

Factors Effects on Different Stimulation Method in Nursing Education

Abstract

The aim of this study is to investigate the factors that affect the critical thinking dispositions of undergraduate nursing students. The population of the study consisted of all students who received nursing undergraduate education in 2018-2019 academic years at the School of Health of a state university. The study was conducted with 190 students who agreed to participate in the study. The data were collected by using the Descriptive Information Form for the students and the California Critical Thinking Disposition Inventory (CCTDI). The students critical thinking dispositions were found to be moderate. When the subscale scores of CCTDI were examined; it was found that students had a moderate tendency in systematicity, open-mindedness, inquisitiveness and analyticity sub-dimensions, and low level of critical thinking in search for truth-seeking and self-confidence sub-dimensions. When the students' descriptive characteristics and the critical thinking disposition scale total scores were compared; It was found that there was a significant difference between the variables of classroom, place of residence before the university, status of reading books, following scientific studies in nursing, participating in social activities, school achievement status, place of residence before the university and total critical thinking tendency. There was no significant difference between gender, age, grade point average, pre-university school life variables of scientific studies, participation in projects and critical thinking disposition total scores.

Keywords: Critical thinking • Nursing students • Nursing education

Introduction

In recent nursing environments, complex and strategic practices are required, and the role of nurses is recognized for its importance. In order to effectively respond to the patients demands, it has become important for nurses to equip themselves with specialized skills [1]. Such change requires nurses to build not only a high level of knowledge and skills, but also self-leadership to actively solve problems with independence and autonomy, as well as critical thinking to set the best goals and to identify strategies and grounds for apply clinical judgment and decision. To this effect, nursing education must provide a learning environment that reflects actual practices and supports students to ultimately equip themselves with problem-solving abilities by coming up with their own measures, as well as searching and collecting the required data in order to exercise leadership and make logical and critical decisions in various situations, thereby ultimately carrying out nursing at a technical level. Problem-solving abilities are an essential quality and the most notable characteristic of nursing professionals [2], in which they utilize their knowledge, explore and arrange information, and use it to serve the intended purposes under complex and unpredictable circumstances. However, the traditional top-down education systems have limitations in teaching such practical skills and are inadequate to prepare students for many challenges in the field. For nursing graduates, attitudes that are active, autonomous, responsible, and such are required in clinical practice, and many of them face difficulties to meet the requirements as they have developed passive and dependent approaches during early school years centered on university entrance exams.

Insufficient training on practice at nursing colleges leads to the decline in clinical practice capability of new nurses after their graduation. To complement this, more universities are adopting a high-performance simulator to enhance their training on practice. The training

Fatima Naziya*

Department of Nursing, School of Nursing and Midwifery, Shiraz University of Medical Sciences, Shiraz, Iran

*Author for correspondence:
NaziyaFatima@Hc.ir

Received: 02-Aug-2023, Manuscript No. OANC-23-96484; **Editor assigned:** 04-Aug-2023, PreQC No. OANC-23-96484 (PQ); **Reviewed:** 18-Aug-2023, QC No. OANC-23-96484; **Revised:** 24-Aug-2023, Manuscript No. OANC-23-96484 (R); **Published:** 30-Aug-2023; **DOI:** 10.37532/oanc.2023.6(4).59-62

simulators provide benefits by reproducing simulated situations which are similar to actual clinical environments, motivating the learning of students and providing direct learning effects by having students engage in activities in simulated situations [3]. They also provide additional learning effects through post-learning evaluation and a re-design process. Furthermore, it has been reported that such practice-oriented training provides benefits of enhancing students' critical thinking skills, allowing them to experience the outcomes of their clinical intervention, and to share with other students and reflect on their experience through de-briefing. In simulated situations, trainees must apply in a critical way the theories learned to address patient issues and set their priorities to make decisions in a self-directed manner. If students lack self-leadership, which is underscored in the simulated training on practice, they may not be able to improve problem-solving skills the essential skill required for change [4].

Due to the characteristics of nursing training, the result of training is directly related to practice in the field, and this has led to more attention being given to the design of training courses involving skills development and training experience for nurses aiming to develop and promote their critical-thinking and problem-solving abilities. However, there are an insufficient number of studies on the relationship between self-leadership, goal commitment, critical thinking, and problem-solving abilities in nursing students. Thereby, the study results may be used as basic data for developing and operating training programs to enhance nursing undergraduates' problem-solving skills.

