

## 간호대학생을 위한 학제간 의사소통을 포함한 시뮬레이션 교육 프로그램 개발 및 효과

김현주\*

### Development and Effect of Simulation Education Program including Inter-disciplinary Communication for Nursing Students

Hyun-Ju Kim\*

\*Associate Professor, Department of Nursing, Catholic University of Pusan, 46265, Korea

#### 요 약

의사소통은 간호사가 대상자와의 치료적 관계 및 다양한 직종간의 협력관계를 형성하여 성공적인 간호중재를 이끄는 데 있어 중요한 요소이며 이에 간호대학생들에게 효과적인 의료인 간의 의사소통 능력 함양 할 수 있는 의사소통 교육프로그램을 개발하고 그 효과를 분석하여 간호교육 전략을 모색하고자 하였다. 연구대상은 P 대학교 간호학과 4학년에 재학중인 학생 54명이며, 연구결과, 대상자의 의사소통명확성 ( $t=-7.75, p<.001$ )과 셀프리더십 ( $t=4.43, p<.001$ )은 유의한 차이가 있었고, 의사소통 만족도는 교육 후에 점수가 증가하였으나 유의한 차이가 없었다 ( $t=-1.22, p=.226$ ). 결론적으로 SBAR를 활용한 학제간 의사소통 교육프로그램은 간호대학생의 의사소통명확성과 셀프리더십에 긍정적인 효과가 있으며 다양한 시나리오의 개발과 반복 훈련을 할 수 있는 지속인 교육개발이 필요하다.

#### ABSTRACT

Communication is an important factor for nurses to lead successful nursing interventions by establishing therapeutic relationships with the subjects and cooperative relationships between the various occupations. The purpose of this study was to develop a communication education program to nurse college students to improve communication skills among medical professionals and to analyze the effects of the program. The subjects of this study were 54 students in the 4th grade of P nursing. The results of this study showed that there was a significant difference between the subjects' communication clarity ( $t=-7.75, p<.001$ ) and self-leadership ( $t=4.43, p<.001$ ). Satisfaction with communication increased after the training but there was no significant difference ( $t=-1.22, p=.226$ ). In conclusion, communication program using SBAR has a positive effect on clarity of communication and self-leadership of nursing students, and it is necessary to develop continuous education that can develop various scenarios and repeat training.

**키워드** : 간호대학생, 의사소통명확성, 의사소통만족도, 셀프리더십

**Keywords** : Nursing student, Communication clarity, Communication satisfaction, Self-leadership

Received 30 July 2019, Revised 2 August 2019, Accepted 14 August 2019

\* Corresponding Author Hyun-Ju Kim(E-mail:hjkim@cup.ac.kr, Tel:+82-51-510-0772)

Associate Professor, Department of Nursing, Catholic University of Pusan, 46265, Korea.

Open Access <http://doi.org/10.6109/jkiice.2019.23.10.1209>

print ISSN: 2234-4772 online ISSN: 2288-4165

©This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License(<http://creativecommons.org/licenses/by-nc/3.0/>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.  
Copyright © The Korea Institute of Information and Communication Engineering.

## I. 서론

As the medical environment became complicated and the demand for highly professional nursing increased, the nurses were in charge of education and counseling for patients and caregivers in addition to nursing work. In addition, many medical personnel in the hospital are mediating communication with patients and experience serious conflicts and stresses in communication disorders among various occupations of hospitals[1]. In particular, nurses and doctors frequently encounter frequent interactions and collaborations in patient care, but frequent work conflicts arise from communication[2]. The communication problem between the nurse and the doctor is mentioned as one of the causes of communication in different ways. The doctor wants to listen to the information necessary for the patient treatment in a simple and clear way. Some doctors think that the communication method of the nurse is not clear Point[3]. In addition, the transfer of nurses should include basic information about the patient, treatment and nursing plans, nursing performance and progress, and knowledge, skills and empathy are required for effective communication. However, if the essential information about the patient is not conveyed during this process, it may lead to delayed diagnosis and treatment, increased patient complaints, and increased length of hospital stay.

In order for nurses to establish nursing interactions with their subjects and cooperate with various occupations, they should be able to express their opinions clearly and confidently in communication[4]. In addition, there is a growing demand for effective communication strategies to improve self-leadership by self-directed ability to self-judge through critical thinking[5].

