

Strategies of Simulation Training for Improving Nursing Practice Skills in Korea

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Abstract

The purpose of this study is to propose critical thinking clinical judgment skills and strategies to improve academic achievement which are required for understanding in integral manner and further applying the nursing activities necessary for patient care by running a simulation exercise focused on the cases of the difficult patients, which the nursing students could scarcely encounter directly in their actual clinical practices.

Publication History:

Received: January 04, 2016

Accepted: March 02, 2016

Published: March 04, 2016

Keywords:

Nursing education, Simulation training, Nursing practice skill

Introduction

The purpose of nursing education focuses on delivering highly qualified professional nurses armed with the autonomous attributes, who are capable to provide with the decisions in practice and appropriate care in accordance with clinical situations on the basis of scientific nursing knowledge, and, at the moment, a variety of training methods are attempted to do so. Nursing belongs to the field practice oriented learning which concerns applying nursing knowledge and key hands-discipline skills related to nursing practice in clinical nursing field, so the clinical practice courses are important, where the nurses can acquire the ability to apply the nursing process to the patient's actual and potential health problems in the field of clinical practice [1].

Nursing education is organized with theoretical training as well as practical training as essential curriculum and, in practical training, it is required to provide an experience for enhancing the clinical practice performance in addition to the basic nursing technique, therefore the concerned faculty of the university should endeavor to lead the students to equip themselves with the competencies required during the course of campus lab training and clinical practices.

But recently the patient safety was emerging for the important issue of medical society, while clinical laboratory environment was also changing due to changes in the health care environment, including the more emphasis to be put on the right of patient, so the students are given little opportunity to perform nursing technique directly to the subjects during clinical practice training.

As the result that any kind of mistakes by the nurses cannot be excused in the clinical environment because the subjects whom the students are to encounter are human beings and the students' intervention would be denied due to the intensifying tendency to assert the rights of the subjects, while, for the part of the students, they should experience severe anxiety and tension derived from the pressure of being afraid of making mistakes due to their immature nursing techniques, eventually the student tend to have a negative attitude toward clinical practice and the level of satisfaction concerning practice training is reported low due to the prevailing dependence on the observation oriented training [2-6].

Besides the current severe medical environment that has been aggravating with the gaps between theory and practice, lack of Practice Advisors, health care system preferring foreign visitors,

shortening of hospital stay for a fast bed turnover, and decrease of acute symptom diseases and the intensifying severity and chronicity of specific diseases [7-9] has become the hindrance for the students in the aspects of acquiring various clinical experience and the access towards the subject. As seen above, even though the clinical hands-on training comprises a very important part for nursing students but it faces a lot of difficulties in the other hand.

This can cause the difficulties of new nurse graduates in their adaptation of nursing practices and degrade the provision of the quality of the practical nursing. In particular, the today's nursing environment which has been frequented with the complex and unpredictable situation compels you to need graduate nurses equipped with field working capacity in clinical judgment and integrated thinking as well [10-11], so nursing education to cope with these changes has become necessary. In this context, the simulation education has emerged as a teaching and learning strategy to increase skills through repetitive training in a situation similar to the actuality in order to promote the performance of the nursing college students in their clinical practice [12-13].

Because clinical training is conducted in a actual field of clinical practice, not a place intentionally created for students training, even the stress and pressure felt by the instructors, not to say the students, is enormous due to the unfrocking nature of any mistake even for the student during clinical practice training, however, in the simulation training the repeated learning is possible through the reproduction of the clinical situation and you can go through a trial and error while some mistakes are allowed without evoking any direct and deadly impact on the safety and rights of patients, even if you would commit them.

In addition, with simulation training, the students can experience academic achievement and improvement, as well as critical thinking in clinical performance, enhanced confidence and satisfaction, the

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Citation: Park M, Ha S (2016) Strategies of Simulation Training for Improving Nursing Practice Skills in Korea. Int J Nurs Clin Pract 3: 173. doi: <http://dx.doi.org/10.15344/2394-4978/2016/173>

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by using scenarios similar to actual situations, they can learn about the way of improving the communication skills between the patients plus care givers and the health professionals, the patient safety, the interdisciplinary cooperation among the various medical teams and acquire the ability to manage difficult situations [15-16].

This study aims to propose critical thinking clinical judgment skills and strategies to improve academic achievement which are required for understanding in integral manner and further applying the nursing activities necessary for patient care by running a simulation exercise focused on the cases of the difficult patients, which the nursing students could scarcely encounter directly in their actual clinical practices.

Definition of Terms

Simulation training program

It is the learning program is to provide materialized learning by applying with the structured patient scenarios in a secure environment and aims to produce the education effect in a process of solving problems directly in the clinical situation.

Clinical competency

It refers to the ability to function competently showing adequate knowledge, judgment, skills on the clinical situation [17].