Discussion

Nursing education and training must provide a learning environment that reflects actual practice and enables students to set up alternative measures to solve learning problems, search and obtain required data, and equip themselves with problem-solving abilities. However, the traditional top-down education systems have limitations in teaching such practical skills and are inadequate to prepare students for many challenges in the field [5]. This study aimed to analyze the relationship between the self-leadership, goal commitment, critical thinking, and problem-solving abilities of nursing undergraduates with the experience of simulated practice

training and to obtain basic data to improve the quality of simulated practice training.

The results of the study are similar to the previous studies; an average mean of 3.14 points for problem-solving skills, 3.36 points for problem-solving orientation, and 2.98 points for problem-solving abilities. This suggests that nursing undergraduates evaluated their problem-solving abilities to be of intermediate level and perceived themselves as an intermediate-level problem solver. For sub-categories, the positive problem orientation showed the highest point, followed by rational problem-solving and evasive style. This implies that nursing undergraduates showed a comparatively positive emotional state when faced with problems, but had a tendency to evade problems for as long as possible rather than confront them. To address this problem, the study also stressed out the need for measures to support nursing undergraduates to experience various situations and respond in objective, rational, and cognitive manners [6]. Problem-solving abilities refer to a process of making decisions using effective problem-solving strategies based on one's knowledge and are regarded as very important skills for professional nurses. A study by Yang stated that the current nursing education and training courses provide content and methods that are not effective in teaching nursing undergraduates about the understanding or skills of the problem-solving process, and results in many undergraduates experiencing hardships when faced with various challenges in the clinical field. As insufficient training on practice leads to a decline in the clinical practice capability of new nurses after graduation; therefore, various teaching methods should be applied to enhance students' problem-solving abilities and to enable nursing undergraduates to solve problems in a positive, active, and rational manner.

The difference in problem-solving abilities according to the general characteristics was partially significant for grades, personal relationships, and academic grades. The major satisfaction exhibited significant differences in all sub-categories. For positive problem orientation and rational problem-solving, the subjects with a greater major satisfaction showed a higher level of problem-solving skills. For negative problem orientation and impulsive careless style, subjects with less major satisfaction showed a higher point.

These results are consistent with the results of another study on critical thinking disposition, problem-solving ability, and clinical competence of nursing students in that the subjects with a lower major satisfaction had lower problem-solving skills. This means that the subjects with a greater major satisfaction had more effective, intellectual, and creative problem-solving abilities than those with less major satisfaction. This is believed to be due to factors such as academic achievement, active attitude toward problem-solving, and such, according to their level of major satisfaction [7].

The influential factors for problem-solving abilities were goal commitment and critical thinking. Although the general characteristics of age, satisfaction with nursing major, and personal relationships showed correlations with problem-solving skills, no significant result was observed in the regression analysis. The study also stated that subjects could develop actual capabilities required in the field only by having a deep understanding of situations and those they could acquire problem-solving abilities required in the field by committing to the situation not as an observer, but as a learner. Therefore, to enhance problem-solving skills, various programs should be developed and implemented to improve students goal commitment. In addition, team projects or action-based learning programs should be implemented to promote interactions between different learning programs and enhance students' commitment to the study. In this way, the programs may enhance the problem-solving abilities of students by motivating them.

According to the study by Han and Park, greater critical thinking leads to higher problem-solving skills, which in turn enhances one's confidence in problem-solving and improves the problem-solving skills? The study found that nursing undergraduates must develop critical thinking skills in order to explore problems in diverse aspects and seek solutions in a discreet manner [8]. Training using simulators is an effective educational method as it motivates students' learning and provides direct learning effects through simulated activities. Furthermore, it enhances the students' critical abilities and allows them to experience the outcomes of their clinical intervention, as well as to share with other students and reflect on their experience

through de-briefing.

Tucker et al. stated that problems can be solved through a regular method based on guidelines and algorithms, and those such guidelines and algorithms are the result of such efforts. To develop problem-solving skills, which are an essential quality for nurses, one must develop a strong goal commitment and critical thinking abilities. To this effect, nursing undergraduates should be subjected to various nursing situations and be able to establish their own goals and commitment. They should also develop an accurate understanding of situations and critical thinking abilities to accurately identify, analyze, consolidate, and utilize data. To this effect, various simulated practice trainings, action-based learning, and problem-solving-oriented teaching programs, which support a natural learning process through a repetitive process, should be implemented to have learners actively engage in learning and develop a sense of commitment as well as critical thinking.

