

# Collective Efficacy and Communication Ability according to Emotional Intelligence in Nursing Students

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## Abstract

**Background:** The purpose of this study was to examine differences in collective efficacy and communication ability according to the degree of emotional intelligence in nursing students.

**Methods:** The participants of this study were 185 nursing students. Data were collected through personal interviews using a questionnaire from October 8 to 22, 2019. Data were analyzed using descriptive statistics, t tests, one-way analysis of variance, and Pearson's correlation coefficients.

**Conclusion:** Emotional intelligence, collective efficacy and communication ability according to the general characteristics commonly showed significant differences in motivation to choose the department and satisfaction with the major. The group with the top 25% emotional intelligence showed a higher degree of collective efficacy and communication ability than the group with the bottom 25% emotional intelligence. Emotional intelligence showed significant positive correlations with collective efficacy and communication ability. It is necessary to develop and apply programs to improve the level of emotional intelligence in nursing students, and these programs will improve collective efficacy and communication ability.

**Keywords:** *Communication, efficacy, emotional intelligence, nursing, students*

## Introduction

The medical environment in Korea has changed very rapidly, and the recent changes have been more intense and radical. To cope with these changes in the medical environment, competent nurses are needed. The Korea Accreditation Board of Nursing Education suggests communication and cooperation skills among specialized fields as an important core competency that nursing students should have at the time of graduation<sup>[1]</sup>. Nursing students who need to complete clinical practice should cooperate with patients and medical staff<sup>[2]</sup>. In addition to imparting knowledge and clinical experience, nursing curricula should provide students with opportunities to develop their communication and

emotional skills<sup>[3]</sup>. Emotional intelligence promotes effective communication and improves nursing performance<sup>[4]</sup>.

Emotional intelligence includes awareness of self and others and empathy, and these behaviors are congruent with the mission of nursing because they improve health outcomes<sup>[4]</sup>. Nurses with higher emotional intelligence tend to be better in establishing productive relationships with patients and their families, and nurses possessing empathetic skills manage their own emotions effectively<sup>[3]</sup>. Developing emotional intelligence is useful for improving academic and clinical performance and reducing the risk of emotional distress during clinical placement experience<sup>[5]</sup>.

Occupational health nurses who are emotionally intelligent have improved relationships with others, an important aspect of the nursing role<sup>[4]</sup>. Collective efficacy is the belief that one can successfully perform a common task<sup>[6]</sup>. Learners with a high level of collective

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efficacy can actively participate in the learning process and develop communication skills through active interaction with colleagues<sup>[7]</sup>. Team efficacy is an important factor that helps nurses cooperate with fellow nurses and experts in various fields<sup>[8]</sup>. Therefore, it is necessary to help students prepare for proper interaction with others during the school education.

Emotional intelligence is positively related to clinical communication ability among nursing students<sup>[9]</sup>. Communication refers to the ability to accurately convey one's thoughts and feelings to others according to one's intention<sup>[10]</sup>. In a complex medical environment, the cooperation among multidisciplinary health care teams is considered important, and the importance of nurses' communication skills is further emphasized<sup>[11]</sup>. Problems in communication among medical staff were reported as the main root cause of red-signal incidents, where in patient safety incidents resulted in life threats, permanent damage, or death<sup>[12]</sup>. Lack of communication skills can also affect nurses' presentation of clinical views or performance in nursing behavior, ultimately leading to poor nursing quality<sup>[13]</sup>. Nursing students' communication ability is reported as moderate level<sup>[11]</sup>, making it difficult to maintain therapeutic relationship with various subjects at clinical sites. Therefore, nursing students should evaluate their communication ability and come up with measures to enhance their communication skills before going for clinical practice.

In a prior study, emotional intelligence was found to improve the communication ability, clinical performance, and self-leadership of nursing students<sup>[14-16]</sup>. However, there has been no research on collective efficacy and communication ability among nursing students according to the level of emotional intelligence. Therefore, this study intended to provide basic data on strategy development for the improvement of emotional intelligence, collective efficacy, and communication ability by examining the differences in collective efficacy and communication ability according to their emotional intelligence levels.

