

Access this article online
Quick Response Code:

Website: www.jehp.net
DOI: 10.4103/jehp.jehp_237_18

Comparison of the effect of standardized patient-based training with team-based learning on the knowledge of midwifery students in providing services to victims of rape

Zahra Norouzi, Farzaneh Jafarnejad¹, Talaat Khadivzadeh², Habibollah Esmaily³, Arya Hedjazi⁴

MSc of Midwifery, Nursing and Midwifery Care Research Center, Mashhad University of Medical Sciences, Mashhad, ¹MSc of Midwifery, Faculty Member and Instructor of Midwifery, Nursing and Midwifery Care Research Center, Mashhad University of Medical Sciences, Mashhad, ²Assistant Professor in Reproductive Health, Nursing and Midwifery Care Research Center, Mashhad University of Medical Sciences, Mashhad, ³Ph.D Biostatistics, Professor, Social Determinants of Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran, ⁴Forensic Medicine Specialist, Legal Medicine Research Center, Legal Medicine Organization, Tehran, Iran

Address for correspondence:

Mrs. Farzaneh Jafarnejad, MSc of Midwifery, Faculty Member and Instructor of Midwifery, Nursing and Midwifery Care Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.
E-mail: Norouzi.zahra96@gmail.com

Received: 28-07-2018

Accepted: 20-10-2019

Abstract:

BACKGROUND: Rape is a widespread and important issue in the field of public health, and its victims require comprehensive and gender-sensitive health services. Healthcare providers, especially midwives, play an important role in the diagnosis and treatment of rape, and improving their knowledge has been an essential factor in enhancing the quality of service provided.

OBJECTIVE: The objective of the study is to compare the impact of standardized patient-based training and team-based learning on midwifery students' knowledge for providing services to rape victims.

MATERIALS AND METHODS: In this randomized quasiexperimental study, 75 midwifery students of Mashhad School of Nursing and Midwifery were selected using available sampling method and were assigned to two groups of standardized patient-based training ($n = 38$) and team-based learning ($n = 37$). After performing pretest, standardized patient-based training group and team-based learning group were trained separately for 6 h. One week after intervention, posttest was performed. Data were collected and analyzed using the Academic Specifications Questionnaire and the Knowledge Assessment Questionnaire. Significance level was considered at $P < 0.05$.

RESULTS: The two groups were homogeneous in terms of demographic characteristics. There was no statistically significant difference between the two groups in the posttest in terms of knowledge score ($P = 0.079$). However, there was a statistically significant difference in the level of knowledge between the two groups ($P = 0.037$).

CONCLUSIONS: Given the effectiveness of both standardized patient-based training method and team-based learning method on enhancing midwifery students' knowledge for providing services to rape victims, these methods can be used in students' education.

Keywords:

Education, knowledge, learning, patient simulation, rape, simulation training

Introduction

Sexual violence against women as a major problem in the international community has significant effects on reproductive and sexual health. Rape is referred to as completely unlawful intercourse by

forcing the victim. Between one-fifth and one-seventh of American women have been the victims of rape. Complications of rape include the possibility of unwanted pregnancies and sexually transmitted diseases; moreover, its psychological effects include depression, substance abuse,

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Norouzi Z, Jafarnejad F, Khadivzadeh T, Esmaily H, Hedjazi A. Comparison of the effect of standardized patient-based training with team-based learning on the knowledge of midwifery students in providing services to victims of rape. *J Edu Health Promot* 2019;8:267.

posttraumatic stress disorder, and suicide.^[1,2] Victims require comprehensive, gender-sensitive healthcare services to cope with the physical and psychological consequences of rape, and healthcare providers play an important role in the diagnosis, treatment, and prevention of rape.