Critical thinking disposition

It says the personal inclinations and cognitive driving force for you to make thinking with the aim to make your decision based on your independent determination in personal or professional business [18].

Clinical judgment

Clinical judgment is meant the ability to determine the decision of the actions in a standard or appropriately complementary approach based on the patient's response taking the understanding and interpretation concerning the patient's needs, his concerns and health problem into account [11].

Methods

Simulation training program

After training has been used as the computer-based training media designed for aviation and military training in early stage, however, since the beginning of 2000 the simulated training program began to be applied utilizing the high fidelity simulator in nursing [19-21]. In Korea, with the lead of Pusan National Simulation Center in 2005, the simulation training embarked in full-fledged manner followed by the opening of the 4 centers including those of Catholic University, Yonsei University and thereafter the simulation training has gradually begun to expand with consecutive openings of seven places in 2006 and 10 locations in 2007 [22].

Simulation training program has the advantage of capable to provide with a secure environment and reproduce the same conditions for the promotion of clinical performance for Nursing Students and it can enhance the capabilities through the repeated reflection and debriefing by acquiring feedback from the instructor when the

training is finished and also it can be said the cost-effective training method [23-24, 25].

Simulation training program can be designed to fit the actual patient care so that the nursing students can apply the knowledge and confidence in nursing clinical practice, that they makes learning in teaching [26], while the composition of the educational environment similar to the actual clinical practice is promoting the motivation of the student, so this method has been being applied to the study program in the world in a way to promotes the self-confidence of the students by learning skills to solve clinical practices [27-28].

There are a number of simulators of various kinds used by the nursing, such as the low-fidelity mannequins like the arm models for intravenous injection, the muscular injection models and the like, through which you can learn a simple technique, while there are also high fidelity simulators which enable you to acquire the knowledge and critical thinking needed for clinical practice using the computer-operated mannequins. In addition, in the simulation programs the standardized role-play patient that was trained to perform the role of the patient, can be utilized while you can select a virtual patient to the reinforcement of the simulation programs, and the virtual patient is either a standardized patient recorded by video based on a computer or a shape made of actual conditions (Avatar), so this is a training method using a simulator that is programmed actually to respond to the drug and the action of the actors physically [29].

The research on the effectiveness of the characteristics of the simulators [30] disclosed that, in comparison of two groups, a group applying high fidelity simulator which has a real human anatomy and physiological characteristics, and other group using the multi- mode simulators, namely the medium fidelity simulators capable of the part body reactions and the standardized patients together, even though the concern and the burden was worrisome when conducting invasive practice to the standardized patients, compared to the expensive high-fidelity simulator, but there was no difference in clinical performance and satisfaction between two groups. It can be seen that only the training applying expensive equipment cannot guarantee the education effect and the simulation programs arranged in consideration of the level of objectives and the education environment, are cost-effective.

Conclusion

Recent nursing field is changing very rapidly while it is sometimes difficult either to predict or control the environment, so you have to take into account the safety of nursing subjects with a priority. Therefore, nursing education should be prepared step by step for educational innovation in field training towards simulation education which will enable the situation learning with the learning situation similar to the real one.

Simulation training will become the ideal one when it is paralleled with clinical experience of nursing students and you can enhance the understanding of learning content and technical skills when you integrate teaching, simulation training and clinical experience while the active learning experience, using a simulation will enable long term storage of learning content and deepening of the learning and learning effect can be enhanced through a debriefing.

In fact, it is not easy work to wrestle nursing students to have confidence in the treatment environment, where the integrated

intervention is required for the complex and diverse symptoms of the subjects in clinical trials.

Therefore, the instructors should always grasp the problems of teaching methods and apply and evaluate them in order to help the nursing students to fit and have confidence in the clinical practices, and further have a continuous interest in establishing an effective strategy so that the nursing students can be confident in themselves as well as play a role in clinical practice.

Strategy for enhancing the learning effect of the simulation training is as follows.

First, in order to improve clinical judgment and critical thinking disposition of nursing students, a systematic training program, not one of some hours, is needed and the studies to determine the effectiveness of simulation training for this purpose should be preceded by priority.

Second, because it is the interaction between environment-learner, learner-learner, teacher-learner made through the scenarios in the same environment as the clinical, learning information, interaction and the activities of motivation aspects must be considered with scenario development at the same time when designing instructional plan.

Third, the evaluation of the simulated hands-on training is important. You should have a process for the students to reflect themselves through adequate debriefing (work to review the results) after simulation exercises. You should develop and standardize the appropriate evaluation tools for each simulation scenario.

Fourth, the fidelity of the simulation center (lab) should be increased. To ensure that it is keys to create the environment as similar to the actual clinical practice field as possible, by securing sufficient space.

Fifth, you should ensure a team of instructors with the capability to conduct simulation training. Simulation training is achieved most effectively when there are well-trained educators.

Competing Interests

The authors have no competing interest with the work presented in this manuscript.

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