

MODIFIED SIMULATION LEARNING METHOD ON KNOWLEDGE AND ATTITUDE OF NURSING STUDENT'S CULTURAL AWARENESS AT UNIVERSITAS INDONESIA

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Abstract

Nursing students should be prepared to be culturally competent nurses. Cultural awareness is believed as the most important elements of cultural competence. The purpose of this article is to describe the effectiveness of Modified Simulation Learning Methods on cultural awareness as one attribute of cultural competence. A quasi-experimental (control group) design was used to explore the relationship between variabels among 98 first year nursing student attending Basic Nursing Concept I course at Faculty of Nursing Universitas Indonesia. The knowledge of cultural awareness was found statistically different between participants in Modified Simulation Methods group (intervention) and participants using the regular method. However, there were no statistical differences in attitude of cultural awareness between intervention and control groups. It could be concluded that Modified Simulation Learning methods is an effective learning method for increasing cultural knowledge of nusing student to be a competent nurse. Further research should be developed in continuing the improvement of cultural competence such as cultural skills.

Abstrak

Metode Pembelajaran Modifikasi Simulasi untuk Pengetahuan dan Sikap Kesadaran Kultural Mahasiswa Keperawatan Universitas Indonesia. Mahasiswa keperawatan perlu dipersiapkan menjadi perawat yang memiliki kompetensi kultural. Kesadaran kultural dipercaya sebagai elemen yang paling penting dalam kompetensi kultural. Tujuan penulisan artikel ini adalah untuk menguraikan keefektifan metode pembelajaran modifikasi simulasi terhadap kesadaran kultural sebagai salah satu elemen dari kompetensi kultural. Desain kuasi eksperimental digunakan untuk mengeksplorasi hubungan di antara variabel. Sebanyak 98 orang mahasiswa yang mengikuti mata kuliah Konsep Dasar Keperawatan I terlibat dalam penelitian ini. Hasil penelitian menunjukkan bahwa terdapat perbedaan yang bermakna pada aspek pengetahuan dalam kesadaran kultural partisipan yang menggunakan metode modifikasi simulasi dibandingkan dengan partisipan yang menggunakan metode reguler. Namun tidak terdapat perbedaan bermakna pada aspek sikap dalam kesadaran kultural diantara partisipan dalam kelompok intervensi dan kelompok kontrol. Dapat disimpulkan bahwa metode pembelajaran modifikasi simulasi merupakan metode yang efektif untuk meningkatkan pengetahuan kultural mahasiswa keperawatan agar dapat menjadi perawat yang kompeten. Penelitian selanjutnya diperlukan untuk mengembangkan elemen lainnya dalam kompetensi kultural seperti keterampilan kultural mahasiswa.

Keywords: cultural awareness, culturally competent, modified simulation learning method, nursing student

Introduction

Globalization and cultural diversity in Indonesia has an impact in the increasing diversity of cultural background of clients in health care setting. International Council of Nurses required nurses to have a cultural competency in providing holistic nursing care for their patients. Lack of cultural competence could be

seen when nurses interact with their patients. The type of cultural incompetence varies, from frustration and anger when facing the difficulties in communication with the clients, open criticizing, or lack of interest in understanding other values and beliefs from different cultures.¹ The need of culturally sensitive nursing care is in line with the concept that every client is a unique and holistic individual who has bio-psycho-socio-spiritual

and cultural dimensions. Therefore, in providing nursing care, the nurse should consider all dimensions of client including his culture.

Cultural competency is revealed by the culturally sensitive attitudes regarding the patient need. This competency should be prepared since the student in the educational program. Nursing education institution is responsible for preparing the nursing students in possessing the cultural competency.² Based on the literature study, a number of research related to the learning methods for improving the cultural competence of nursing students such as the utilization of literature, integrated teaching material, immersion experience with a diverse culture and also the use of role play and clinical simulation.³⁻⁷

Cultural competency is a set of skills and attitudes which made the nurses possible to work effectively, and culturally sensitive in the cultural context of clients which appropriate with the client's need. In general, the attribute of cultural competency includes cultural awareness, cultural knowledge, and cultural skill.¹ Cultural awareness is the awareness of being knowledgeable with his/her own cultural values, beliefs, attitudes, and practices before trying to be knowledgeable with other cultural values, beliefs, attitudes and practices. Cultural knowledge is the process of seeking information about different cultural views, biological variations, diseases, and health condition found in ethnic group. Cultural skill is the ability to conduct a relevant cultural assessment and accurately conduct physical assessment based on culture. A person develop a cultural skill by using the cultural awareness and knowledge in order to conduct a holistic assessment appropriate with the client culture. The most important element in cultural competency is cultural awareness since the cultural competency is revealed by the ability to maximize the sensitivity in delivering care for the client from a variety of culture, not on how much knowledge related to different culture, instead of as an open person and respecting the difference and also the motivation or desire to learn about other culture. Cultural awareness consist of some aspects of knowledge, perceptions, beliefs and attitudes toward one's culture.¹ Therefore in this study, the researchers were focusing on the improvement of cultural awareness first before the cultural knowledge and skills.