In many countries, including Iran, there is a wide gap between the healthcare needs of rape victims and existing level of healthcare provided. Studies have shown that in some countries, there is a comprehensive and overall plan for providing services for rape victims, and a trained medical staff can greatly meet the treatment needs of victims of sexual violence. Moreover, trained medical staffs can greatly meet the needs of victims in treatment in sexual violence services. The midwives and other medical staff have undeniable effects on these victims, and their awareness of the victims' health and treatment needs and knowing how to overcome them plays an important role in providing clinical services.^[2] Midwifery students, as potential medical staff, must also have a high quality of education to provide these women with adequate and safe care.^[3] Midwifery students, as potential medical staff, must also have a high-level training quality to deliver adequate and safe cares to women.^[3]

Currently, in Iran, there is no specific curriculum of training among midwives on sexual assault and provision of healthcare services to these victims. Therefore, midwifery graduates do not have the necessary knowledge.^[4] Jina *et al.* believe that the development and implementation of postrape care training programs for healthcare providers is of utmost importance and that the quality of midwifery students' education is emphasized to achieve high quality of care and women's health and develop training quality for midwifery students.^[5,6] Inadequate training and lack of active teaching methods can be proposed as a factor in students' lack of knowledge and skills.^[7,8] In fact, the quality of learning depends to a large extent on the quality of education, and familiarity with the methods and techniques of teaching and applying them make the goals of education easier to achieve in a shorter period of time.^[9] Currently, slideshow lectures are the main education way in medical schools. This method is mainly useful for achieving educational goals at lower levels of cognitive domain; however, it has been unable to train medical students to perform their professional duties.^[10] Educational psychologists believe that learning takes place better and its impact is more lasting when students are activated and engaged more in the learning process.^[11] Among the active teaching methods, we can refer to role playing, participatory learning, group discussion, and simulation. A team-based learning method promotes students' learning quality by

enhancing problem-solving skills. This method ensures that students are well-prepared in the classroom. His method, in addition to providing an active and collaborative learning environment, does not require a small workgroup space and an increase in the number of teachers and can be implemented with a large classroom and a teacher (over 10 students and one teacher).^[12] The results of Vaezi *et al.*'s study also showed that 97.7% of students with a team-based learning method had a better understanding of the content of the lesson. This method has also resulted in improving communication skills and better understanding of concepts, facilitating learning and enhancing confidence in most people.^[12] Although team-based learning is associated with active student participation and leads to appropriate learning, there are limitations such as difficulty in classroom management, the time required, and weak or shy students' disinterest to participate in the discussion.^[13] Another active learning technique is simulation, which spurs students to strive for self-knowledge and can be an alternative for lecturing to deliver content to students.^[14] A group of simulators in medical education are standardized patient or simulated patient. this person has learned to role-play a patient, or is a real patient who applies his or her biography to teach, evaluate, and practice the communication skills of medical personnel.^[15] This method allows learning, learning to think, and applying knowledge in different fields; however, there are limitations such as the time required to prepare the scenarios, the lack of realism in the scenarios, the cost, and the learners's anxiety when using it.^[7,16] The results obtained by Fitzpatrick *et al.* showed that the use of simulation technology was effective in enhancing learners' knowledge in forensic examinations of sexual assault.^[17] On the other hand, a study by Schwartz *et al.* represented that using a simulated patient had no advantage over case-based learning.^[18] Due to the lack of research aiming at identifying effective learning methods in the field of providing services to rape victims and the importance of developing and comparing different teaching patterns and comparing them with each other, the purpose of this study was to compare the effect of standardized patient-based training with team team-based learning on midwifery students' knowledge for providing services to rape victims in 2017.

