Effects of Applying Role Playing Approach on Nursing Students’ Education

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Abstract

Employing new education approach is necessary for enhancing nursing students’ skills; Therefore, the main purpose of this study was to comparing effects of role playing and traditional methods on nursing students’ education. The paper presents the results of an experimental study where one group of students was taught using role-playing and the control group was taught using traditional approach. Statistical population of the study included all nursing students at Shiraz University and 228 nursing students were randomly allocated in role playing and traditional training groups to participate in a 4 hour workshop. Before and after the workshop students' skills were assessed and data gathering tools included a self evaluation form and evaluation checklists for assessing students’ performance. Results of Paired t-test showed that the scores of role playing was more than writing test and were statistically significant. Average of female’s scores were more than men’s in both exams; and paired t-test showed a significant relation between gender and average of scores but average of female’s scores in role playing method had a more significant increase.

Keywords: Role Playing, Traditional Education, Nursing, Educational Methods.
INTRODUCTION

Today, innovative ideas and new strategies in nursing education is encouraged to provide the learning needs and demands of constantly changing health care (Chan, 2012). Improving students to focus on the needs of patients and their families is one of the concerns of nursing teachers (Holland, 2002). Nursing education can maintain its dynamic quality when it moves toward innovation and modern methods of teaching and learning. Therefore, teachers are required to employ up to date methods in their teaching plans(Pourghaznein et al., 2015). Problem-based learning method for integration of theory and practice in the classroom and clinical settings is an appropriate method to resolve these concerns (Williams & Beattie, 2008; Khiri & Mohammadi, 2016).

The most widely adopted pedagogical approach used for conveying knowledge in majority of the construction programs today is the traditional teaching methods that include lectures, seminars, and tutorials to expose the students to different aspects of construction (Bhattacharjee, 2014). In addition to traditional methods, other forms of active learning pedagogical approaches adopted in construction education include construction site visit, site trainings, computer games and simulations, and problem-based learning. Though role-playing is not a popular pedagogical approach adopted in construction education, it has major benefits and potentials for improving students" learning (Bhattacharjee & Ghosh, 2013). Due to the involvement of multiple stakeholders in any construction project, role-playing teaching method that replicates the real life scenario by assigning different roles to the students can prove to be very effective in construction education.

Role-playing is being used as a pedagogical approach for many years, predominantly in sports education, theater, history and other social science disciplines. Utilizing the techniques of drama, role-playing teaching is a holistic teaching method that inculcates the process of critical thinking, instigates emotions and moral values, and informs about factual data. It has been found that role-playing teaching increases the efficacy of the learning experience and makes it more grounded in reality (Bhattacharjee, 2014).

Role-playing is a schematic approach in which interpersonal interactions will be observed, analyzed and interpreted by others (Billings & Halstead, 2005) and also as a method of problem-based learning increases the ability of learners in facing with situations, decision-making, situations interpretation and critical thinking. Learning with role playing decrease anxiety and also increase reliability of learners (Khiri & Mohammadi, 2016).

Also by helping the learners in situations and roles, questions and answers, and also active listening, professional knowledge of learners will be increased; and providing repeating opportunities, rethinking and habituation, cause to learning. In this simulation method, which actively and continuously puts students in real situations, individual autonomy, creativity, and self-efficacy will be strengthened too (Martinez et al., 2010). The other benefit of this method is increasing of observation-based skills, decision-making, instant feedback on communication skills which used in role playing (Billings & Halstead, 2005). In this method, interaction between students and teachers will be reinforced inside and outside of classroom and create a safe environment in which students freely express their points and teacher can modify them (Chang, 2009).
Literature review
Recent changes in health care systems led to challenges of caregivers in content integration of theory and practice. A study has been conducted on problems of integration of theory and practice in clinical nursing positions on 40 nursing students in South Africa in theory and clinical course of family planning. The results indicated the need for coherent holistic programs based on the needs of society. Also it was concluded that the integration of theory and practice will be realized through problem-based programs, society-based, cooperation between hospital management and faculty and student involvement in all of learning and teaching procedures (Muselsel et al., 2001).

In a qualitative study aimed to rethink of expected therapeutic outcomes, a role-playing situation to deal with the patient's care provider was prepared. The main extracted themes from this situation were include of understanding, self-declarations, trust, respect, honesty, struggles between interpersonal relations and power, capability, and open mind thinking; and it was concluded that use of a role playing situation between patient and nurse may strengthen the performance of expected therapeutic outcomes (Babatsico & Gerogianni, 2012).

Problem-based learning in nursing education has positive effects on learning along with teamwork motivation, problem solving skills and critical thinking creates (Chan, 2012). A study has been done aimed to determine attitude of nursing students in relate to the SBAR technique and effect of training workshops on the use of this tool. During this workshop, using SBAR communication tool was taught to 17 senior nursing undergraduate students. Content of the workshop, in addition to SBAR training was including of reminding via videos and role playing scenario. Before and after the workshop, the students filled a questionnaire on learning and attitude questions. The results showed that, before and after the workshop, the students had significant progress in knowledge and attitude (Wang et al., 2015).