The utilization of simulation method in health education continues to increase. Simulation are being used mostly because it could increase the safety and minimize the error, clinical judgments and useful for teaching psychomotor skills in the situation which are similar with actual situation.^{4,8-10} There are a different type of simulation methods such as role playing, gaming, debates, and case method.¹¹ Simulation teaching

methods could increase psychomotor skills and also the concept of management of care.⁹ The application of Benner Theory in Interactive Patient Care Simulation provide a positive learning experience for completing the management of patient skills and collaboration skills with multidiscipline team.⁴ Simulation is one of the best learning methods for psychomotor skills and problem solving in a safe and controlled environment. However the effectiveness of simulation methods in improving the cognitive and affective ability of the students has not been much explored.⁹

In Indonesia, the learning method especially for improving cultural competency has not been developed yet. The researchers developed Modified Simulation Learning method using the combination of simulation and reflective methods in order to increase cultural awareness as one element of cultural competency of nursing students. The purpose of this study is to identify the effectiveness of Modified Simulation Learning Methods in increasing the cultural awareness of nursing student's cultural competency at Universitas Indonesia.

Methods

This study was using a quasi-experiment research design to examine the relationship between the modified simulation learning method and the improvement of cultural awareness of nursing student cultural competency. Modified simulation learning method is a method developed through the integration between three types of simulation method (role play, debate and case method) with the reflective technique. This method was being applied when the students learn two subjects of Basic Concepts in Nursing Course on their first semester of study at Faculty of Nursing University of Indonesia. Using this modified method, a number of scenarios related to course subject matter being developed in order to provide the students with the guideline how to accomplish the learning objectives as a culturally competent nurse. A total number of students participates in the study is 98 first year bachelor nursing students registered for Basic Nursing Concepts I course at Faculty of Nursing Universitas Indonesia. These students divided into two groups, 47 students in the control group and 51 students in the intervention group. The intervention group provided with the Modified Simulation Learning Method for studying the concepts of Trans cultural Nursing and Caring in Nursing. The intervention conducted for 10 sessions with a period of 150 minutes each week. The modified simulation learning methods were applied in two from four class of Basic Concepts of Nursing Course as intervention groups. Other two class work as control groups was utilized the original learning method for the course.

Cultural awareness in this study was measured through a questionnaire consist of knowledge and attitudes of

student cultural awareness which was developed by the researcher based on the self assessment tool for cross-cultural development by Winkelman¹² and other concepts and theory related to Trans cultural Nursing and Cultural Competence.^{1,13-14} The questionnaire consists of two section, first section the knowledge of cultural awareness consist of 40 item, yes or no response, was used to assess knowledge of cultural awareness, and the second section, a 35-item, 4-point-Likert scale, was used to assess student attitude of cultural awareness. The reliability coefficient of the instrument is 0.715. Here are some item examples for knowledge of cultural awareness questionnaire: 1) Person from different ethnic group has the same cultural characteristics; 2) Individuals' values and beliefs were based on cultural perspectives and prejudice; 3) Cultural background influences the people attitudes. Whereas, item examples for attitude of cultural awareness questionnaire were: 1) I should familiar with other language which spoken by people who communicate with me; 2) I should understand non verbal language of other people; 3) I do respect other values and beliefs which are different with my own.

The study was completed over one semester (sixteen weeks period) with two different group of students (experiment and control group), each group is consist of two different classes. All participants completed questionnaire twice during their first semester. Firstly, at the beginning of the semester and secondly after completing the course at the end of semester. Participants involved in the intervention group were required to keep reflective notes every week in which they were to reflect their feelings, perceptions, and experiences completing the course.

Data analysis conducted using descriptive analysis. Means from the two test periods were calculated. The paired t-test was used to analyze the different of student cultural awareness before and after intervention of Modified Simulation learning Methods within the control and intervention groups. However the difference between the control and intervention group was analyze using the independent t-test.

