

## Nursing Competency and Debriefing Evaluation According to Satisfaction in Simulation Practice

Eun Hee Choi<sup>1\*</sup>

*School of Nursing, Yeungnam University College  
eh5472@ync.ac.kr*

### **Abstract**

*Nursing competency including problem solving, critical thinking and clinical competency is essential in the nurse. Although importance of nursing competency is more increasing, chance of direct-patient care in hospital is more decreased. This study was purposed to evaluate nursing competency and debriefing evaluation according to satisfaction in major and clinical practice. 186 nursing students had participated in this describing study. Critical thinking and clinical practice among nursing competency and debriefing evaluation are significantly differences according to satisfaction in major. According to satisfaction in clinical practice, problem solving, critical thinking and clinical competency of nursing competency and debriefing evaluation were differences. Regardless of these positive results, there were not differences in real performances evaluation from educator and students themselves. It means that satisfaction in major and clinical practice is the important elements increasing clinical competencies but it is not promoting real performances in simulation situation. In order to develop the program improving real situational performances as increasing problem solving, critical thinking, clinical competency and debriefing evaluation extended and repeated studies are needed.*

**Keywords:** *Nursing competency, Simulation, Satisfaction*

### **1. Introduction**

Nursing competency is an essential topic to educators and administrators of nursing. Nursing competency in education is a narrowing of the gap between education and clinical practice leading to positive-patient-outcomes, clinical judgement and accountability of learners. As health care provider and educator have identified the gap between education and clinical practice, the role of competency in education has grown dramatically [1].

To promote the nursing competency, nursing education simulation uses specific patient scenario to provide students with hands-on learning experiences [2]. Shortage of direct-patient-care practice in hospital causes increasing of interest for nursing simulation. Incorporating simulation in nursing education is known to be effective in enhancing education outcome [3]. It can be used as a teaching strategy to promoting nursing competency such as problem solving, decision making and performance.

Debriefing with feedback is regarded as essential learning experiences in simulation and it is important to facilitate the best possible experiences during debriefing in order for student to maximize their learning [4].

The school is maybe both a risk and a resource for development of student's competency. The risk is most clear when students have negative perception for the school.

---

\*Corresponding Author: Eun Hee Choi, PhD, Associated Professor, School of Nursing, Yeungnam University College, 170 Hyunchungro, Namgu, Daegu, 705-703, South Korea. Tel: +82-53-650-9388, Fax: +82-53-625-4705, E-mail: eh5472@ync.ac.kr

This student who dislikes school is also most likely to be failing academically [5]. This means student's positive perception is related with academic accomplishment, it is needed to develop student's perception more positively.

Although satisfaction is related with academic accomplishment, there are not many articles especially to increase nursing student's satisfaction in major and clinical practice in order to promote nursing competency [1, 6]. If we would find out how the nursing student's satisfaction affected nursing competency, it would be the fundament of the nursing education.

Therefore this study was planned to find out the differences of nursing competency and debriefing evaluation according to satisfaction in major and clinical practice when you have a plan to apply the simulation based education.

### **1.1. Purposes**

The purpose of this study was to investigate the differences of nursing competency and debriefing evaluation according to satisfaction in major and clinical practice in simulation situation.

### **1.2. Definition of Terms**

The nursing competency was the gap between nursing education and clinical practice [1]. In this study, attributes of nursing competency included problem solving, critical thinking, clinical competency and situational performances in simulation. Debriefing evaluation was facilitator led activity following simulation performances where participants were encouraged to think reflectively [4].

## **2. Materials and Methods**

This is the descriptive study to help improving of nursing competency through find out the degree of problem solving, critical thinking, clinical competency and situational performance in simulation setting and debriefing evaluation according to satisfaction in major and clinical practice. All subjects who took part in this study were nursing students who had previously submitted written consent.

### **2.1. Sample**

The convenience sample for this study consisted of 186 nursing students attending a baccalaureate undergraduate program at a college in the Republic of Korean. The students were participated in simulation practice that was part of their outcome based educational course. They were in in the seventh semester of eight semester curriculum and had participated in six or seven simulation or debriefing exercise in their nursing curriculum.