Materials and Methods

This quasi-experimental study was performed on two groups after obtaining permission from Mashhad University of Medical Sciences Ethics Committee. Sampling started by submitting a written letter to Mashhad School of Nursing and Midwifery in 2017. In the present study, the sample size was calculated 37 individuals in each group using Cohen's table with 95% confidence, 80% test power, and 65% effect rate and

regarding 25% sample attrition, 45 individuals per group were considered. The study population consisted of the Bachelor and Master's students in midwifery, Master of Counseling in Midwifery in Faculty of Nursing and Midwifery, Mashhad University of Medical Sciences. The individuals were selected based on random allocation using block allocation and were assigned to two groups of 47. Finally, 19 participants were excluded from the study for various reasons (unwilling to continue the study, refusing to attend training and testing sessions, and for personal reasons). As a result, there were 38 patients in the standardized-patient group and 37 in the team-based group. Inclusion criteria included having written consent to participate in the study, not taking another course related to sexually assault, having no teaching experience in this field, and having no adverse events during the past 3 months. Exclusion criteria included refusing to attend all stages of training or course tests, experiencing adverse events (such as serious illness for spouse, children, or herself; death of a loved one; accident; severe family dispute; divorce; immigration and financial bankruptcy), and participating in another training course on sexual assault during training sessions and course tests. After introducing herself and giving a brief description of the aims of the study, if the students were willing to participate in the study, the researcher completed the selection form of the research units and informed consent form through interview. Ethical considerations included obtaining permission from the Ethics Committee of Mashhad University of Medical Sciences (IR.MUMS.REC.1396.7), filling in a form of informed consent by individuals; assuring research units that they could freely withdraw from the study whenever they wanted and presenting the results in general without mentioning the characteristics of the participants. The pretest consisted of completing the demographic and academic form and a researcher-made questionnaire of knowledge assessment. The knowledge assessment questionnaire consisted of 20 four-option questions with the content of providing services to rape victims. The scores on this questionnaire ranged from 0 to 20. The correct answer was given a score of 1, and the wrong answer was given a score of zero. The content validity of this questionnaire was evaluated by experts in the fields. The mean coefficient of difficulty of the questionnaire was calculated to be between 0.4 and 0.7, and the discrimination index of the questions was above 0.7. Its reliability was confirmed by test-retest reliability $r = 0.7$ with a 2-week interval. Training course started the day after the pretest at Mashhad School of Nursing and Midwifery. The educational content for both groups was the same and was based on international protocols and related articles and resources. At the end of the pretest, the curriculum was given to the participants and they were asked to read the pamphlet before teaching. In the standardized patient-based

training group, after explaining the training stages and tasks, the students were divided into 4 groups with the same educational level. Each group interacted with a simulated patient with a specific scenario for 30 min. The duties of the group included communicating with the patient, obtaining the history of the patient and diagnosis, performing clinical examinations, sampling, and treatment. The representative of each group then interacted with the stimulated patient in the presence of all other participants for 60 min, and evaluation and feedback were provided by other students and the instructor. Finally, the researcher summarized each case for 30 min and answered the questions (training term: 6 h). In the team-based learning group, after explaining the training process, the individuals were classified into 4 groups with the same educational level. After identifying the groups, the training was done through six phases, namely, individual test (20 multiple choice test of training content), team test, appeals (referring to training sources and defending answers), assigning group tasks and feedback, peer reviewed, and receiving criticism from peer group and other students, receiving peer review, summarizing, and introducing top participants of groups (training term: 6 h). Finally, midwifery students' knowledge was measured 1 week after the intervention and was compared in two groups. Pretest and posttest results in two groups were analyzed using Statistical Package for Social Sciences Version 24 (IBM SPSS® Statistics, version 25, International Business Machines Corporation, New Orchard Road, Armonk, New York 10504, United States). Moreover, descriptive statistical, Kolmogorov Smirnov and Shapiro Wilk tests (to check for the normality of the variable), Chi-squared, Fisher's exact, independent t , Mann-Whitney, paired t -test, and Wilcoxon were analyzed.

Results

The mean age of students in standardized patient-group was 23.4 ± 5.3 years and in team-based group was 23.6 ± 6.0 years. In terms of student accommodation, in standardized patient group, 12 individuals (32.4%) were living in dormitory and 25 (67.6%) were living in private accommodation. In team-based learning group, 9 individuals (24.3%) were living in dormitories and 28 individuals (75.7%) were living with their families. Eight individuals (21.1%) in the standardized-patient group and 8 (21.6%) in the team-based group had jobs. According to the results of Mann-Whitney, Chi-square, and Fisher's exact tests, the two groups were homogeneous in terms of age, place of residence, and occupation.