This study suggests that, while self-leadership showed no significant impact on problem-solving skills, it had impact on the problem-solving abilities of nursing undergraduates. It was also suggested that self-leadership affected the goal commitment, which impacted the problem-solving abilities and improved it. This was due to the fact that not all nursing undergraduates exercised self-leadership and the level of self-leadership varied according to the individuals' ability, environmental factors, function, and task structure [9]. Self-leadership involves a behavior strategy and cognitive strategy. Nursing students need to be committed to this process to solve problems and must put efforts to address problems on their own in order for their problem-solving abilities to develop. To enhance problem-solving skills, they must be committed to achieving their goals. Educational and training programs should be developed and implemented to provide nursing students with circumstances in which they are able to exercise self-leadership and in which they are encouraged to develop self-leadership skills.

This study holds significance in that it suggests the need for the development and implementation of various programs involving simulated practice training to enhance the problem-solving abilities of nursing undergraduates. It also suggests the need for measures to make students set

their own goals and improve the level of their goal commitment, as well as the fact that the use of self-leadership may enhance the effectiveness of the process. Furthermore, it suggests the possible synergetic effects on developing critical thinking abilities by allowing students to build critical curiosity over questions they face by experiencing various programs. On the other hand, this study had limitations in that the scope of sample was limited to nursing undergraduates with the experience of simulated practice training at certain universities in Seoul city who agreed to participate in the study, suggesting that the study results should not be used for generalization [10]. In addition, there are limitations to defining the correlation in that a cross-sectional study method was used in which the cause and outcome variables of the collected data were measured at the same time point for analysis.

Conclusions

This study was conducted to identify the relationship between the self-leadership, goal commitment, critical thinking, and problem-solving abilities of nursing undergraduates with the experience of simulated practice training. The multiple regression analysis results show that the variables of goal commitment and critical thinking had a significant impact on the nursing undergraduates' problem-solving abilities, with the explanatory power of 41%. In order to enhance the problem-solving abilities of nursing undergraduates, various education programs which involve discussions with simulated training on practice to demonstrate a step-by-step approach to problematic situations, an establishment of hypothesis, and team cooperation must be developed and implemented. At this stage, measures are required to encourage students to set up their own goals and enhance goal commitment; the effectiveness is expected to increase if the process involves self-leadership. In addition, there may be synergetic effects from students participating in various programs, through training and classes, and developing questions and critical thinking as well as curiosity. Based on the study results, the following suggestions are made. There is a need for repetitive studies on nursing undergraduates and professional nurses under

various circumstances and on self-leadership, which was explained as a parameter for problem-solving skills. In addition, a comprehensive program must be developed in which simulated practice training involves not only enhancing the learners' problem-solving abilities and critical thinking, but also developing self-leadership and goal commitment.

References

1. El-Solh AA, Niederman MS, Drinka P. Nursing home acquired pneumonia: a review of risk factors and therapeutic approaches. *Current Medical Research and Opinion*. 26, 2707–2714(2010).
2. Sarin J, Balasubramaniam R, Corcoran AM *et al*. Reducing the risk of aspiration pneumonia among elderly patients in long-term care facilities through oral health interventions. *Journal of the American Medical Directors Association Current Medical Research and Opinion*. 9, 128–135(2008).
3. Marik PE, Kaplan D. Aspiration pneumonia and dysphagia in the elderly. *Asp Pneu Dysph*. 124, 328–336(2003).
4. Mintz AH, Kestle J, Rathbone MP *et al*. A randomized trial to assess the efficacy of surgery in addition to radiotherapy in patients with a single brain metastasis. *Cancer*.78, 1470–1476(1996).
5. Zimm S, Wampler GL, Stablein D *et al*. Intracerebral metastases in solid-tumor patients: natural history and results of treatment. *Cancer* .48, 384–394(1981).
6. Grunfeld E, Coyle D, Whelan T *et al*. Family caregiver burden: results of a longitudinal study of breast cancer patients and their principal caregivers. *CMAJ* .170, 1795–1801(2004).
7. Brouwers MC, Chambers A, Perry J *et al*. Neuro-oncology Disease Site Group. Can surveying practitioners about their practices help identify priority clinical practice guideline topics? *BMC Health Serv Res*. 3, 23-25(2003).
8. Lee ST, Lui TN, Chang CN *et al*. Prophylactic anticonvulsants for prevention of immediate and early postcraniotomy seizures. *Surg Neurol* .3, 361–364(1989).
9. Patrick DM, Marra F, Hutchinson J *et al*. Per capita antibiotic consumption: How does a North American jurisdiction compare with Europe? *Clin Infect Dis*. 39, 11-17 (2004).
10. Heberer T. Occurrence, fate, and removal of pharmaceutical residues in the aquatic environment: A review of recent research data. *Toxicol Lett*. 131, 5-17 (2002).