### **2.2. Instrument of Data Collection**

Instrument is classified with nursing competency and debriefing evaluation. The tool for the nursing competency was problem solving, critical thinking, clinical competency and situational performance in simulation situation. Problem solving developed by Lee (2003) was consisted with subscales including recognize the problem, data gathering, analysis, divergent thinking, decision making, ability to make plan, practice and adventure, evaluation and feedback and the number of total item is 45 [19]. Critical thinking was developed by Kwon et al. (2006) was consisted with subscales intellectual integrity, creativity, challenge, open-mind, prudence, objectivity, truth seeking and the number of total item was 35 items[7]. Clinical competency developed by Son et al. (2007) consisted 7 subscales including data collection, basic nursing care, communication, critical thinking, teaching and

leadership, nursing management developing nursing professionalism and legal implementation and the number of total item is 64 [8]. Situational performance scale by educator and themselves was items consisted with more than content validity index 0.8 [20]. It was developed according to scenario by researcher and 3 members of coworkers had more than 5yrs career as an educator and nurse. Emergency scenario was about care of cardiac arrest. Situational performance scale consists with activities such as emergency notice, EKG reading, cardio-pulmonary resuscitation, defibrillation, intravenous medication and fluid infusion and treatment of return of spontaneous circulation. Total score of items is 23. Score allocation is depending on importance of intervention and is decided to researcher and coworkers.

Debriefing evaluation developed by Reed (2012) consisted with subscales analyzing thought and feeling, learning and making connection, facilitator skill in conducting the debriefing and appropriate facilitator guidance and the number of total item is 20 [9].

### 2.3. Data Analysis

Data were analyzed using SPSS 21.0 program. General characteristics, satisfaction in major and clinical practice, nursing competency, and debriefing evaluation were analyzed with mean and standard deviation. Difference according to satisfaction in major and clinical practice was analyzed with t-test.

## 3. Results

### 3.1. Characteristics

The average age of students was 22.62 years, 178 were female (95.7%). The students who have religion were 59(31.7%) and more than 3.5 in the grade were 90(48.4%). 95(51.1%) were high in satisfaction of major and 64(34.4%) were high in satisfaction of clinical practice.

**Table 1. General Characteristics**

(N=186)

Characteristic	Classification	N(%) or M±SD
Age (year)		22.62±3.32
Sex	Male	8( 4.3)
	Female	178(95.7)
Religion	Yes	59(31.7)
	No	127(68.3)
Grade	≥3.5	90(48.4)
	<3.5	96(51.6)
Satisfaction in major	High	95(51.1)
	Below moderate	91(48.9)
Satisfaction in clinical practice	High	64(34.4)
	Below moderate	122(65.6)

\*Low satisfaction in major and clinical practice added to moderate for sample size is fewer than 2

Problem solving's average was 3.66 out of 5. Critical thinking was 2.83 and clinical competency was 3.03 out of 4. Performance evaluation was 21.82 by educator and 19.34 by students themselves out of 23. Debriefing evaluation was 4.43 out of 5.

**Table 2. Nursing Competency and Simulation Debriefing Evaluation**  
 (N=186)

Characteristic	Classification	M±SD
Nursing competency	Problem solving	3.66±0.38
	Critical thinking	2.83±0.28
	Clinical competency	3.03±0.27
	Performance evaluation by educator	21.82±2.11
	Performance evaluation by themselves	19.34±2.68
Debriefing evaluation		4.43±0.48

### 3.2. Nursing Competency and Debriefing Evaluation According to Satisfaction

Critical thinking and clinical competency in the nursing competency were significantly different between high and below moderate satisfaction in major ( $p<.05$ ). Debriefing evaluation according to satisfaction in major was different ( $p<.05$ ). Performance evaluation by educator and students themselves were no differences according to satisfaction in major.

**Table 3. Differences According to Satisfaction in Major**

Characteristics	Classification	Satisfaction in major	M±SD	t	p
Nursing competency	Problem solving	High	3.70±0.38	1.39	.167
		Below moderate	3.61±0.38		
	Critical thinking	High	2.90±0.30	3.37	.001
		Below moderate	2.77±0.24		
	Clinical competency	High	3.08±0.27	2.22	.028
		Below moderate	2.99±0.27		
	Performance evaluation by educator	High	22.09±1.92	1.81	.072
		Below moderate	21.54±2.27		
	Performance evaluation by themselves	High	19.46±2.56	0.62	.538
		Below moderate	19.22±2.81		
	Debriefing evaluation	High	4.60±0.41	5.09	<.001
		Below moderate	4.26±0.49		

Problem solving, critical thinking and clinical competency in the nursing competency were significantly different between high and below moderate satisfaction in clinical practice ( $p<.05$ ). Debriefing evaluation according to satisfaction in clinical practice was different ( $p<.05$ ). Performances evaluation by educator and students themselves were no differences according to satisfaction

**Table 4. Differences According to Satisfaction in Clinical Practice**

Characteristics	Classification	Satisfaction in major	M±SD	t	p
Nursing competency	Problem solving	High	3.75±0.37	2.50	.013
		Below moderate	3.61±0.37		
	Critical thinking	High	2.91±0.31	2.66	.009
		Below moderate	2.80±0.26		
	Clinical competency	High	3.14±0.28	3.70	<.001
		Below moderate	2.99±0.25		
	Performance evaluation by educator	High	21.98±2.13	0.76	.450
		Below moderate	21.74±2.10		
	Performance evaluation by themselves	High	19.73±2.32	1.44	.151
		Below moderate	19.14±2.84		
	Debriefing evaluation	High	4.60±0.36	5.50	<.001
		Below moderate	4.30±0.49		