In standardized-patient group, 30 individuals (78.9%) were undergraduates and 8 (21.1%) were graduate students. In the team-based group, 29 (78.4%) were

undergraduates and 8 (21.6%) were graduate students. In the standardized-patient group, 17 patients (44.7%) and in the team-based group 11 patients (29.7%) reported a great need to learn new information about sexual assault. According to the results of Chi-square and Mann-Whitney statistical tests, the two groups were homogeneous in terms of variables of educational level and their need to study new issues and topics about sexual assault.

In standardized-patient group, 15 individuals (39.5%) and in team-based group, 14 (37.8%) have faced victims of rape. According to Fisher's exact test results, the two groups were homogeneous regarding facing a victim of rape. In terms of the measures taken when facing with sexual assault, most of the students in both groups reported referring to forensic medicine. The exact Chi-square test results also showed that the two groups were homogeneous regarding this variable.

Based on the results of independent *t*-test, the mean scores of knowledge before intervention were not significantly different between the two groups ($P = 0.183$). However, there was a statistically significant increase in intragroup comparison in both groups in terms of the mean scores of knowledge 1 week after the intervention ($P < 0.001$). Results of independent *t*-test for intergroup comparisons showed that the mean scores of knowledge 1 week after the intervention were not significantly different between the two groups ($P = 0.079$) [Table 1].

In the present study, based on the score obtained in the pretest and posttest, the research units were classified into poor (zero to 10), medium (10.1–15), and good (15.15–20) groups.^[19] Before intervention, 37 individuals (97.4%) were in standardized-patient group and 36 (97.3%) were at poor level in team-based group. There was no statistically significant difference between the two groups in terms of knowledge about providing services to rape victims ($P = 0.985$). However, after intervention, 24 students (63.2%) from the standardized-patient group were at the intermediate level and 22 students (59.5%) in the team-based group were at the good level ($P = 0.037$). In fact, in both groups,

changes in the knowledge level before and after the intervention were significant ($P < 0.001$) [Table 2].

Discussion

The findings of the present study showed that the two educational groups were homogeneous regarding personal knowledge about providing services to rape victims before the intervention. Moreover, standardized patient-based training and team-based learning significantly increased students' knowledge at 1-week post-intervention, which was not significantly different between the two groups. Therefore, standardized patient-based training and team-based learning can be equally effective in enhancing students' knowledge of providing services to rape victims.

Fitzpatrick *et al.* showed that simulation technology was effective in enhancing learners' knowledge in forensic examinations of sexual assault.^[17] Reynolds *et al.*'s study showed that compared to the effect of simulation and lecture training, there was no significant difference between the two groups before the intervention, although in the posttest, simulation increased midwifery students' knowledge score in vaginal natural delivery and shoulder dystocia.^[20] Tofil *et al.*'s study also presented that training using simulation methods significantly increases students' knowledge and learning level.^[21] In fact, simulation is one of the active learning methods that encourages the student to strive for self-knowledge and can be an alternative for lecturing to deliver content to students.^[14] The results of the aforementioned studies are consistent with the results of the present study despite the fact that there are differences in the subject of education and the characteristics of the participants and the type of study design. However, in the study of Burns *et al.*, the results showed that students' learning problem-solving skills in simulation method was easier than lecture, there was no difference in knowledge score, though.^[22] Perhaps, the most important reason for this inconsistency is the difference in the research community and the subjects being taught. The teaching method should be tailored to the goals and content of the training, as well as the characteristics of the learners.

