.62	2.73	0.195
	After	9.76	3.18	13.33	2.33	0.001
	P-value	0.015		0.001		
Description of the patient's current illness	Before	3.48	2.60	2.33	2.46	0.151
	After	5.48	3.56	8.57	2.94	0.004
	P-value	0.029		0.001		
Ending the interview	Before	1.67	2.11	0.81	1.60	0.160
	After	2.71	2.15	7.05	3.07	0.001
	P-value	0.284		0.001		

interview one month after the intervention. Accordingly, the mean score of communication skills and its dimensions in the role-playing group was significantly higher than that of lecture-based group.

The results also showed that in the role-playing group, the mean score of interview initiation skills, interactive skills, problem follow-up, description of the patient's current illness, and ending the interview one month after the intervention compared to before the intervention, increased significantly ($p < 0.05$) Table 3. The results showed that in the lecture-based group, the mean scores of interview initiation skills, interactive skills, problem follow-up and description of students' current illness were significantly increased one month after the intervention compared to before the intervention ($p<0.05$); Table 3. However, the results of paired t-test showed that in the lecture-based group, the mean of ending the interview one month after the intervention was not significant compared to before the intervention ($p = 0.284$).

Discussion

The results of data analysis showed that both educational methods (role-playing and lecture-based educational groups) were effective in increasing communication skills in nursing students after the intervention. However, the role-playing educational method was more effective in improving patient communication skills in nursing students than the lecture-based educational method. One of the strengths of this study was that the role-playing educational method was performed in a hospital environment and in difficult Covid-19 conditions, and to assess communication skills of nursing students in both groups (role-playing and lecture-based methods), the patient communication skills checklist was used in the hospitalized patients' bedside.

This result is in line with the results of some interventional studies, which found role-playing and lecture-based educational methods increased patient communication skills in nursing students and students who learned communication skills through role-playing method viewed role-playing as a useful way for repeating, observing, discussing, and considering roles in line with other educational programs, and this method was effective in improving patient communication skills (23). Also, thestudies conducted by Hausberg et al., showed that lecture-based method was effective in communicating with patients in nursing students (24). The similarity of these

studies is in using lecture-based and role-plying educational methods and the role and effect of these two methods on patient communication skills in nursing students. However, the duration of education and the level of effectiveness of the educational intervention in the mentioned studies were different from those of present study.

The educational intervention in the present study was performed based on educational classes in 3 two-hour sessions and by using lecture and role-playing methods during one month and led to increased communication skills in nursing students, but time, place, and educational content of educational interventions were different in other studies. Therefore, different effectiveness of educational intervention on communication skills was observed in nursing students. In line with the present study, the results of a study conducted by Burns et al., showed that the role-playing educational method led to an increase in learners' communication skills (25).

In line with the present study, the results of studies conducted in this regard have shown that the role-playing educational method is more effective than the lecture-based educational method in presenting materials for students. Role-playing method is more important and effective than the lecture-based method and other common methods of teaching communication, since student's is placed in an appropriate environment than the classroom and establishes more comprehensive communication with the patient (26). In line with the present study, the results of studies conducted around the world showed that role-playing education in all areas of communication and performance of nursing students is more effective than conventional educational methods and the mean score of communication skills and its domains was higher in the students of role-playing method than the students of the lecture-based education. These results are in line with the results of our study (27-29).

The greater effectiveness of role-playing method than the lecture-based method in the present study and other studies may be justified by the fact that role-playing method creates mental readiness for students in learning, because it makes the technical skills of teaching in the environment appear real in an environment similar to the clinical environment and reduces stress reduction in students. Furthermore, by using this method, students not only practice their clinical skills, but also their communication skills are strengthened and experience the patient's reaction to care, which ultimately affects all the cares provided by students to patients (30, 31). Thus, it can be stated that role-playing provides a living example of human behavior that students use as a tool to understand emotions and gain specific insights into their values (32).