## **Methods**

The participants for this study were selected as second-year students with no clinical practice experience

attending the nursing department in G-gun, Korea. The 185 participants who participated in this research, excluding the 15 whose responses were insufficient among the 211 through document investigation. Data for this study were collected from October 8 to 22, 2019.

General characteristics of the participants included gender, age, religion, motivation to choose the department, satisfaction with the major, and grades in the previous semester. Emotional intelligence was measured using the tool modified by Jung<sup>[17]</sup> from the original Emotional Intelligence Scale (WLEIS) by Wong and Law<sup>[18]</sup>. This tool uses a 5-point Likert scale and has 16 questions. Higher scores mean higher emotional intelligence. The Cronbach's alpha for the previous study was .92<sup>[17]</sup>, and that of the current study was .92. Collective efficacy was measured using the tool developed by Alavi and McCormick<sup>[6]</sup>. This tool uses a 5-point Likert scale and has 21 questions. Higher scores mean higher collective efficacy. The Cronbach's alpha for the previous study was .95<sup>[6]</sup>, and that of the current study was .91. Communication ability was measured using the tool modified by Hur<sup>[19]</sup> from the original Interpersonal Communication Competence Scale (ICC) developed by Rubin et al.<sup>[20]</sup>. This tool uses a 5-point Likert scale and has 15 questions. Higher scores mean higher communication ability. The Cronbach's alpha for the previous study was .72<sup>[19]</sup>, and that of the current study was .92.

Data were analysed using SPSS version 25.0 program. General characteristics of the participants were presented in real numbers, percentages. The levels of emotional intelligence, collective efficacy, and communication ability were presented in means and standard deviations. The differences among emotional intelligence, collective efficacy, and communication ability according to general characteristics were analysed using t tests and one-way analysis of variance; post hoc test was made through Duncan's test. The correlations among emotional intelligence, collective efficacy and communication ability were analysed through Person's correlation coefficients.

## Results

### Level of emotional intelligence, collective efficacy and communication ability

The participants' mean scores for emotional intelligence, collective efficacy, and communication ability were 3.72±0.54 (range, 1-5), 3.81±0.57 (range, 1-5), and 3.80±0.56 (range, 1-5) respectively (Table 1).

**Table 1 Level of Emotional Intelligence, Collective Efficacy and Communication Ability (N=185)**

Variables	Mean±SD	Range
Emotional intelligence	3.72±0.54	1-5
Collective efficacy	3.81±0.57	1-5
Communication ability	3.80±0.56	1-5

### Differences in emotional intelligence, collective efficacy and communication ability according to general characteristics

As to the participants' scores for emotional intelligence, there were significant differences statistically, according to motivation to choose the department (F=4.92, p<.05) and satisfaction with the major (F=10.57, p<.001). The scores of collective efficacy showed significant differences statistically, according to motivation to choose the department (F=3.31, p<.05) and satisfaction with the major (F=4.08, p<.05). Communication ability also showed significant differences statistically, according to age (t=2.03, p<.05), motivation to choose the department (F=14.28, p<.05) and satisfaction with the major (F=5.05, p<.05) (Table 2).

**Table 2 Differences in Emotional Intelligence, Collective Efficacy and Communication Ability according to General Characteristics (N=185)**

