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The Effect of Emotional Intelligence, Caring Efficacy, and Social Support on Clinical Competency of Nursing Students

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Abstract:

Aim: The purpose of this study was to determine the effects of emotional intelligence, caring efficacy, and social support on the clinical competency of Korean nursing students.

Methods: We conducted a descriptive correlational study from 5th March to 10th June 10, 2020, among 257 nursing students in 3rd and 4th years who participated in clinical practice at four universities in two cities. We collected the data using a self-structured questionnaire that included 129 items from the Wong and Law Emotional Intelligence Scale (WLEIS), the General Self-efficacy (GSE) scale, scales on social support and clinical competency. We analyzed the data using frequency analysis, t-test, ANOVA, Scheffe test, Pearson correlation coefficient, and stepwise multiple regression analysis.

Results: The majority of the students, *i.e.*, 80.2%, were female, 57.6% were in their 3rd year, and the students' average age ranged from 22.91 to 4.75. The participants' clinical competency was linked to their emotional intelligence (r =.457; *p*<.001), their ability to care for others (r =.516; *p*<.001), and their social support (r =.515; p<.001). There was a statistically significant difference in clinical competency based on the participants' religion, academic performance, and satisfaction with their major and clinical practice. Factors, such as care efficacy, social support, emotional intelligence, religion, and significant satisfaction, influenced clinical competency.

Conclusion: Overall, 39.3% of the participants demonstrated clinical competency. The results have highlighted the need for the development of an effective educational program that can enhance emotional intelligence, care efficacy, social support, and major satisfaction, thereby promoting the clinical competency of nursing students.

Keywords: Nursing students, Clinical competency, Emotional intelligence, Caring efficacy, Social support, General Self-efficacy (GSE).

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1. INTRODUCTION

Clinical performance refers to the ability to effectively perform a given task in clinical situations with diverse characteristics [1]. The ultimate educational goal of nursing education is to provide nursing students with consciousness and appropriate professional behavior through nursing theory and practical education that can be enhanced to improve clinical performance [2]. With the rapidly changing healthcare environment and as the level of medical service requirements of nursing recipients

improves, nurses must also become more professional and independent, so it is essential for prospective nurses to have clinical performance skills [3]. Therefore, nursing students must apply the appropriate knowledge, judgment, and skills learned at school to the various nursing practice situations encountered in field training, acquire the clinical performance ability to competently perform nursing and provide skilled nursing care [4, 5].

Acquiring nursing theory is simply one aspect of becoming a professional nurse who delivers nursing care; another is learning how to put that theory into practice, which can enhance one's clinical performance [6, 7]. However, nursing students are being demonstrated to refuse to work with patients in clinical settings because of the fast rise in public health needs and the higher demand for the best medical care. This is making field-oriented professions, like nursing, more demanding [8]. Additionally, nursing students experience a lack of confidence in their nursing activities and encounter difficulty in applying the theoretical knowledge they have acquired in school to uncertain and complex real-world nursing situations as a result of the emphasis on observation rather than direct nursing at clinical practice sites [9, 10]. The clinical performance abilities of nursing students are being rapidly diminished as a result of environmental restrictions on practical education at practice sites [11, 12]. The education and training programs must be designed by identifying the factors that affect clinical performance ability. It is also imperative to examine methods for improving clinical performance.

In previous studies related to the clinical performance ability of nursing students, variables affecting the clinical performance have included empathy, critical thinking, recognition of nursing professionalism, nursing professional intuition, emotional intelligence, and caring efficacy [13, 14]. Emotional intelligence plays an important role not only in forming effective relationships with people, but also in forming therapeutic relationships between patients and nurses. It is a key element of nursing that can meet the needs of patients [15, 16]. The quality of care is an important criterion that determines the quality of nursing and the value of the nursing profession [17]. There has been a suggestion in nursing education for a care-centered nursing curriculum that prioritizes humanistic values over technical areas [18].

Self-efficacy in providing patient care is known as care efficacy. Therapeutic relationships are built on closeness *via* appropriate empathy, skilled nursing practice, and the caregiver's comfort and confidence in making decisions [2-19]. It has been noted that greater care efficacy can offer confidence and motivation during clinical practice, which is a crucial component of providing high-quality patient care [19]. However, there is a shortage of studies on clinical performance. Additionally, nursing education can enhance the efficacy of care. Consequently, it seems that there is a need to better understand nursing students' ability to give value-centered care to patients rather than technology-centered care.