## II. 본론

In the domestic nursing department, communication

education is theoretical-oriented lecture education mainly provided for the therapeutic communication of patients and nurses, and communication skills among medical professionals when faced with complicated emergency situations in clinical practice It is not enough to demonstrate.

Communication clarity is one of the components of the communication principle, and it is a means to improve communication in the medical profession by accurately understanding the meaning of the communicator and the meaning of the communicator. The Institute for Healthcare Improvement(IHI) proposed a Situation-Background-Assessment-Recommendation (SBAR) as a standardized communication method. It is also the only standardized communication method recommended by the Joint Commission Interational.

The SBAR includes the current problem situation of the subject, the background of the clinical cause of the problem, the assessment of the current condition, and the recommendation of the reporter for further treatment of the subject. Is a structured communication tool that enables fast, clear communication in a short period of time. SBAR also enhances critical thinking by allowing communicators to evaluate the problem in advance and start thinking about the appropriate solution before the actual report begins[5].

The results of this study are as follows. First, the nurses were able to recognize the change of the patient status accurately, and the clarity of the report, the clinical performance ability and the clinical judgment ability were improved and the doctor could give the patient a prompt and appropriate prescription[6-7]. Recently, the use of SBAR has been increasingly used for patient reporting, nurse takeover, and student education[5,8-9].

On the other hand, in Korea medical institutes have started to use SBAR as a standardized communication method. In addition, nursing students should be able to have communication skills based on clinical practice in order to increase nursing competence, but clinical practice field is progressed to observation-oriented

passive practice and it is difficult to meet these needs. In this respect, it is necessary to enable nursing students to experience nursing activities in the communication area in a simulation exercise that enables repeated and direct learning using hypothetical scenarios based on clinical practice[8]. In addition, when using various methods such as lectures, role-play, group discussions, and simulation-based education, communication and clinical judgment were improved as the ability to take over [5,6-7,10].

Therefore, in order to effectively communicate information about patients, we need the ability to understand the patient's condition as a whole and communicate with them. In order to integrate them, we apply the scenario-based educational and communication tools. In order to grasp, SBAR communication theory education, communication role of SBAR using scenario, and communication education program as a stage of simulation were constituted. Through the communication education using the SBAR, the effectiveness of communication clarity, communication confidence and self-leadership of nursing college students is evaluated and presented as a basis for nursing student's communication ability enhancement.

### III. 연구 방법

#### 3.1. 연구 설계

The purpose of this study was to investigate the effect of SBAR based communication program on nurse college students' communication clarity, communication satisfaction and self-leadership in fourth graders of nursing students. to be. In this study, the communication education program using the SBAR was developed based on the four elements of SBAR communication, the SBAR communication precedent study, and the nursing practice in the practice. The curriculum was based on Bloom's new classification. Bloom's new classification system provides a theoretical framework for pedagogical design and evaluation of nursing student's SBAR

communication education. It is aimed at confirming the learning goals of clinical reasoning, confirming clear cognitive learning outcomes, and co-ordinating education and evaluation. Bloom's new classification, a process of memory, understanding, application, analysis, evaluation, and creation, is described as a process of transitioning the learning process to higher-order thinking[10]. In this study, SBAR communication lecture education was a learning stage of memory and understanding, SBAR scenario role was learning stage of application and analysis, communication simulation using SBAR was a high level thinking evaluation, and it is designed to provide students with step-by-step SBAR communication training.

The subjects of this study were students who understood and agreed on the purpose of the research among the 4th grade students of the P nursing department of the university. The sample size of this study was calculated using the G-Power 3.1 program based on the effect size 0.54[11], significance level 0.05, and power 0.8 based on the results of previous studies. The size of the calculated sample was 29 in a single group. In this study, 36 students were required considering the dropout rate of 20%. However, considering that this study is part of the curriculum, 54 students.

#### 3.2. 연구 진행 절차

##### 3.2.1. Pre-test

Before running the SBAR-based communication education program, general characteristics, communication clarity, communication satisfaction and self-leadership were examined. The time required was about 20 minutes.

##### 3.2.2. Experimental procedure: Communication training program operation

The program consists of lectures, role plays, feedback, and simulations.