Characteristics	Categories	n(%)	Emotional intelligence		Collective efficacy		Communication ability	
			Mean±SD	t/F(p) Duncan	Mean±SD	t/F(p) Duncan	Mean±SD	t/F(p) Duncan
Gender	Female	138(74.6)	3.74±0.53	-0.60 (.552)	3.81±0.53	-0.16 (.875)	3.83±0.55	-1.42 (.156)
	Male	47(25.4)	3.68±0.57		3.80±0.68		3.70±0.56	
Age (yr)	≤25	164(88.6)	3.73±0.55	0.47 (.642)	3.83±0.56	1.43 (.154)	3.83±0.56	2.03 (.043)*
	≥26	21(11.4)	3.67±0.45		3.64±0.63		3.57±0.52	
Religion	None	128(69.2)	3.72±0.57	0.67† (.881)	3.78±0.60	1.39 (.246)	3.81±0.59	2.97† (.397)
	Buddhism	4(2.2)	3.73±0.17		3.81±0.31		4.03±0.41	
	Catholic	16(8.6)	3.80±0.40		4.08±0.38		3.89±0.33	
	Protestant	37(20.0)	3.69±0.54		3.77±0.56		3.68±0.52	
Motivation department choice	According to school records	12(6.5)	3.33±0.42	4.92 (.001)* a<d	3.47±0.77	3.31 (.012)* a<d	3.33±0.57	14.28† (.006)* a<d,e
	Invitation of others	36(19.5)	3.52±0.55		3.60±0.46		3.64±0.46	
	To serve	6(3.2)	3.43±0.56		3.74±0.46		3.58±0.76	
	Because of the nurse's appeal	77(41.6)	3.84±0.51		3.93±0.56		3.90±0.50	
	Because of employment	54(29.2)	3.80±0.53		3.85±0.56		3.89±0.61	
Satisfaction with major	Good	112(60.5)	3.85±0.54	10.57 (.000)** c<b<a	3.90±0.56	4.08 (.019)* (b<a)	3.87±0.56	5.05 (.007)* c<a,b
	Usually	59(31.9)	3.58±0.51		3.69±0.52		3.77±0.52	
	Bad	14(7.6)	3.29±0.36		3.56±0.69		3.39±0.53	
Last semester grade	<3.0	31(16.8)	3.60±0.51	0.72 (.542)	3.67±0.59	0.82 (.483)	3.64±0.52	1.06 (.370)
	3.0-3.4	72(38.9)	3.75±0.54		3.82±0.55		3.84±0.56	
	3.5-3.9	52(28.1)	3.72±0.54		3.83±0.56		3.82±0.57	
	≥4.0	30(16.2)	3.78±0.59		3.89±0.64		3.82±0.56	

\*\*p<.001, \*p<.05, †Kruskal Wallis test

*Collective efficacy and communication ability according to emotional intelligence*

The group with the top 25% emotional intelligence (score 4.15, n=46) showed a higher degree of collective efficacy and communication ability than the group with the bottom 25% emotional intelligence (score 3.31, n=50) ( $t=-10.84, p<.001$ ). In communication ability, the group with the top 25% emotional intelligence level was significantly higher than the group with the bottom 25% ( $t=-15.73, p<.001$ ) (Table 3).

**Table 3: Collective Efficacy and Communication Ability according to Emotional Intelligence (N=96)**

Variables	The lowest 25% group (n=50)	The highest 25% group (n=46)	t(p)
	Mean±SD	Mean±SD	
Collective efficacy	3.31±0.54	4.35±0.38	-10.84(.000)**
Communication ability	3.23±0.42	4.40±0.29	-15.73(.000)**
**p<.001, *p<.05			

*Correlations among emotional intelligence, collective efficacy and communication ability*

Emotional intelligence of the study participants was positively correlated with collective efficacy ( $r=.68, p<.001$ ) and communication ability ( $r=.79, p<.001$ ). Communication ability was positively correlated with collective efficacy ( $r=.69, p<.001$ ) (Table 4).

**Table 4 Correlations among Emotional Intelligence, Collective Efficacy and Communication Ability (N=185)**

Variables	Collective efficacy	Communication ability
	r(p)	r(p)
Emotional intelligence	.68(.000)**	.79(.000)**
Collective efficacy	1	
Communication ability	.689(.000)**	1
**p<.001, *p<.05		

**Discussion**

This study was conducted to use as basic data to develop strategies for improving emotional intelligence, collective efficacy and communication ability of nursing students by examining the differences between collective efficacy and communication ability according to their emotional intelligence.