It has been reported that nursing students perceive high levels of stress due to many theoretical classes and clinical practice and negative feelings of nervousness and anxiety [20, 21]. Social support refers to the emotional consideration and affection provided by family, relatives, friends, colleagues, experts, *etc*. It plays an important role in helping college students overcome negative emotions experienced in stressful situations, positively evaluate their future, and actively solve problems [22]. Previous studies related to the clinical performance ability of nursing students have focused on social support and validated the findings regarding the factors influencing clinical performance among Korean nursing students [8-10]. These factors have been found to include communication ability, self-efficacy, major satisfaction, problem-solving skills, practice satisfaction, learning satisfaction, self-directed learning, and self-concept about the nursing profession [2, 8, 13, 17]. However, it is hard to find studies that discuss how clinical practice stress, ego resilience, and clinical practice satisfaction affect nursing students' ability to do well in their clinical work.

According to previous studies, variables that affect clinical performance include empathy, critical thinking, and recognition of the nursing profession [2, 5, 9], which also influence nurses' professional intuition and emotional intelligence [13]. However, research on the correlations among clinical performance, emotional intelligence, care efficacy, and social support among nursing students remains limited. Therefore, this study aimed to determine the relationships among nursing students' emotional intelligence, care efficacy, and social support, and the degree of their clinical performance, as well as to identify the factors that affect clinical performance ability.

2. MATERIALS AND METHODS

2.1. Study Design

This study was a descriptive correlational study performed to determine the correlation among nursing students' emotional intelligence, care efficacy, social support, and clinical performance, and identify factors affecting the clinical performance.

2.2. Study Participants

The study participants were 3rd and 4th year nursing students at four universities located in cities B and G, constituting a convenience sample drawn from March 5, 2020, to June 10, 2020, who had done clinical practice for at least one semester, *i.e.*, about 3 months. Clinical experience lasted more than three months for third-year students and more than eight months for fourth-year students during the study period. In accordance with earlier studies, we used the G*power 3.1.9.7 software to set the sample size at a medium effect size of 0.15 [23]. Based on a significance level of 0.05 and a power of 0.95, we selected 13 predictive factors for emotional intelligence, caring efficacy, and social support, including 10 general characteristics. Thus, the indicated 194 participants comprised the minimum sample size. A questionnaire was distributed to 260 students, which resulted in a 20% attrition rate. Ultimately, we excluded three of them due to

insufficient data and obtained 257 responses for the final analysis.

2.3. Measures

2.3.1. Clinical Performance Ability

Clinical performance ability was assessed by the supervisors by using a tool developed by Lee *et al*. [24] based on a six-dimensional scale and modified and supplemented by Choi [25]. This tool includes 45 questions on 5 factors: 11 nursing process questions, 11 nursing skills questions, 8 education/cooperation questions, 6 interpersonal relationships/communication questions, and 9 professional development questions. Each question is rated on a 5-point Likert scale ranging from 1 for "very poorly" to 5 for "very well". Higher scores indicate greater clinical performance, ranging from 45 to 225. Choi's study showed Cronbach's α = .92, and Cronbach's α = .96 was obtained in this study.

2.3.2. Emotional Intelligence

The Wong and Law Emotional Intelligence Scale (WLEIS) developed by Wong and Law [26] has been validated by Jeong H [27] to be adopted in the Korean version to measure emotional intelligence. It includes 16 questions on self-awareness, recognition of others' emotions, use of emotions, and emotion control. Each question is scored on a 7-point Likert scale that ranges from 1 for "not at all" to 7 for "very much". Higher scores imply emotional intelligence. During development, the instrument has exhibited reliability of Cronbach's α =.87, with subfactors of self-emotion awareness (α =.72), other emotion detection (α =.78), emotion regulation (α =.82), and emotion utilization (α =.79). In this study, Cronbach's α has been obtained as .89 with subcategories of self-emotion awareness (α =.81), other emotion detection (α =.82), emotion control (α =.86), and emotion usage (α =.87).