#### 1) SBAR Communication Training

Communication training related to the SBAR was

made using a program consisting of SBAR communication lectures and role-plays using Karen's[12]. The SBAR educational materials were prepared with powerpoint including the importance of communication, definition and necessity of SBAR, historical background of SBAR, components of SBAR, application effects and clinical examples. Theoretical training time was 30 minutes.

## 2) Role-play of scenario using SBAR

Total training time was 50 minutes. The researchers who had received pre-education and training for SBAR conducted the pilot education using the revised and supplemented scenarios in consideration of the understanding and application level of the nursing college students among the six topics that were used in Cho[11]. After the pilot training, we presented the scenarios to the participants, gave them a role-play as a group of two, and gave feedback to help them communicate effectively.

## 3) Development and application of simulation scenario using SBAR

The results of the previous study that grasped the education contents required for the new nurses to take over the acquisition of the nurses were analyzed by analyzing the meaningful change of the patient's condition, the contents and timing to report to the doctor, the clinical significance of the diagnostic test results[13]. It is difficult to communicate these items logically. The purpose of this study is to analyze the actual cases of clinical needs and to analyze the nursing problems of acute coronary artery disease patients in the cardiopulmonary ward environment. The simulation scenario was validated by two adult nursing professors with simulation training experience, one professor of basic nursing professor, and two nurses in the cycling machine ward and intensive care unit of a university hospital with a master's degree of more than 5 years clinical experience. Simulation-based SBAR training was conducted for a total of 6 hours.

In order to solve the nursing problem of the patients who complain of chest pain, the specific operation

method of the simulation exercise using the SBAR based on the scenario is that 26~28 students become one team and participate in the practice at the same time, And it is necessary to carry out the effective communication method to solve the nursing problem of the standardized patient. At this time, in order to help students to use SBAR communication, we provided four elements of SBAR communication and a form to explain it.

After that, the contents of the subjects 'nursing problem, doctor's report and prescription, and nursing care before the examination were simulated by SBAR, and the simulation was carried out within 5 minutes. After the simulation, the content of the debriefing was structured according to the SBAR communication system. In relation to Situation, 'What do you think are important symptoms in the patient's situation?', Background related 'How did you know?', Assessment related to 'What is the assessment about the patient's serious injury?', Recommendation related to 'What do you think is necessary for the patient?'. At the end of the debriefing, students were asked to review their learning and organize their thoughts in a reflection log.

### 3.2.3. Post-test

After applying the SBAR-based communication education program, subjects were asked about communication clarity, communication satisfaction and self-leadership.

## 3.3. 연구도구

### 3.3.1. Communication clarity

Communication clarity is to communicate the meaning of the communicators to the communicators correctly. Cho[11] composed 14 items excluding 6 items because of duplication of concepts or similarity of contents in the original tool.

Nurses were asked to report their names, titles, It includes questions such as briefly and clearly communicating the patient's problems, asking specific questions, or clearly asking for directions. Each item is composed of 5 points likert scale and a higher score means a high clarity of communication. In Cho [11], the

reliability of the instrument was Cronbach's  $\alpha = .77$ . In this study, Cronbach's  $\alpha = .91$ .

### 3.3.2. Communication satisfaction

Communication satisfaction is a personal satisfaction that is felt when a person is successfully communicated to a person or communicated with a certain person, and consists of one item about communication satisfaction when communicating with a fellow student nurse. Each item is composed of 5 points likert scale and a higher score means a high communication satisfaction.

### 3.3.3. Self-leadership

Self-leadership is the process by which self-leadership determines self-initiative and influences itself to motivate voluntarism and self-initiative necessary to perform tasks in a desirable way. The self-leadership questionnaire, was modified by Cho[14] to measure the self-leadership of the general hospital nurse. This questionnaire consists of 18 sub-items, self-expectation, rehearsal, goal setting, self-compensation, self-criticism and constructive thinking. Self-leadership stages are classified according to the score, with 15-22 being very low, 23-37 low, 38-52 being normal, 53-67 high, 68-75 high level. Cronbach's  $\alpha = .87$  in the Cho[14] study. In this study, Cronbach's  $\alpha = .74$ .

## 3.4. 자료 분석

Analysis of the collected data was analyzed using SPSS version 21.0 program. The general characteristics of the subjects were analyzed by frequency and percentage, and communication clarity, satisfaction and self-leadership were analyzed by mean and standard deviation. The difference in communication clarity, satisfaction, and self-leadership between before and after nursing students using SBAR was analyzed by Paired t-test.