Role playing is a method which is widely used in medical education. In an investigation aimed to develop strategies for maximize role playing in communication learning, experiments of students were studied. First year medical students as part of educational communication programs participated in a role-playing session and before and after this session, they filled a questionnaire on the role playing and how it can be useful. The results were representing of usefulness of these experiments in the point of majority of them. And from the viewpoint of students, the useful key points in the role playing were about observed situation, practice an discussion, realistic role and Implementation roles with other aspects of the curriculum. Unusualness aspects of role playing were include of negative emotional and strengthen responses recalling unrealistic situation of role-playing (Nastel & Tierney, 2007).

One of the most important components of education is choosing proper teaching method. In Iran, speech is the commonest method of teaching about health care issues, while other methods such as games and role playing which involve learners can increase their learning. Therefore, this study aimed to compare two teaching methods of traditional and role play to find the proper method for teaching to nursing students.
MATERIALS AND METHODS

Research design:
This quasi-experimental study aimed to compare the effect of lecture and role playing education on nursing students’ learning and to determine the relationship between students’ characteristics and scores of theoretical exam and their role playing checklist, was conducted.

Participant selection:
Samples of this study were consisting of 228 nursing students which were enrolled in the third semester undergraduate training in Shiraz nursing faculty. This intervention was carried out in the course of learning process and principals of patient training. All nursing students studying in third semester of nursing in 2010 to 2012 (during six sequential semesters), participated in this study. Course designing was carried out by one of the researchers as instructor of the course. At the start of the course, students were absolutely aware of course implement. Additionally, at the beginning of class schedule, researchers explained entire program to students and convinced them via benefits of role playing method and its importance in educational experiments transferring.

Intervention protocol:
At first (during 4 lesson), some concepts and principles of patient training were described to students through lecture with questions and answers. Then in addition to providing the necessary guidance on how to implement, students were asked to set up team work groups voluntarily and under the guidance of teacher, choose real patients in the hospital, after their training show and criticize training process in role playing method.

4 sessions of teaching in this course was conducted with the lecture method. The first session was about goals of lesson learning process and patient training, the methods of teaching, teacher’s task and responsibility of students, definition of teaching and learning, learning facilitators and barriers. In the second session, explained some details with questions and answers on how to review training needs of the patient and writing of learning objectives in three domains of cognitive, psychomotor and affective. Third session was about different methods of patient training with an emphasis on role-playing method. In this session, steps of role playing and writhing of scenario were illustrated. In the parts of second and third sessions, asked students to answer some questions about presented subjects based on an assumed sample patient (to write needs of training and training goals based on it for a special patient. In the fourth session, explained about different methods evaluation of patient training program. Then in another session which was conducted to resolve possible ambiguities and clarify different aspects of the course, students in role playing groups studied history of the patient by run a workshop and determined goals, proper method of training and evaluation for needs of patient training in their groups.

In the next 4 session, students choose real patient in small groups under supervision of teachers and after capturing their history and training needs identification, determined training goals and priorities of everybody; then necessary trainings were implemented and trainings were been evaluated. After passing mentioned steps, students provide a training
scenario and after training and completely being ready, were presenting it in the presence of other students and teachers in the classroom. After each presentation, one of group members was offering an assessment of group performance; then other students were asking their questions. Teacher was serving full support and guidance of students in all of steps.

**Measurements:**
Learning measurements of lecture method were done by a writing exam. This exam was made from some questions about presented subjects from first to forth sessions and a score of 10 was calculated. To assessment part of role playing, used a checklist with 5 score Likert scale from “perfect” to “no observation”. This checklist was including of 11 items and a score of 8 was calculated.

**Analysis:**
Data analyzing was done by SPSS software, the 21th version. Data was analyzed by using descriptive statistics (abundance, average, standard deviation) and inferential statistics (Pair t, independent t-test, Pearson coefficient of correlation, one way analysis of variance ANOVA).

**RESULTS AND DISCUSSION**
According to results, 127 female students (57%) and 101 male students (44.3%) were consisting samples of this research which totally were including 6 undergraduate Nursing periods. There were 31 freshmen students (13.6%), 34 sophomore students (14.9%), 43 students (18.9%) from third, 40 students (17.5%) from forth, 39 students (17.1) from fifth and 41 students (18%) from sixth period.

Pearson coefficient of correlation did not show any significant relation between scores of writing exam and scores of role playing (p=0.1). This matter indicates independence of studied methods and no interaction effect. Scores of writing exam were fluctuating from minimum of 1.9 to maximum of 10 (6.3±1.36) and scores of role playing at least 5 to utmost 8 (7.2±0.73). Paired T test showed that scores of role playing was more than writing test and were statistically significant (p=0.000). Average of female’s scores were more than men’s in both exams; and paired T test showed a significant relation between gender and average of scores but average of female’s scores in role playing method had a more significant increase (p=0.00). Table 1 compares average scores of two methods based on gender. One way analysis of variance showed that average scores in different entrances had significant different too. Diagram 1 and 2 reflect these differences.