Table 1. Mean Score for Knowledge and Attitude of Cultural Awareness between the Control Group (n=47) and the Intervention Group (n=51)

Variable	Before intervention (pre test)			After intervention (post test)		
	Mean	SD	SE	Mean	SD	SE
Knowledge of cultural awareness						
Control group	18.425	2.233	0.325	20.042	1.899	0.277
Intervention group	19.333	2.055	0.287	20.941	2.120	0.296
Attitude of cultural awareness						
Control group	60.255	7.148	1.042	59.787	7.006	1.021
Intervention group	59.215	6.800	0.952	61.745	5.840	0.817

Results and Discussion

Based on the result from questionnaire, the characteristics of students were mostly 18 years old (66.7% from intervention group and 72.2% from control group). Only 6.4% students from control group and 3,9% from intervention .group were male. Students from control group were 100% Moslems, whereas in the intervention group 84% Moslems, 13.7% Christians, and 2% Hindu. Mostly students were Javanese (66% from control groups and 45.1% from intervention group. Other ethnic groups of students include Sundanesse, Minang, Betawi, Batak, and Melayu. The students residence before study in faculty of nursing were mostly live with their parents, however after study at universities most of the students live in students dormitory since most of the students come from different area far from the university location. The students' characteristic shown that the nursing students are mostly having the same age (18 years) and gender (female students). However they come from rather different ethnic group which might have different culture in daily habits. Changing place of living before and after study at university is also another concerned that might have an impact in students adaptation of cultural changing.

The mean score of knowledge aspect of cultural awareness was increase after the intervention both in the control and the intervention group. The mean score of knowledge aspect within control group is increased from 18.425 to 20.042. Meanwhile the mean score of knowledge aspect within the intervention group is increase from 19.333 to 20.941. The mean score of attitudes aspect of cultural awareness was only increase in the intervention group (from 59.215 to 61.745). Meanwhile in the control group, the mean score of attitudes aspect of cultural awareness was decreased from 60.255 to 59.787 (Table 1).

Table 2 shown the mean difference of knowledge and attitude of cultural awareness before and after the intervention in the control and the intervention group.

Table 2. Mean Difference of Knowledge and Attitude of Cultural Awareness Before and After Intervention

Variable	Mean difference	SE diff	t	p	95% Confidence Interval of the difference	
					Lower	Upper
Knowledge of cultural awareness						
Control group	1.617	0.441	3.664	0.001	0.728	2.505
Intervention group	1.608	0.421	3.818	0.000	0.762	2.453
Attitude of cultural awareness						
Control group	0.468	1.629	0.287	0.775	2.812	3.748
Intervention group	2.529	1.159	2.183	0.034	0.201	4.857

Table 3. Mean Difference of Knowledge and Attitude of Cultural Awareness between Control Group (n=47) and Intervention Group (n=51)

Variable	Mean difference	SE diff	t	p	95% Confidence Interval	
					Lower	Upper
Knowledge of cultural awareness						
Before intervention (Pre test)	0.907	0.433	2.095	0.039	0.477	1.767
After intervention (Post test)	0.898	0.407	2.203	0.030	0.888	1.708
Attitude of cultural awareness						
Before intervention (Pre test)	1.039	1.409	0.738	0.462	-3.837	1.757
After intervention (Post test)	1.957	1.299	1.507	0.135	-0.621	4.536

There was a statistically different between knowledge aspect of cultural awareness before and after the intervention within the intervention group ($p = 0.000$). Within the control group, the knowledge aspect of cultural awareness was also statistically different ($p = 0.001$). It means both the new method and standard method has improve the knowledge aspect of cultural awareness of nursing student significantly.

Data also shown that there was a statistically different between attitude aspect of cultural awareness before and after the intervention of Modified Simulation Method within the intervention group ($p = 0.034$). However, there was no statistically different between attitude aspect of cultural awareness before and after the intervention of Modified Simulation Method within the control group ($p = 0.775$). It was mean that there was a statistically difference of students attitude before and after the utilization of Modified Simulation Learning Methods. This result was in line with the previous publications that the simulation learning methods has positive impact for students learning.^{4,6,8-10}

In order to identify the different of knowledge and attitude aspect between the control and the intervention group, the independent t-test was conducted (Table 3). Result shown that there was a statistically different in knowledge aspect of cultural awareness between control and intervention group before intervention ($p = 0.039$)

and after intervention ($p = 0.030$). However, there was no statistically different in attitude aspect of cultural awareness between control and intervention group before intervention ($p = 0.462$) and after intervention ($p = 0.135$). By this result we could conclude that the new method which implemented in intervention group has increased the knowledge of cultural awareness significantly if compared to the control group. It could be stated that the new method effective in increasing the knowledge aspect of cultural awareness. Even though for the attitude aspect the new methods has no difference impact from control group.

Several themes derived from the reflective notes including 1) new positive experience, 2) positive response to new learning method, 3) the advantage of new methods, 5) the difficulty conducting the new methods, and 6) hopes and feedback for the next learning. Those themes generated three different reflective notes from 51 participants within intervention group after completing the implementation of Modified Simulation Learning methods at Basic Concepts in Nursing Course. The students' reflective notes shown that they have new positive learning experiences. Case debates as a new methods of students learning methods has improved students' ability in expressing their ideas, providing justification of their ideas, analyzing the clinical problems based on cases provided besides increasing their knowledge related to the subject of

learning. Students' communication skills were also being improved through the case discussion and debates.