## IV. 결과

As a result of analyzing the general characteristics of the subjects, there were 46(85.2%) female students, and 32(59.3%) and 39(72.2%) The most. The degree of self-expression was usually the highest in 27(50%), and the clinical self-confidence was usually 42(77.8%).

In this study, communication clarity of nursing college students increased significantly ( $p < .001$ ) to 57.22 points after education compared with 50.63 points before communication education program. Satisfaction with communication increased to 3.94 points after education(3.81 points before training), but there was no significant difference ( $t = -1.22, p = .226$ ). Self-leadership increased significantly ( $p < .001$ ) from 67.84 points after training to 64.85 points before communication education program. Rehearsal ( $t = -5.39, p < .001$ ), goal setting ( $t = -2.53, p = .015$ ), self-criticism ( $t = -3.28, p = .002$ ), and constructive thinking ( $t = -1.92, p < .001$ ) among sub-domains of self-leadership improved significantly. Self-expectation ( $t = -1.92, p = .061$ ) and self-compensation ( $t = -1.91, p = .062$ ) improved after the training but not significantly.

## V. 결론

The purpose of this study was to develop a communication education program using SBAR and to apply it to nursing college students and to confirm the effect of communication clarity, communication satisfaction and self-leadership on effective communication skills among nursing students.

In this study, communication clarity of nursing college students was significantly increased to 57.22 points after education compared with 50.63 points before communication education program education. This is consistent with the previous study that improved communication clarity after applying SBAR to nurses and nursing college students[5,8,14]. SBAR is a structured communication tool that helps us to define

and distinguish the contents of the report in detail, and it seems to be an effective guide to reporting to students who are confused or do not know exactly how to report contents or methods. In addition, more than 60% of the red lightning incidents in hospitals are caused by unclear communication between healthcare providers, and clarity of communication is an important factor for improving the quality of patient safety and patient care, and that it can reduce stress and reduce turnover[7].

Communication clarity is one of the components of a communication principle, and it is the intent of the communicator to convey its intentions and precisely understand the meaning of the communicators, but nursing students have the opportunity to report directly to colleagues or nurses and it is hard to know how to communicate when it becomes a nurse after graduation.

In order to determine when, what, and how to report a changing patient condition to a PCP, it is possible to clinically deduce and judge the patient's condition, not just the level of knowledge or understanding[5]. In this way, students can identify the nursing problems related to the patient's situation through role-play applying real scenario, and help them assess whether they should report the change to the physician by evaluating meaningful clues[8] And organized a communication education program so that they could learn what to prepare for future.

In this study, communication satisfaction of nursing college students increased to 3.94 points after education compared with 3.81 before communication education program education, but there was no significant difference. In Lee[5] and Renz et al.[15], nurses' reporting skills improved when the SBAR protocol was applied to the physician, and the overall communication satisfaction felt by the nurses increased. Lee[5] was able to use the communication tools more naturally by carrying out the practical application period of the SBAR during the experimental procedure for nurses for a total of 4 weeks. It is believed that this improved the communication efficacy and self-confidence and increased the communication satisfaction[8,16]. In this regard, it is

difficult for nursing students to perform actual reporting to medical staff during clinical practice.

In this study, the self-leadership of nursing college students increased significantly from 64.85 points to 67.94 points after training. Self-leadership refers to the process by which an individual herself changes her behavior and thoughts and exerts influence on herself. Since a nurse must self-emergence is emphasized. In order to improve the self-leadership ability, communication that gives trust to the other person is the most important, and as the communication ability is improved, the self-leadership and clinical performance are improved. Communication education has confidence in communication ability by reducing the fear of reporting and by performing consistent reporting successfully[17]. It is very meaningful that communication training using SBAR improves self-leadership.

Various methods have been attempted to activate the application of SBAR and to verify its effectiveness, and SBAR performance score was higher when case-based role play was performed than SBAR theory lecture alone. In addition, scenario education is not only effective in improving communication because it provides a logical order, but also has increased communication clarity and satisfaction[5,8]. The results of this study also confirmed that SBAR communication education using scenario-based role play and simulation has a positive effect on nursing student 's communication and self-leadership.

#### ACKNOWLEDGEMENT

This paper was supported by RESEARCH FUND offered from Catholic University of Pusan in 2019.