Table 1: Mean and standard deviation of knowledge score before and after intervention in midwifery students in both standardized patient and team-based groups

Variables	Mean±SD		Intergroup test result
	SP group	TBL group	
Before intervention	7.1±6.6	7.1±1.8	$t=1.3$, $P=0.183$, independent <i>t</i> -test
After the intervention	14.1±7.8	15.2±4.2	$U=549.5$, $P=0.098$, Mann-Whitney
Difference of the score before and after intervention	7.2±1.4	8.3±3.1	$t=-1.8$, $df=73$, $P=0.079$, independent <i>t</i> -test
In-group test result	$T=-18.3$, $df=37$, $P<0.001$, Wilcoxon		$Z=-5.3$, $P<0.001$, paired sample <i>t</i> -test

SD=Standard deviation, SP=Standardized patient, TBL=Team-based learning

Table 2: Mean and standard deviation of knowledge level before and after intervention in midwifery students in both standardized patient and team-based groups

Variables	Mean±SD		Intergroup test result Mann-Whitney
	SP group	TBL group	
Level of knowledge before intervention			
Poor	37±97.4	36±97.3	U=702.5
Medium	1±2.6	1±2.7	P=0.985
Good	0±0.0	0±0.0	
Level of knowledge after intervention			
Poor	1±2.6	1±2.7	U=530.5
Medium	24±63.2	14±37.8	P=0.037
Good	13±34.2	22±59.5	
In-group test result (Wilcoxon)	Z=-5.5, P<0.001	Z=-5.4, P<0.001	

SD=Standard deviation, SP=Standardized patient, TBL=Team-based learning

The present study was conducted to enhance midwifery students' knowledge on providing services to the victims of rape. The Burns's study was aimed to educate nursing students regarding problem-solving skills. In fact, knowledge is mental retention of content, and there are a lot of factors that can affect a person's knowledge, one of which is teaching method. Other factors including motivation, interest, and effective student-teacher and student-student interaction can influence the knowledge level. The differences in these issues may be the reason for the inconsistency between the results of the present study and the study of Burns.

Concerning the use of team-based learning method, the results of Vaezi, Hassanzadeh, and Jafari studies are in line with the results of the present study. The results of Vaezi *et al.*'s study showed that the mean score of team-based knowledge was higher than that of lecture-teaching method. 100% of students believed that team-based learning increased interpersonal and intergroup skills. 97.7% mentioned that this method has helped them understand the content of the lesson better.^[12] The results of the study by Hassanzadeh *et al.* showed that 63.8% of the students believed that team-based learning was an appropriate method for deep learning, and also, this method increased students' participation in the class.^[10] In the study of Jafari (2014), the results represented that team-based learning was more successful than lecture-teaching method.^[23] In line with the results of previous studies, it can be noted that better, more effective, and lasting learning is achieved through more activation and participation of the learner in learning.^[11] Compared to the lecture-teaching method, collaborative learning method results in more learning, longer retention, and more fun for the student. In addition, engaging students in examining existing knowledge and teaching new knowledge through dialogues enables learners to achieve higher levels of learning.^[24,25] In the present study, team-based learning method as an active educational approach had a significant effect on increasing the knowledge score

of midwifery students. Although the results of the previous studies support the present study, Delaram and Mahram *et al.*'s studies did not show a significant difference in the mean scores of students at the end of the semester using the two methods of lecture-teaching and team-based learning methods.^[26,27] This inconsistency may be due to the time interval between the teaching and assessment and the difference regarding the design of final test questions in the above study. The interval between learning and assessment influences the test results. In this study, students were evaluated once and 1 week after training.

Although in the present study, students' knowledge scores increased with both educational methods, in terms of their knowledge level, it can be described that before education, most individuals of both groups were in poor level. After training, the majority of students in the standardized-patient group were at the medium level and the majority of students in the team-based learning group were at the good level. However, in the study of Abedian *et al.*, both groups were at the poor level before the training, and after training, both students were at the moderate level.^[19] The reason for this difference is the type of methods used in Abedian research that was an educational workshop and podcast-based training. In the present study, the methods used were standardized-patient training and team-based learning. Moreover, the knowledge measuring tool can influence the results of the evaluation. It is also important to note that learning is influenced by intrinsic factors such as motivations, emotions, goals, and individual desires. In the present study, the participating students felt a great need to learn new material about rape and provide services to its victims. This is why the students are motivated to learn and improve their knowledge in this course. It can be concluded that depending on the type of evaluation scale, team-based learning can enhance students' knowledge level more than standardized patient-based learning. This is a confirmation of the claim made by the Vaezi, Hassanzadeh and Jafari studies.