#### 4. Discussion

Nursing competency is essential in the nurse. Understanding meaning and level of nursing competency is very important to enhance performances [10]. Because nurses often contact with emergency situations, emergency nursing competency is very essential. Although the importance of emergency nursing competency is high for the nurses, chance to improve emergency nursing competency through the clinical practice is decreasing because the patient's right is more increased and frequencies that patients who refuse the care of the nursing students are increasing. In addition to this, emergency care in clinical setting can't be done mistake or delayed treatment. Simulation-based education is an alternative educational methodology and nursing educators are interested in simulation for safety and repetition of simulation practice [11].

Satisfaction is related with self-esteem and career motivation in nursing [12]. It used as a tool for life scale affects career search behavior in nursing students and effected by nursing competency and performance in clinical situation [6, 12-14]. This means nursing competency is related with satisfaction.

Problem solving, critical thinking and clinical competency in nursing competency are very essential to the nurse. This study represented that satisfaction in major affected to nursing competency attribute such as the critical thinking and clinical competency. Satisfaction in clinical practice affected more nursing competency attributes including problem solving, critical thinking and clinical competency. It means that increasing satisfaction in major and clinical practice very much related with nursing competency. Lots of literature support this study's result that clinical competency, satisfaction in major and clinical practice, and critical thinking are related with each other [15-16]. Especially, critical thinking affected to the clinical practice [17]. But it was not real and direct performance evaluation but it was only self-fill-up the questionnaire.

The real performance in nursing competency is often more important in the real hospital situation. Increasing satisfaction in major and clinical practice was not enough to increase performance in simulation situation and there is needed to develop the intervention promoting real performances. This meaning is that it is not enough when you consider that competency is focused on the individual's behavior underpinning the competent [1]. This suggests that satisfaction in major and clinical practice would not

affect specific performances in some simulation- situation-settings but general competency attributes including problem solving, critical thinking, and clinical competency should be affected. It is because of trait differences between emotional competency including problem solving, critical thinking and clinical competency and real performances.

In addition to this, satisfaction in major and clinical practice affected positively to the debriefing evaluation after simulation. Debriefing, the purposeful reflection that follows simulation, is an essential step to maximize learning and enable behavior change. Promotion of satisfaction in major and clinical practice would be promoting the effects of simulation and debriefing [4].

Consider these results, intervention that increasing the satisfaction in major and clinical practice would improve nursing competency and debriefing evaluation. So the intervention to increase the satisfaction in major and clinical practice would increase debriefing evaluation in simulation practice. Smith and Roehers reported that high fidelity simulator is useful instrument for increase students' satisfaction [18]. It means that students' satisfaction would be more improve if you used the high fidelity simulator although it is not enough to increase the real performances in the specific simulation situational settings.

## 5. Conclusions

This is a non-equivalent control group quasi-experimental study to examine effects of repeated simulation-exposure depending on having leader experience on hospital emergency care.

This study is a descriptive and contributes to the evidence to find out the influence of the satisfaction in major and clinical practice. Few evidences were found showing the effect of satisfaction in major and clinical practice on nursing students. Although a few differences were exist, students reported overall that their positive perception about the major and clinical practice would increase nursing competency including problem solving, critical thinking and clinical competency and debriefing evaluation.

Although the satisfaction in major and clinical practice was the important element to increase the nursing competency and debriefing evaluation, it is not enough to improve the real performances in the simulation situational settings. So it is needed to find out the elements that influence the real performances in the clinical settings.

In conclusion, increasing satisfaction of major and clinical practice could promote increasing nursing competency and debriefing evaluation in simulation practice. This result could be applied to plan simulation-based education on hospital emergency care with considering efficiency of the simulation based education.

## Acknowledgements

This paper is a revised and expanded version of a paper entitled [Effects of Repeated Simulation-Exposure on Hospital Emergency Care] presented at [GST 2015 Conference at Jeju National University International Center, Jeju, Korea on December 16, 2015].

## References

- [1] D. D.S. Tilley, "Competency in Nursing: A concept Analysis", *Journal Contin Educ Nurs.*, vol.39, (2008), no.2, pp.58-64. doi: 10.3928/00220124-20080201-12
- [2] A. M. Owen and P. Ward-Smith, "Collaborative Learning in Nursing Simulation: Near-Peer Teaching Using Standardized Patients", *J. Nurs Educ.*, vol.53, no.3, (2014), pp.170-173.
- [3] E. E. Suh, "Development of a Conceptual Framework for Nursing Simulation Education Utilizing Human Patient Simulators and Standardized Patients", *J. Korean Acad Soc Nurs Edu.*, vol.18, no.2, (2012), pp.206-219.