2.3.3. Caring Efficacy

For assessing caring efficacy, the Caring Efficacy Scale, a tool for measuring caring efficacy developed by Coates [29], was modified by Jeong J [28] to suit nursing students. It consists of a total of 30 questions, 15 positive and 15 negative, and is measured on a 6-point Likert scale from 1 'completely disagree' to 6 'strongly agree', with a score of 30 to 180. The greater this value is, the greater the caring ability is. In the case of negative questions, they are converted to the reverse, and the average of the scores is calculated. The reliability of the tool at the time of development was Cronbach's α = .88; in the study by Jeong Jin-ok (2016), Cronbach's α was .92, and in this study, Cronbach's α was .93.

2.3.4. Social Support

For social support, a scale developed by Park JW [30] and modified by Yoon and Kim [31] was used to evaluate the social support perceived by individuals from family, relatives, friends, and people around them. It consists of 25 questions focused on a total of 4 areas: emotional support, evaluative support, informational support, and material support. It is measured on a 5-point Likert scale from 1 'not at all' to 5 'very much'. A higher score denotes greater societal support, with a maximum score of 125 points.

The reliability of the original study was exhibited by an overall Cronbach's α = .94, α = .87 for emotional support, α = .89 for evaluative support, α = .85 for informational support, and α = .84 for material support. The present study has obtained an overall Cronbach's α = .97, α = .92 for emotional support, α = .89 for evaluative support, α = .91 for informational support, and α = .89 for material support.

2.4. Data Collection

Data were obtained from third- and fourth-year nursing students at four B and G universities from March 5 to June 10, 2020, who received clinical training. The researcher personally visited each university's nursing departments, obtained permission outside of class, explained the study's objective and data collection method, and provided self-administered questionnaires. Due to the COVID-19 pandemic, the process was conducted with masks and minimum touch, and the questionnaire was scheduled to last 10–20 minutes. Data were collected from Google questionnaire participants who accessed the link *via* SMS and email. If the responder tried to complete the questionnaire without answering a question, an alarm message was presented, and the answer was set to input all questions to enhance the response rate.

2.5. Ethical Considerations

We obtained approval from the research ethics review committee of the affiliated university (K-IRB-290). We provided details about the research objective, procedures, and confidentiality to the participants before completing the questionnaire. It was explained that participants could withdraw at any time during the study period. We promised anonymity and confidentiality and explained that the collected data would not be disclosed or used for any purpose other than research purposes. Research participants were given a small gift as a token of gratitude.

2.6. Data Analysis Method

We analyzed the data using the SPSS WIN 23.0 program. We first assessed the emotional intelligence, care efficacy, social support, and clinical performance of nursing students using the mean and standard deviation. Second, we used t-test, ANOVA, and Scheffe's test to compare the emotional intelligence, care efficacy, social support, and clinical performance capacity of nursing students. Third, we used Pearson's correlation coefficients to determine the emotional intelligence, caring efficacy, social support, and clinical performance of nursing students. Fourth, stepwise multiple regression analysis was used to examine the factors influencing nursing students' clinical performance.

3. RESULTS

3.1. General Characteristics of the Subjects

Table 1 illustrates the main variable variances according to participants' characteristics. Most of the participants were female (80.2%) and 3rd grade nursing students (57.6%). The average age of the participants was 22.91±4.75 years, there was a median academic score (71.2%), and 62.7% of them were not religious. Students chose their majors mostly because of the high employment rate (33.8%) following college. 51% of them said they were generally satisfied with their major, while 49.4% said they were satisfied with their clinical practice. The most challenging relationships in clinical practice were stated with other nurses (44.4%), patients and guardians (15.6%), practice colleagues (11.6%), and individuals from other fields (11.6%). The correlation was 9.3%. At 42.8%, the monthly allowance was under 300,000 won.