In this study, the participants' mean score for emotional intelligence was 3.72 points out of 5. The

result of emotional intelligence were higher than the mean 3.63 points of Kim's study<sup>[15]</sup> and lower than the mean 3.85 points of Kim study<sup>[16]</sup>. The results in each study were different due to the differences between the participants. Emotional intelligence is an important part of nurses' clinical practice. By developing emotional intelligence, nurses learn how to deal with their feelings, and provide emotional support to patients and their families in multi-dimensional clinical environments<sup>[3]</sup>. Therefore, various programs are needed to enhance the

emotional intelligence of nursing students. With regard to collective efficacy, the participants' mean score was 3.81 points out of 5. There is no research on collective efficacy in nursing students, so there is a limit to the discussion. The results of this study were higher than the mean of 3.73 points of Park, Ko's study<sup>[7]</sup> and 3.72 points of Lee, Gil's study<sup>[21]</sup>. Further research is needed to investigate the causes of differences in collective efficacy between nursing and general university students. In this study, the participants' mean score for communication ability was 3.80 points out of 5. The result of this study were higher than the mean 3.58 points of Lee, Gu's study<sup>[22]</sup> and 3.33 points of Choi, Son's study<sup>[23]</sup>. The results are different because of different participants in each study. In Lee and Gu's study<sup>[22]</sup>, the subjects are third and fourth graders who conducted clinical practice. Difficulties in communicating with patients and caregivers, negative emotions, and poor coping skills are believed to have affected communication during clinical practice<sup>[22]</sup>. Therefore, programs are needed to strengthen communication in the first and second grades.

Regarding the participants' scores for emotional intelligence, there were significant differences according to motivation to choose the department and satisfaction with the major. The results were consistent with those of Kim<sup>[16,24]</sup>, who showed significant differences in emotional intelligence according to the satisfaction with their major among the nursing students. Emotional intelligence relates to job satisfaction, reduced stress level, and burnout and helps to facilitate a positive environment<sup>[25]</sup>. It can thus be assumed that satisfaction with major can increase emotional intelligence of the nurses. The collective efficacy scores showed significant differences statistically, according to the motivation to choose the department and satisfaction with the major. However, since there is no research that shows collective efficacy among nursing students, it is difficult to compare and discuss the results of this study, so repeated research is needed later. Communication ability also showed significant differences statistically, according to age, motivation to choose the department and satisfaction with the major. The results of this study were consistent with those of Lee and Gu<sup>[22]</sup> and Choi and Son<sup>[23]</sup>, which showed significant differences in emotional intelligence according to satisfaction with major, in nursing students.

The result of this study showed that the group with

a high level of emotional intelligence had a higher collective efficacy and communication ability than the group with a lower level of emotional intelligence. The results of this study were consistent with the Lee and Gu's study<sup>[22]</sup>, where the group with a high level of emotional intelligence showed higher communication ability than the group with a lower level of emotional intelligence. Emotional intelligence also appeared to be the most influential variable in communication ability<sup>[23]</sup>.

With regards to the correlations among emotional intelligence, collective efficacy and communication ability, the result of this study were consistent with those of Lee and Gu's study<sup>[22]</sup>, which confirmed that if nursing students had high emotional intelligence, their communication ability improved. Adding training courses that cover emotional control and empathy skills to the nursing curriculum, to be taught alongside other academic skills, could be a pertinent approach<sup>[3]</sup>. The results of this study were similar to those of the Lee and Gil<sup>[21]</sup>, where the higher the emotional intelligence, the higher the collective efficacy in the pre-child care teacher. Emotional intelligence is based on the ability to understand oneself and others, respond to environmental needs, and address daily problems<sup>[26]</sup>. It can be seen that effectively responding to the feelings of oneself and others is beneficial to collective efficacy<sup>[21]</sup>.

## Conclusion

The results of this study showed that high emotional intelligence had high collective efficacy and communication ability. Therefore, the development and application of curricular or extra-curricular programs to improve the level of emotional intelligence in nursing students, and these programs will improve collective efficacy and communication ability.

**Conflict of Interest:** The authors declare no conflict of interest.

**Source of Funding:** Self

**Ethical Clearance:** Participants who agreed to participate in this survey signed his or her name on a consent form.

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