Simulation and role-playing educational methods were introduced several years ago, but it has been reported that students still do not have the basic skills needed in clinical environments (33). In this regard, in our study, the role-playing educational method was provided in the real environment of hospital and the results of our study, which were in line with all studies conducted in this area, confirmed the effectiveness of using the role-playing method on communication skills of nursing students. The results of a study conducted by Kurniawan et al., showed that group implementation of role-playing educational method and symbolic modeling was effective in improving students' interpersonal communication (34).

Consistent with results of our study, the results of a study conducted by Karbasi et al., showed that educating the patient communication through role-playing could improve the self-efficacy of nursing students (23). Extensive studies have been conducted so far on the effect of educating communication with patient education by various methods, including role-playing, which has had positive effects on the

educational outcomes and experiences of medical students.

Recommendation

It is suggested that researchers in the future also examine the following aspects:

Investigating and comparing simulation-based training methods with role-based training methods. Investigating the effect of the role-based education method on patient satisfaction with students' activities in the ward. The effect of the role-based education method on the satisfaction level of professors and hospital wards staff on student performance. Investigating the effect of the role-based education method on the motivation and interest of nursing students in this field. Review of teaching methods based on role-playing on the scores obtained at the end of each semester by nursing students.

Study Limitations

Spending much time to justify students about the role-playing method and the way of implementing it: Some nursing students did not consider role-playing method seriously due to the dramatic and artistic nature of this method. In this study, it was not possible to control all the influencing factors. Cultural, social, religious, etc. differences are among the factors that are influential in establishing patient communication that it was not possible to control all of them, the statistical population of this study was limited to nursing students of Jahrom University of Medical Sciences.

Conclusion

Based on the results of the present study, both educational methods were effective in increasing communication skills in nursing students, but the role-playing method was more effective than the lecture-based method. Thus, it is recommended for officials of the university and the relevant administrators to provide an opportunity for students by using active educational methods and increasing students' participation in discussions and use the role-playing educational method as much as possible, in other nursing students' courses.

Author's contribution

Shima Daman and Mohsen Faseleh Jahromi developed the study concept and design. Ali Dehghani acquired the data. Shima Daman and Mohsen Faseleh Jahromi analyzed and interpreted the data, and wrote the first draft of the manuscript. All authors contributed to the intellectual content, manuscript editing and read and approved the final manuscript.

Informed consent

Questionnaires were filled with the participants' satisfaction and written consent was obtained from the participants in this study.

Funding/financial support

There is no funding.

Conflict of interest

The authors declare that they have no conflict of interests.

References

1. Anbari Z, Godarzi D, Siros A, Mahdian F. Design, Implementation & Evaluation of an Educational Program on Improving the Communication Skills with Patient based on WHO in Interns. Iranian Journal of Medical Education. 2012;12(5):308-316. http://ijme.mui.ac.ir/article-1-1958-en.html
2. Ahmadi A, Ahmadi M, Elyasi F, Ahmadi A, Ahmadi N. The Relationship of Occupational Burnout and Communication Skills in Nurses. J Mazandaran Univ Med Sci. 2013;23(106):130-139. http://jmums.mazums.ac.ir/article-1-1932-en.html
3. Mırzayı O, Vaghei S, Koushan M. The Effect of Communicative Skills on The Perceived Stress of Nursing Students. Journal of Sabzevar University of Medical Science. 2010;17(2):88-95. http://jsums.medsab.ac.ir/article_63.html?lang=en
4. Rhezaii S, Hosseini A, Fallahi M. Evaluating Impact of Communication Skills Training on Level of Job Stress Among Nursing Personnel Working At Rehabilitation Centers In Cities: Ray- Tehran-Shemiranat. Tehran University of Medical Sciences. 2006;64(1):21-26. http://tumj.tums.ac.ir/article-1-999-en.html
5. Amini M, Amini M, Nabiee P, Delavari S. The Relationship Between Emotional Intelligence and