There were significant differences in emotional intelligence based on general factors, including religion (F=3.35, p=.037), major satisfaction (F=3.30, p<.038), and clinical practice satisfaction (F=5.69, p=.004). Emotional intelligence was found to be increased with religion and major/practice satisfaction. There was a relationship between caring efficacy and academic performance (F=3.21, p=.042), religion (F=4.24, p<.015), major satisfaction (F=9.72, p<.001), and clinical practice satisfaction (F=10.90, p<0.001). The following point showed a significant difference: 1) higher academic success was positively correlated with higher levels of religious belief, happiness with major and clinical practice, and care efficacy. The study found social support to have an impact on academic performance (F=5.83, p=.003), religion (F=6.52, p<.002), and satisfaction with their major (F=4.65, p<.001) and clinical practice (F=13.72, p<.001).

Table 1. Differences in variables based on general characteristics (N=257).

Categories	Characteristics	Emotional Intelligence (M±SD)	t or F (p)	Caring efficacy (M±SD)	t or F (p)	Social support (M±SD)	t or F (p)	Clinical competency (M±SD)	t or F (p)
Total	-	5.19±0.77	-	4.24±0.63	-	4.12±0.57	-	3.77±0.51	-
Gender	Male	5.31±0.79	1.75 (.188)	4.30±0.62	0.37 (.543)	4.05±0.64	1.15 (.285)	3.80±0.53	0.23 (.633)
	Female	5.16±0.75		4.24±0.63		4.15±0.56		3.77±0.50	
Academic year (grade)	3rd	5.24±0.80	1.35 (.247)	4.30±0.63	2.27 (.133)	4.15±0.54	0.52 (.473)	3.73±0.47	2.58 (.109)
	4th	5.12±0.71		4.18±0.63		4.10±0.61		3.83±0.54	
Age (years)	20-21	5.17±0.79	0.30 (.742)	4.24±0.63	0.02 (.979)	4.15±0.54	0.32 (.729)	3.76±0.46	0.25 (.780)
	22-24	5.23±0.73		4.25±0.59		4.09±0.60		3.80±0.53	
	≥ 25	5.12±0.75		4.26±0.74		4.16±0.60		3.75±0.58	
Academic performance	High[a]	5.35±0.71	2.02 (.134)	4.46±0.65	3.21 (.042) c<a	4.32±0.61	5.83 (.003) c<a	3.96±0.56	3.96 (.020) c<a
	Middle[b]	5.19±0.78		4.22±0.61		4.13±0.54		3.75±0.48	
	Low[c]	4.99±0.72		4.13±0.69		3.87±0.60		3.67±0.53	
Religion	Yes	5.25±0.75	3.35 (.037)	4.37±0.64	4.24 (.015)	4.22±0.53	6.52 (.002)	3.75±0.51	3.48 (.032)
	No	5.22±0.77		4.22±0.62		4.13±0.57		3.82±0.50	
Motivation for major selection	Academic score	5.09±0.79	1.08 (.375)	3.96±0.61	3.78 (.056)	4.04±0.63	1.66 (.132)	3.76±0.51	2.05 (.059)
	Aptitude	5.30±0.82		4.46±0.62		4.19±0.58		3.90±0.53	
	High employment rate	5.12±0.71		4.12±0.59		4.13±0.55		3.71±0.47	
	Recommendation (parents and teachers)	5.22±0.81		4.14±0.66		4.03±0.58		3.74±0.54	
	Service job	5.19±0.82		4.44±0.36		4.39±0.49		3.52±0.32	
	Compensation	5.60±0.59		4.65±0.56		4.45±0.31		3.99±0.52	
	Other	4.89±4.96		4.24±0.62		3.81±0.65		3.57±0.30	
Major satisfaction	Dissatisfaction[a]	4.74±0.59	3.30 (.038) a<b,c	3.58±0.51	9.72 (<.001) a<b,c	3.83±0.53	4.65 (.010) a<b,c	3.40±0.32	9.76 (<.001) a<c
	Normal[b]	5.11±0.73		4.15±0.60		4.04±0.55		3.67±0.46	
	Satisfaction[c]	5.31±0.80		4.40±0.62		4.24±0.59		3.91±0.53	
Clinical practice satisfaction	Dissatisfaction[a]	4.63±0.82	5.69 (.004) a<c	3.69±0.45	10.90 (<.001) a<b,c	3.60±0.61	13.72 (<.001) a<b,c	3.42±0.45	6.73 (.001) a<c
	Normal[b]	5.10±0.74		4.13±0.65		4.00±0.54		3.70±0.47	
	Satisfaction[c]	5.32±0.76		4.40±0.57		4.29±0.55		3.88±0.52	
Difficult relationship in practice	With a nurse	5.12±0.78	0.63 (.643)	4.19±0.64	1.77 (.135)	4.08±0.57	1.06 (.376)	3.71±0.50	1.02 (.397)
	With employees in other fields	5.25±0.78		4.19±0.58		4.05±0.53		3.87±0.55	
	With patients/caregivers	5.21±0.81		4.14±0.69		4.18±0.41		3.79±0.49	
	With clinical practice colleagues	5.34±0.57		4.33±0.55		4.08±0.53		3.79±0.41	
	Other	5.24±0.80		4.43±0.61		4.26±0.72		3.85±0.55	