#### References

- [ 1 ] H. S. Lee, and J. K. Kim, "Relationship among communication competency, communication type, and organizational

- commitment in hospital nurses,” *Journal of Korean Academy of Nursing Administration*, vol. 16, no. 4, pp. 488-496, Nov. 2010.
- [ 2 ] M. J. Kim, and K. J. Kim, “The influence of nurses' clinical career and communication within organization on teamwork competency,” *Journal of Digital Convergence*, vol. 14, no. 2, pp. 333-344, Feb. 2015.
- [ 3 ] K. D. Meester, M. Verspuy, K. G. Monsieurs, and P. V. Bogaert, “SBAR improves nurse-physician communication and reduces unexpected death: a pre and post intervention study,” *Resuscitation*, vol. 84, no. 9, pp. 1192-1196, Mar. 2013.
- [ 4 ] K. O. Park, “Nurse's experience of health communication with doctors in the clinical fields,” *Journal of Korean Nursing Administration Academic Society*, vol. 21, no. 1, pp. 53-63, Feb. 2015.
- [ 5 ] H. Y. Lee, “Effects of SBAR application on communication and self-leadership in hospital nurses,” Master's thesis, Pusan, Dong-A University, 2018.
- [ 6 ] Y. H. Kim, Y. S. Choi, H. Y. Jun, and M. J. Kim, “Effects of SBAR program on communication clarity, clinical competence and self-efficacy for nurses in cancer hospitals,” *Korean Academic Society of Rehabilitation Nursing*, vol. 19, no. 1, pp. 20-29, Jun. 2016.
- [ 7 ] J. H. Kim, “The application effects of simulation-based handover education program for new nurses,” Ph. D. dissertation, Seoul, Eulji University, 2016.
- [ 8 ] G. Y. Noh, and I. S. Lee, “Effect of stepwise communication education program using SBAR among nursing students: Focusing on scenarios and nursing case-based role playing,” *Journal of Korean Academic Society of Nursing Education*, vol. 24, no. 2, pp.115-126, May. 2018.
- [ 9 ] M. C. Narayan, “Using SBAR communications in efforts to prevent patient rehospitalizations,” *Home Healthcare Nurse*, vol. 31, no. 9, pp. 504-515, Oct. 2013.
- [10] D. Darbyshire, M. Gordon, and P. Baker, “Teaching handover of care to medical students,” *The Clinical Teacher*, vol. 10, no. 1, pp. 32-37, Feb. 2013.
- [11] H. J. Cho, “The effect of SBAR program education on a nurse's communication clarify and self expression,” Master's thesis, Seoul, Yonsei University, 2013.
- [12] K. S. Kesten, “Role-play using SBAR technique to improve observed communication skills in senior nursing students,” *Journal of Nursing Education*, vol. 50, no. 2, pp. 79-87, Feb. 2011.
- [13] J. H. Kim, and H. Y. Kim, “Educational need assessment and development of scenarios on simulation-based education of nursing handoffs for new nurses,” *Journal of Learner-Centered Curriculum and Instruction*, vol. 17, no. 17, pp. 429-448, Sep. 2017.
- [14] K. H. Cho, “Influence of self-leadership about job-satisfaction and outcome of nursing practice,” Master's thesis, Seoul, Korea University, 2003.
- [15] S. M. Renz, M. P. Boltz, L. M. Wagner, E. A. Capezuti, and T. E. Lawrence, “Examining the feasibility and utility of an SBAR protocol in long-term care,” *Geriatry Nursing*, vol. 34, no. 4, pp. 295-301, Jul-Aug. 2013.
- [16] S. Shrader, B. Dunn, E. Blake, and C. Phillips, “Incorporating Standardized Colleague Simulations in a Clinical Assessment Course and Evaluating the Impact on Interprofessional Communication,” *American Journal of Pharmaceutical Education*, vol. 79, no. 4, pp. 57, May. 2015.
- [17] Y. H. Lee, “Self-leadership, communication skill performance and clinical competency of nurses,” Master's thesis, Seoul, Korea University, 2015.



김현주(Hyun-Ju Kim)

가톨릭대학교 간호학 박사  
 부산가톨릭대학교 간호학과 교수  
 ※관심분야 : 시뮬레이션, 뇌졸중, 간호교육