Communication Skills in Healthcare Staff. Shiraz E-Medical Journal. 2018;20(4):e80275. https://doi.org/10.5812/semj.80275.
6. Khatib Zanjani N, Moharreri M. Assessing the Nurses' Knowledge and Awareness of Effective Verbal Communication Skills. Interdisciplinary Journal of Virtual Learning in Medical Sciences, 2012;3(1):11-20. https://ijvlms.sums.ac.ir/article_46032.html
7. Hemmati Maslakpak M, Sheikhbaklu M, Baghaei R, Sheikhi N. Study the performance of nurses communication with patients in special education and non-teaching hospital, urmia. Nursing and Midwifery Journal. 2012;10(2):286-294. http://unmf.umsu.ac.ir/article-1-833-fa.html
8. Chan EA, Wong F, Cheung MY, Lam W. Patients' perceptions of their experiences with nurse-patient communication in oncology settings: A focused ethnographic study. PLoS One. 2018;13(6):e0199183. https://doi.org/10.1371/journal.pone.0199183
9. Mullan BA, Kothe EJ. Evaluating a nursing communication skills training course: The relationships between self-rated ability, satisfaction, and actual performance. Nurse Educ Pract. 2010;10(6):374-8. https://doi.org/10.1016/j.nepr.2010.05.007
10. Kennard DK. Health Literacy Concepts in Nursing Education. Nurs Educ Perspect. 2016;37(2):118-9. https://pubmed.ncbi.nlm.nih.gov/27209875/#:~:text=The%20ability%20to%20learn%2C%20retain,and%20awareness%20about%20health%20literacy.
11. Mirzaei- Alavijeh M, Motlagh M, Hosseini S, Jalilian F. Nursing Students Communication Skills with Patients in Kermanshah University of Medical Sciences. Research in Medical Education. 2017;9(3):54-47. http://rme.gums.ac.ir/article-1-539-en.html
12. Barati M, Moeini B, Samavati A, Salehi O. Assessment of communication skills level among medical college students: verbal, listening, and feedback skills. Nursing and Midwifery Journal. 2012;10(2):145-154. http://unmf.umsu.ac.ir/article-1-818-en.html
13. Shahjooi S, Jalalmanesh S, Ebrahimi E. Relationship between critical thinking and interpersonal communication skills in nursing students of Azad University Tehran medical Branch. Journal of Nursing Education. 2014;3(3):1-13. http://jne.ir/article-1-348-en.html
14. Clancy TR, White-Delaney C, Mako M. Improving the academic programming process in a school of nursing using computational modeling and simulation. Stud Health Technol Inform. 2009;146(1):587-592. https://pubmed.ncbi.nlm.nih.gov/19592910/
15. West C, Usher K, Delaney LJ. Unfolding case studies in pre-registration nursing education: lessons learned. Nurse Educ Today. 2012;32(5):576-580. https://doi.org/10.1016/j.nedt.2011.07.002
16. Ahsen NF, Batul SA, Ahmed AN, Imam SZ, Iqbal H, Shamshair K, Ali H. Developing counseling skills through pre-recorded videos and role play: a pre- and post-intervention study in a Pakistani medical school. BMC Med Educ. 2010;10(1):7-10. https://doi.org/10.1186/1472-6920-10-7
17. Trail Ross ME, Otto DA, Stewart Helton A. Benefits of Simulation and Role-Playing to Teach Performance of Functional Assessments. Nurs Educ Perspect. 2017;38(1):47-48. https://doi.org/10.1097/01.NEP.0000000000000095
18. Chan ZC. Role-playing in the problem-based learning class. Nurse Educ Pract. 2012;12(1):21-7. https://doi.org/10.1016/j.nepr.2011.04.008
19. Madi Neshat M, Lashkardost H, Tabatabaee Chahar M. Investigating the effect of role play scenarios on changing mood and empathy among nursing students in psychiatry. Journal of Medical Education Development & Development Center. 2013;10(4):431-438.
20. Nestel D, Tierney T. Role-play for medical students learning about communication: Guidelines for maximising benefits. BMC Med Educ. 2007;7(2):3-14. https://doi.org/10.1186/1472-6920-7-3
21. Sabzevari S, Soltani Arabshahi K, Shekarabi R, Koohpayehzadeh J. Nursing Students' Communication with Patients in Hospitals Affiliated to Kerman University of Medical Sciences. Iranian Journal of Medical Education. 2006;6(1):43-49. http://ijme.mui.ac.ir/article-1-137-en.html
22. Baghcheghi N, Koohestani HR, Rezaei K. A comparison of the cooperative learning and traditional learning methods in theory classes on nursing students' communication skill with patients at clinical settings. Nurse Educ Today. 2011;31(8):877-82. https://doi.org/10.1016/j.nedt.2011.01.006
23. karbasi F, khatiban M, Soltanian A. The Effects of Teaching the Communication Skills to Patients Through Role-Playing Method on Nursing Students' Self-Efficacy. Avicenna J Nurs Midwifery Care. 2019;26(6):357-365. http://nmj.umsha.ac.ir/article-1-1866-en.html
24. Hausberg MC, Hergert A, Kröger C, Bullinger M, Rose M, Andreas S. Enhancing medical students' communication skills: development and evaluation of an undergraduate training program. BMC Med Educ. 2012;12(1):16-27. https://doi.org/10.1186/1472-6920-12-16
25. Burns HK, O'Donnell J, Artman J. High-fidelity simulation in teaching problem solving to 1st-year nursing students: a novel use of the nursing process. Clinical Simulation in Nursing. 2010;6(3):e87-e95. https://doi.org/10.1016/j.ecns.2009.07.005
26. Delnavaz S, Hassankhani H, Roshangar F, Dadashzadeh A, Sarbakhsh P, Ghafourifard M, Fathiazar E. Comparison of scenario based triage education by lecture and role playing on knowledge