(Table 1) contd.....

Categories	Characteristics	Emotional Intelligence (M±SD)	t or F (*p*)	Caring efficacy (M±SD)	t or F (*p*)	Social support (M±SD)	t or F (*p*)	Clinical competency (M±SD)	t or F (*p*)
A month's allowance (won)	<300,000	5.16±0.77	0.18 (.834)	4.20±0.61	0.50 (.604)	4.08±0.55	0.89 (.412)	3.74±0.43	0.58 (.560)
	3~600,000	5.22±0.74		4.28±0.64		4.19±0.56		3.81±0.54	
	>600,000	5.22±0.84		4.29±0.68		4.10±0.66		3.76±0.60	

The clinical performance ability was assessed in terms of academic performance (F=3.96, *p*=.020), religion (F=3.48, *p*=.032), major satisfaction (F=9.76, *p*<.001), and clinical practice satisfaction (F=6.73, *p*=.001).

3.2. Correlations between Major Variables

The students' emotional intelligence score was found to be 5.19 out of 7 in the following subareas: caring efficacy (4.24), emotion management (4.93), emotion usage (4.76), awareness of one's own emotions (5.50), and recognition of others' emotions (5.58). The subareas of social support included emotional (4.17), evaluative (4.15), informative (4.10), and material (4.09). The scores obtained on a 5-point scale of the parameters of clinical competency are presented as follows: clinical performance ability: 3.77, educational partnership: 3.83, professional growth: 3.79, nursing skills: 3.76, interpersonal communication: 3.75, and nursing process: 3.73.

Clinical performance ability was substantially positively correlated with social support (r=.52, *p*<.001), caring efficacy (r=.52, *p*<.001), and emotional intelligence (r=.46, *p*<.001). A strong positive association was found between emotional intelligence and both care efficacy (r =.46, p <.001) and social support (r =.47, p <.001). Additionally, there was a significant positive correlation found between care efficacy and social support (r =.46, p <.001) (Table 2).

Table 2. Correlation coefficients of variables (N=257).

Variables	Emotional Intelligence	Caring Efficacy	Social Support	Clinical Competency
Emotional intelligence	1	-	-	-
Caring efficacy	.46**	1	-	-
Social support	.47**	.53**	1	-
Clinical competency	.46**	.52**	.52**	1

Note: ** *p*<0.001.

3.3. Clinical Performance Factors of Nursing Students

Table 3 shows the results of the stepwise multiple regression used to confirm the problem of multicollinearity between independent variables. No multicollinearity was found between independent variables, as tolerance limits were below 1.0 and variance inflation factors were below the standard of 5 to 10. Following the residual analysis, the Durbin-Watson test verification score was 2.02, being nearly equal to 2 and suggesting the residual independence as sufficient.

Table 3. Variables influencing clinical competence (N=257).

Variables	B	S.E	β	T (p)	Collinearity	
					Tolerance	VIF
Constant	1.13	0.22	-	5.25 (<.001)	-	-
Caring efficacy	0.22	0.05	.27	4.46 (<.001)	.64	1.56
Social support	0.23	0.05	.26	4.29 (<.001)	.65	1.54
Emotional intelligence	0.12	0.04	.19	3.27 (.001)	.71	1.40
Religion	0.13	0.05	.12	2.49 (.013)	.99	1.01
Satisfaction with major	0.12	0.05	.12	2.45 (.015)	.94	1.06

Note: R2 = .404; adjustable R2 =.393; F=34.09; *p*<.001; Durbin-Watson = 2.02.