- [4] S. J. Reed, C. M. Andrews, and P. Ravert, "Debriefing Simulation: Comparison of Debriefing with Video and Debriefing Alone", *Clinical Simulation in Nursing* vol.9, no.12, (2013), pp.e585-e591. doi:http://dx.doi.org/10.1016/j.ecns.2013.05.007
- [5] I. O. Samal, D. Nutbeam, B. Wold, and L. Kannas, "Achieving health and educational goals through school-a study of the importance of the school climate and the students' satisfaction with school", *Health Educ Res.*, vol.13, no.3, (1998), pp.383-397.
- [6] I. O. Moon, G. W. Lee, "The Effect of Satisfaction in Major and Career Efficacy on Career Search Behavior in Nursing Students", *J. Korean Acad Soc Nurs Edu.*, vol.16, no.1, (2010), pp.83-91. doi: 10.5977/JKASNE.2010.16.083
- [7] I. S. Kwon, G. E. Lee, K. D. Kim, Y. H. Kim, K. M. Park, H. S. Park, S. K. Sohn, W. S. Lee, K. S. Jang, B. Y. Chung, "Development of a critical thinking disposition scale for nursing students", *J Korean Acad of Nurs.*, vol. 36, no. 6, (2006), pp. 950-958.
- [8] J. T. Son, M. H. Park, H. R. Kim, W. S. Lee and K. S. Oh, "Analysis of RN-BSN students' clinical nursing competency. *Journal of Korean Academy Nursing*", vol. 37, no. 5, (2007), pp. 655-664.
- [9] S. J. Reed, "Debriefing Experience Scale: Development of a tool to evaluate the student learning experience in debriefing, clinical simulation nursing", vol. 8, no. 6, (2012), pp. e211-217. Doi: 10.1016/j.ecns.2011.11.002
- [10] H. W. Kim and M. R. Kim, "Nursing Competency as Experienced by Hospital Nurses in a Clinical Nursing Unit", *International Journal of u- and e- Service, Science and Technology*, vol. 8, no. 11, (2014), pp. 235-244.
- [11] I. H. Song and H. C. Jeong, "Development and Effects of an Emergency Nursing Simulation-based Education Program for Hypoglycemia Patients", *International Journal of u- and e- Service, Science and Technology*, vol. 8, no. 11, (2015), pp. 261-272.
- [12] Y. S. Kang and S. K. Hwang, "Correlation of self-esteem, major satisfaction and career motivation in college nursing students", *The Korea Academia-industrial Cooperation Society*, vol.14 no.7, (2013), pp.3301-3309. doi: 10.5762/KAIS.2013.14.7.3301
- [13] E. D. Diener, R. A. Emmons, R. J. Larsen, and S. Griffin, "The Satisfaction with Life Scale", *Clinical Simulation in Nursing.*, (1985), Vol.49, No.1, pp.71-75. doi: 10.1207/S15327752jpa4901-13
- [14] N. S. Ha, J. Choi, "An Analysis of Nursing Competency affecting on Job Satisfaction and Nursing Performance among Clinical Nurses", *J. Korean Acad Nurs Admin.*, vol.16, no.3, (2010), pp.286-294.
- [15] I. S. Kim, Y. K. Jang, S. H. Park, S. H. Song, "Critical thinking disposition, stress of clinical practice and clinical competence of nursing students", *J Korean Acad Soc Nurs Edu.*, vol. 17, no. 3, (2011), pp. 337-345.
- [16] K. A. Shin, B. H. Cho, "Professional self-concept, critical thinking disposition and clinical competence in nursing student", *J Korean Acad Fundam Nurs.*, vol. 19, no. 1, (2012), pp. 46-56.
- [17] M. S. Kwon, "The influence of self-directed learning & critical thinking disposition on clinical competence in nursing students", *J Korean Acad Soc Nurs Edu.*, vol.17, no.3, (2011), pp. 387-394.
- [18] S. J. Smith and C. J. Roehers, "High fidelity simulation: factors correlated with nursing student satisfaction and self-confidence", *Nurs Educ Perspect.*, vol.30 no.2, (2009), pp.74-78.
- [19] S. J. Lee, "A Study on the Development of Life-skill: Communication, problem solving, and self-directed learning", *Korean Educational Development Institute*, Seoul, (2003).
- [20] E. O. Lee, N. Y. Lim, H. A. Park, I. S. Lee, J. I. Kim, J. I. Bae, S. M. Lee, Editor, "Nursing Research and Statistic Analysis", *Soomoonsa Publisher*, Seoul, (2009).

## Author



**EunHee Choi, PhD, RN, GNP.** Yeungnam University College, Associate Professor (2008.03~)Korean Society for Simulation in Nursing, Director (2013.03~)