and practice of nursing students. Nurse Educ Today. 2018;70(1):54-59. https://doi.org/10.1016/j.nedt.2018.08.006

27. Delnavaz S, Hassankhani H, Roshangar F, Dadashzadeh A, Sarbakhsh P, Ghafourifard M, Fathiazar E. Comparison of scenario based triage education by lecture and role playing on knowledge and practice of nursing students. Nurse Educ Today. 2018;70(1):54-59. https://doi.org/10.1016/j.nedt.2018.08.006
28. Noh YG, Lee I. Effect of stepwise communication education program using SBAR among nursing students: focusing on scenarios and nursing case-based role playing. The Journal of Korean Academic Society of Nursing Education. 2018;24(2):115-26. https://doi.org/10.1002/nop2.537
29. Ershad Sarabi R, Salmani M, Danesh E, Farvahari A. Comparing the Effect of Role-playing and Lecturing on Learning the Communication Skills Among Health Workers of Kerman Health Centers, Iran. Strides in Development of Medical Education, 2020;17(1):1-5. https://doi.org/10.22062/sdme.2020.91005
30. Larti N, Ashouri E, Aarabi A. The effect of an empathy role-play program for operating room nursing students. J Educ Eval Health Prof. 2018;15(1):29-36. https://doi.org/10.3352/jeehp.2018.15.29
31. Gutiérrez-Puertas L, Márquez-Hernández VV, Gutiérrez-Puertas V, Granados-Gámez G, Aguilera-Manrique G. Educational Interventions for Nursing Students to Develop Communication Skills with Patients: A Systematic Review. Int J Environ Res Public Health. 2020;17(7):2241. https://doi.org/10.3390/ijerph17072241
32. Baghdari N, Torkmannejad Sabzevari M, Karimi Moonaghi H, Rad M, Amiri M. The Effect of Educational Approaches on Knowledge and Attitude of Midwifery Students in Breaking bad News to Patients. J Med Educ Dev. 2016;9(22):12-20. http://zums.ac.ir/edujournal/article-1-623-en.html
33. Ferrari A, Spoletini P, Bano M, Zowghi D. SaPeer and ReverseSaPeer: teaching requirements elicitation interviews with role-playing and role reversal. Requirements Engineering. 2020;25(4):417-38. https://doi.org/10.1007/s00766-020-00334-0
34. Kurniawan T, Sugiyo S, Purwanto E. TThe Implementation of Psychoeducational Group with Role Play and Symbolic Modelling Techniques to Improve the Interpersonal Communication of the Guidance and Counseling Students of Universitas IKIP Veteran Semarang. Jurnal Bimbingan Konseling. 2020;9(1):51-55. https://journal.unnes.ac.id/sju/index.php/jubk/article/view/35610