Table 4. Relationships among emotional intelligence, care efficacy, social support, and clinical performance.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)
1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	.75**	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	.68**	.51**.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	.77**	.42**	.30**	1	-	-	-	-	-	-	-	-	-	-	-	-	-
5	.80**	.43**	.34**	.54**	1	-	-	-	-	-	-	-	-	-	-	-	-
6	.46**	.35**	.35**	.40**	.29**	1	-	-	-	-	-	-	-	-	-	-	-

(Table 4) contd.....

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)	r(*p*)
7	.47**	.43**	.32**	.44**	.26**	.53**	1	-	-	-	-	-	-	-	-	-	-
8	.46**	.42**	.31**	.42**	.26**	.53**	.94**	1	-	-	-	-	-	-	-	-	-
9	.50**	.44**	.34**	.46**	.28**	.54**	.93**	.86**	1	-	-	-	-	-	-	-	-
10	.38**	.33**	.25**	.35**	.22**	.47**	.92**	.80**	.80**	1	-	-	-	-	-	-	-
11	.41**	.39**	.29**	.39**	.19*	.44**	.92**	.79**	.81**	.79**	1	-	-	-	-	-	-
12	.46**	.28**	.32**	.42**	.39**	.52**	.52**	.47**	.53**	.47**	.44**	1	-	-	-	-	-
13	.44**	.28**	.30**	.42**	.31**	.46**	.49**	.45**	.49**	.44**	.43**	.91**	1	-	-	-	-
14	.40**	.25**	.29**	.33**	.33**	.42**	.42**	.38**	.44**	.41**	.34**	.91**	.78**	1	-	-	-
15	.370**	.20*	.28**	.35**	.28**	.47**	.46**	.43**	.46**	.43**	.39**	.89**	.75**	.77**	1	-	-
16	.38**	.24**	.28**	.35**	.27**	.49*	.43**	.40**	.46**	.37**	.370**	.85**	.69**	.73**	.79**	1	-
17	.44**	.27**	.29**	.40**	.36**	.49**	.49**	.44**	.51**	.43**	.41**	.88**	.77**	.73**	.72**	.69**	1

Note: 1. Emotional intelligence; 2. self-emotion awareness; 3. recognition of other people's emotions; 4. emotion control; 5. utilization of emotions; 6. care efficacy; 7. social support; 8. emotional support; 9. evaluative support; 10. information support; 11. material support; 12. clinical performance; 13. nursing process; 14. nursing skills; 15. educational partnerships; 16. interpersonal communication; 17. professional development. **p<0.001, *p<0.05.

3.4. Association among Emotional Intelligence, Care Efficacy, Social Support, and Clinical Performance

The regression model was found to fit well (F = 34.09, p<.001). The factors affecting clinical performance included caring efficacy (β=.27, p<.001), social support (β =.26, p<.001), emotional intelligence (β =.19, p<.001), religion (β =.12, p =.013), and major satisfaction (β =.12, p =.015), accounting for 39.3% of the score. Table **4** displays the relationships among emotional intelligence, care efficacy, social support, and clinical performance.

4. DISCUSSION

Nursing students' emotional intelligence, care efficacy, social support, and clinical performance allow them to identify influencing factors and adopt approaches to improving clinical performance. Emotional intelligence score was found to be 5.19 (74.1%), and emotional control aspects included emotional control, emotional utilization, awareness of one's own emotions, and recognition of others' emotions. The same tool yielded similar results for nursing students [14, 32, 33]. Emotional utilization and control entailed forecasting specific behavior based on experience in addition to preparing and practicing necessary activities beyond the level of comprehending emotions with respect to the situation [15, 16]. In this context, as experience level has been found to have an impact, it is necessary to develop and implement nursing education programs that can enhance nursing students' emotional control and emotional utilization abilities in order to increase emotional intelligence.