These studies emphasized the significant impact of team-based learning on learning more and faster. It also has increased the quality of learning.

One of the limitations of this study was the information dissemination among research units for the candidates reside at dormitory. Therefore, the researcher tried to select the individuals from different dormitories. There was also a difference in mental ability and interest of the research units in attending the educational course. In addition, the difference was in the mental ability and interest of the research units in attending the training course.

This was partially controlled by random allocation of the samples to the two groups. On the other hand, lack of similar studies on students' knowledge of rape has made it difficult to determine the sample size, design, and implementation of the curriculum. One of the strengths of this study is comparing two methods of active experience-based and collaborative training methods, and to the best of our knowledge, there has been no similar study conducted on this issue so far. Moreover, designing and implementing a regular training course on services to sexual assault victims is important for midwifery students as potential medical personnel in the field of women's care. Considering the results of the present study, which illustrates the enormous impact of two abovementioned educational methods in providing services to victims of rape, it is suggested that studies be conducted to compare these methods with the conventional and other active teaching methods to enhance students' knowledge of providing services to rape victims.

Conclusions

Both standardized patient-based teaching and team-based learning enhance midwifery students' knowledge of providing services to rape victims. Therefore, considering the existing conditions and possibilities, using these two teaching methods as useful and active teaching methods is recommended for teaching-learning process of midwifery students in this field.

Acknowledgments

This paper was a part of research thesis passed on 15/04/2017 by Mashhad University of Medical Sciences registered through code 951368 in clinical trial IRCT2017050733845N1. This study was performed by financial support of Research Deputy of the university. Hereby, we appreciate support of the deputy, Research Council of Mashhad University of Medical Sciences, as well as students in the study and colleagues and personnel of the Department of Nursing and Midwifery.

Financial support and sponsorship

This paper was a part of research thesis passed on 15/04/2017 by Mashhad University of Medical Sciences registered through code 951368 in clinical trial IRCT2017050733845N1. This study was performed by financial support of Research Deputy of the university. Hereby, we appreciate support of the deputy and Research Council of Mashhad University of Medical Sciences.

Conflicts of interest

There are no conflicts of interest.