Another method being used in this study was role play. Students enjoy the role play as their new methods of learning. In student's opinion, role play was a creative and innovative learning methods, fun experience, and also increasing the critical thinking of students. Students also learned how to act as a real nurse in a simulated situation of nurse-patient interactions. Some students hope that the new methods could be implemented in other courses or classes. This study result in line with the study conducted by Harder⁸ which stated that role play simulation in health education has positive impact to students. Several studies also shown that role play in simulation have been used in increasing the comforts and safety and decreasing error in clinical judgments and also benefit in learning psychomotor skills including communication skills in almost real situation.^{4-5,8-10}

Another learning method being utilized more is reflective learning method. This method has a potential for the students in exercising critical analysis and interpretation their works with the facilitator assistance. Reflective technique usually being used only as part of the evaluation learning process and some debates related to the effectiveness of this methods as a learning method and instrument for nursing still occurred.^{9,15} In this study, reflective methods being used in order to teach students to reflect their experience after they completing learning session. The students made some notes regarding their new experience. This method has been successfully trained the student abilities in critical analyses. The reflective methods will developed the cognitive and affective skills including self awareness, description, critical analysis, synthesis, and self evaluation.¹⁵

This research was a preliminary study that should be followed by further research. It is recommended that for developing cultural competence of nursing student require continued process and planning to be integrated in the curriculum program. This study still limited in result since it only explored the aspect of cultural awareness. Other attributes of cultural competence such as cultural knowledge, cultural skills and cultural encounter should also being explored within the nursing students' competencies. Therefore, further research should be developed and conducted in order to develop the cultural competency of the nursing students.

Conclusion

Modified Simulation Learning Methods increased the knowledge and attitude aspect of cultural awareness of nursing student. It is considered as an effective learning

method for increasing cultural awareness of the nursing students at Universitas Indonesia. Based on students' reflective notes, Modified Simulation Learning Methods provides the students with new positive experiences and these methods was more effective to improve their understanding in learning course content and their communication skills. Further research needed especially in exploring the other attributes of cultural competence such as cultural knowledge, cultural skills and cultural encounter.

References

1. Zander PE. Cultural competence: analyzing the construct. *The Journal of Theory Construction and Testing*. 2007; 11(2):50-54.
2. Burchum JLR. Cultural Competence: an evolutionary perspective. *Nursing Forum*. 2002; 37(4):5-15.
3. Halloran L. Teaching transcultural nursing through literature. *Journal of Nursing Education*. 2009; 48(9):523-528.
4. Larew C, Lessans S, Spunt D, Foster D, Covington BG. Innovations in clinical simulation: application of Benner's theory in an interactive patient care simulation. *Nursing Education Perspectives*. 2006; 27(1):16-21.
5. Lipson JG, Desantis LA. Current approaches to integrating elements of cultural competence in nursing education. *Journal of Transcultural Nursing*. 2007; 18(1):10S-20S.
6. Shearer R, Davidhizar R. Using role play to develop cultural competence. *Journal of Nursing Education*. 2003; 42(6):273-276.
7. Sullivan CH. Partnering with community agency to provide nursing students with cultural awareness experiences and refugee health promotion access. *Journal of Nursing Education*. 2009; 48(9):519-522.
8. Harder BN. Use of simulation in teaching and learning in health sciences: a systematic review. *Journal of Nursing Education*. 2010; 49(1):23-28.
9. Hawkins K, Todd M, Manz J. A unique simulation teaching method. *Journal of Nursing Education*. 2008; 47(11):524-527.
10. Waxman KT. The development of evidence-based clinical simulation scenarios: guidelines for nurse educators. *Journal of Nursing Education*. 2010; 49(1):29-35.
11. Fuszard B. *Innovative teaching strategies in nursing*. 2nd ed. Gaithersburg, Maryland: Aspen Publication; 1995.
12. Winkelman M. *Culture and health: applying medical anthropology*. San Francisco: Jossey-Bass; 2009.
13. Leininger M, McFarland MR. *Transcultural nursing; concepts, theories, research, and practice*. 3rd ed. New York: Mc Graw Hill; 2002.

14. Leininger M. Culture care theory: a major contribution to advance transcultural nursing knowledge and practice. *Journal of Transcultural Nursing*. 2002; 13(3):189-192.
15. Burns S, Bulman C. *Reflective practice in nursing: the growth of the professionals practitioner*. 2nd ed. London: Blackwell Science Ltd; 2001.