**Table 1:** Comparing the average scores of the written exam and the role playing based on gender.

<table>
<thead>
<tr>
<th></th>
<th>Sex</th>
<th>N</th>
<th>Mean±SD</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scoreexam</td>
<td>female</td>
<td>127</td>
<td>6.4±1.32</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>101</td>
<td>6.1±1.39</td>
<td></td>
</tr>
<tr>
<td>ScoreR</td>
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<td>127</td>
<td>7.39±0.61</td>
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<tr>
<td></td>
<td>male</td>
<td>101</td>
<td>7.1±0.83</td>
<td></td>
</tr>
</tbody>
</table>
Figure 1: Frequency of role playing scores based on entrances

Figure 2: Frequency of writing exam scores based on entrances
The results of this study showed that, role playing as a cooperating method improves the student’s learning more than lecture method. Based on results of the study, student’s scores in role playing method were more than of lecture method significantly. Role playing is an accepted method in academic education and it had been used for many applications such as preparing students to face with professional real environment (Howes & cruz, 2009; Smythe, & Higgins, 2007; Blatner, 2006; Doron, 2007; Mitri & Cole, 2007).

Using role playing method in courses based on problem solving improves critical thinking and amplifies student’s innovation (Chan, 2012). Using role playing method meanwhile preparing students for facing opposite believes, creates a kind of entertainment (Wiles, 2013). Role playing as an educational in the field such as midwifery and nursery is a kind of active learning and enhances group learning and facilitate relational abilities with other students (Warland & Smith, 2012).

This method integrate cognitive and psychomotor systems of students concurrently, leads to deep learning in brain and obtained experiments save in memory. Role playing improves clinical qualification of nursery students (Macnamara, 2015).

Role playing is a proper strategy for effective and active learning has been used for teaching several aspects of theoretical and clinical courses of nursery and other medical fields (Gillespie et al., 2015; Alluri et al., 2015; Okla & Eden, 2015).

In this study, students were using simulation method by playing role of a patient. Cook et al (2012). meanwhile doing a systematic review and meta-analysis, compared studies of using simulation and other educational methods. These researchers found that simulation method have a more effect on learning (Cook et al., 2012).

Simulation has been examined, even in special groups of nursery students such as who have disability and its effectiveness and supporting learning of such student has been acknowledged (Azzopardi et al., 2012).

Another study has been done aimed to investigate effect of simulation on evolution of preclinical and post clinical skills of medical students. In this research, chest checking up skill were compared in both methods of treat on Counterparts and on SimMan. Obtained results demonstrated increasing knowledge and qualification of students for chest checking up by treat on SimMan method (Swamy et al., 2013).

Another study which has been done on fourth-year student, compared role playing with stimulated patient, reviewed it by videos and created a copy from video. Its result showed that implement of this method lead to facilitate obtaining oral and non-oral skills of students (Hanya et al., 2014).

Also during a research on freshmen students of pharmacy, three strategies of active education were compared including writing of dialog, role playing with counterparts and working on artificial patient. The outcomes concluded that all of three strategies were effective and of these, working on artificial patient had a more effect on knowledge, skill and self-confidence of students (Lupu et al., 2012).

In other hand, results of some studies show disadvantage of stimulation and role playing methods such as Couto et al (2014). which compared High-fidelity simulation versus case-based discussion, to teach the emergency of children to medical students. However outcomes of this investigation did not demonstrate a difference between them in obtaining
and saving knowledge, but the students have expressed more satisfaction from simulation method (Couto et al., 2014).

Results of Kerr et al (2013). did not show a significant difference between educational workshop and simulation based on scenario (Kerr et al, 2013).

Another which compared effects of lecture role playing methods in education of medical residents in Emergency, showed that lecture after teaching had more effects but role playing had more lasting effect over time and convenience levels of residents in cognition and cure were similar in both (Maddry et al, 2014) and Similar results can be seen in other researches (Pourghaznein et al., 2015; Kardong-Edgren et al., 2015).

Reason of these differences can be related to different kinds of educated course in various studies using either simulation or role playing methods, psychomotor and cognitive ability levels of students, probable differences in design of role playing. Because this method likes any other educational method has its own limitations.

This research has some limitations including problems of preparing necessary equipment and tools for role playing. Furthermore, as regarding this method was conducted for formal academic course, both methods were done on same group. Therefore we propose that comparing different teaching method should implement on similar student groups and in the form of case-control.

CONCLUSIONS

Based on our results, role playing is an effective and attractive method in education of students and as a model of teaching, in addition to association of students, improves group working morale and lead to learning of students from each other. Using this method can be improving learning of students. Due to the equipment and kind of course this method can be used either separately or as a complementary method.

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