References

1. Kharamin S, Gorji R, Gholamzade S, Amini K. The prevalence rate of post-traumatic stress disorder (PTSD) in the rape victims of kohgiluyeh and boyairahmad province during (2011-2012). *Int J Front Missiol* 2012;18:99-106.
2. Shahali S, Mohammadi E, Lamyian M, Kashanian M, Eslami M. Experience of healthcare providers to deal with victims of sexual assault: A qualitative research. *J Qual Res Health Sci* 2014;3:37-50.
3. The NSW Nurses Association. Policy on Midwives and Midwifery Practice. The NSW Nurses Association; 2008.
4. Ministry of Health and Medical Education. Undergraduate Course Syllabus of Midwifery. Tehran: Ministry of Health and Medical Education; 2014. Available from: http://fnm.tums.ac.ir/85516/sec_18/p_20.aspx?lang=Fa. accessed 29 August 2016.
5. Jina R, Jewkes R, Christofides N, Loots L. A cross-sectional study on the effect of post-rape training on knowledge and confidence of health professionals in South Africa. *Int J Gynaecol Obstet* 2014;126:187-92.
6. Jahani-Shoorab N, Golmakani N, Mazluom S, Mirzakhani K, Azhari S, Navaiyan A. A survey on the theory and practice gap in mashhad nursing and midwifery faculty. *J Nurs Midwifery Urmia Univ Med Sci* 2011;9:344-349.
7. Ardaghi M. Comparison of the Effects of Standardized Patient and Workshop Methods of Teaching on Midwifery Student's Clinical Skill in Providing Sexual Health Counseling [Master's Dissertation]. Iran, Mashhad: University of Medical Sciences School of Nursing and Midwifery; 2013.
8. Zohali Nejad ME, Keshavarz M. Method of DR Ahmadiyyah on history taking of patients. *Q Med Hist* 2012;5:177-188.
9. Whited N. Learning and teaching. *Health Info Libr J* 2004;21:201-5.
10. Hassanzadeh G, Abolhasani F, Mirzazadeh A, Alizadeh M. Team-based learning; a new strategy in integrated medical curriculum: the experience of school of medicine, Tehran University of medical sciences. *Iran J Med Educ* 2013;13:610.
11. Parmelee D, Michaelsen LK, Cook S, Hudes PD. Team-based learning: A practical guide: AMEE guide no 65. *Med Teach* 2012;34:e275-87.
12. Vaezi A, Azizian F, Kopayehzadeh J. Survey compare team based learning and lecture teaching method, on " learning-teaching process" nursing student's, in Surgical and internal diseases course. *J Med Educ Dev* 2015;10:246-54.
13. Bahador H, Feizi A, Nabizadeh M. A study on the midwifery student's perception of the children's care course by using team-based learning in comparison with conventional learning. *J Urmia Nur Midwifery Facul* 2015;13 (6): 525-534.
14. Lewis CB, Vealé BL. Patient simulation as an active learning tool in medical education. *J Med Imaging Radiat Sci* 2010;41:196-200.
15. Saboori M, Jafari F, Monajemi A. The effect of employing standardized patient on history taking. *Iran J Educ Med Sci* 2010;10:276-83.

16. Prion S. A practical framework for evaluating the impact of clinical simulation experiences in prelicensure nursing education. *Clin Simul Nurs* 2008;4:69-78.
17. Fitzpatrick M, Ta A, Lenchus J, Arheart KL, Rosen LF, Birnbach DJ, *et al.* Sexual assault forensic examiners' training and assessment using simulation technology. *J Emerg Nurs* 2012;38:85-90.e6.
18. Schwartz LR, Fernandez R, Kouyoumjian SR, Jones KA, Compton S. A randomized comparison trial of case-based learning versus human patient simulation in medical student education. *Acad Emerg Med* 2007;14:130-7.
19. Abedian Z, Nosrati F, Sadeghi T, Hejazi SA, Jahangiri Feizabadi MJ. Comparing the effect of workshop and podcast training on knowledge and performance of midwifery students regarding legal and religious aspects of egg donation. *J Midwifery Rep Health* 2018;6:1319-26.
20. Reynolds A, Ayres-de-Campos D, Pereira-Cavaleiro A, Ferreira-Bastos L. Simulation for teaching normal delivery and shoulder dystocia to midwives in training. *Educ Health (Abingdon)* 2010;23:405.
21. Tofil NM, Benner KW, Worthington MA, Zinkan L, White ML. Use of simulation to enhance learning in a pediatric elective. *Am J Pharm Educ* 2010;74:21.
22. 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. *Clin Simul Nurs* 2010;6:87-95.
23. Jafari Z. A comparison of conventional lecture and team-based learning methods in terms of student learning and teaching satisfaction. *Med J Islam Repub Iran* 2014;28:5.
24. Premkumar K, Baumber JS. A learning resources centre: Its utilization by medical students. *Med Educ* 1996;30:405-11.
25. VandenHurk M, Domans D, Wolfhagen I, Muijtjens A, Vamder Vleaton C. Impact of individual study on tutorial group discussion. *Teach Learn Med* 1999;11:196-201.
26. Mahram M, Mahram B, Mousavinasab SN. Comparison between the effect of teaching through student-based group discussion and lecture on learning in medical student. *J Med Edu Dev Cent* 2008;5:33-8.
27. Delaram M. The effect of lecture and focus group teaching methods on midwifery students learning in obstetrics (2) course. *J Med Educ Dev* 2006;2:3-7.