Nursing students rated their care efficacy at 4.24 out of 6, and another study using the same tool found it at 3.37 points. Therefore, care efficacy can be considered to play a crucial role in establishing a therapeutic relationship and delivering care to patients through empathy, as evidenced by studies conducted previously [33-35]. This survey has thus examined participants' satisfaction with their major and clinical practice. Care efficacy has been found to increase with value so positive practice experiences can enhance it by fostering supportive relationships during clinical practice, and nursing education programs should take this into account. However, the current state of research lacks correlation with care efficacy, necessitating further investigation in the future.

We used the same research technique to test nursing students' social support [36], achieving a score of 4.13 out of 5. The participants' score was 4.12. Another study found it to be slightly higher than 3.69 points [37]. Nursing students, who pursue the same major as regular college students, simultaneously enroll in major theory classes and clinical practice. Additionally, they pursue double and group courses throughout the semester or during vacations, which has a positive impact on their interpersonal relationships. Students have high levels of social support when they collaborate and solve problems in a setting that encourages understanding and collaboration. The clinical performance ability of the participants in this study was found to be 3.77 points out of 5, aligning with the research results of Lee *et al*. [32], who used the same research tool to target 3rd- and 4th-grade students. The results were also found to be similar to those of another review study, although they were slightly greater [4, 23, 26]. Clinical performance ability was observed to be higher in 3rd- and 4th-year students than in 4th-year students because nursing students tend to execute noninvasive, observation-oriented nursing interventions rather than practical and invasive nursing care. In contrast to focusing on basic nursing performance and observation, such as repeated vital sign measurements, nursing education courses must ensure student safety and improve clinical performance by making accurate decisions and applying nursing interventions based on professional knowledge. Additional research is required to enhance performance assessment by incorporating a larger group of students.

This study has also found a significant positive correlation among nursing students' clinical performance ability, emotional intelligence, care efficacy, and social support. Emotional intelligence and clinical performance ability showed a positive correlation (r =.46, p <.001), indicating that the greater the emotional intelligence, the

greater the clinical performance ability. In this study, it was found that the greater the care efficacy, the greater the clinical performance ability ($r = .52$, $p < .001$), but this finding is difficult to confirm due to the lack of studies directly comparing the clinical performance ability and care efficacy of nursing students in Korea. Park *et al*. [33] stated that an emotional intelligence improvement program can be an effective intervention for improving the emotional intelligence of nursing students, increasing clinical performance, and bringing about positive changes in clinical practice. There is a need to actively utilize and apply educational programs that train emotional control skills to improve clinical performance. In this study, the greater the social support was, the greater the clinical performance ability was, and there was a positive correlation among the subdomains of social support: emotional support, evaluative support, informational support, and material support.

The most influential factor in nursing students' clinical performance ability was found to be care efficacy, followed by social support, emotional intelligence, religion, and major satisfaction. There was also found a relationship between satisfaction with clinical practice and care efficacy. High-perception nurses engage in holistic nursing, which involves caring for patients through dynamic human relationships, and they express satisfaction with their work by achieving greater performance in nursing practice [29]. The study's results have suggested that to enhance clinical performance, teaching methods or learning strategies that boost care efficacy, social support, and emotional intelligence must be employed. Also, these factors should be enhanced by developing and implementing both curricular and non-curricular programs. Therefore, various relationship-oriented educational strategies should be explored to enhance nursing students' care efficacy and their ability to care for patients.

5. LIMITATIONS

There are some limitations to generalizing the findings of this study because it has focused on nursing students with respect to specific areas and examined the variables influencing their clinical performance without classifying clinical practice institutions. The development and implementation of a nursing education program that aims to enhance care efficacy could enhance the clinical performance of nursing students, as well as their emotional intelligence, social support, and nursing capabilities as prospective nurses. This program will, however, require basic data.

CONCLUSION

This study has shown nursing students' emotional intelligence, care efficacy, and social support to affect their clinical performance, identified the relationships between variables and factors, and provided basic data for developing a clinical performance program. The study has found the students' clinical performance capacity to vary significantly based on their major, religion, academic success, and level of satisfaction with clinical practice. Researchers have found positive correlations among clinical performance ability, emotional intelligence, care efficacy, and social support. Religious beliefs, emotional intelligence, social support, care efficacy, and significant satisfaction have been found to account for 39.3% of clinical performance ability. The study has also found care efficacy, social support, and emotional intelligence to be the most important elements determining nursing students' clinical efficacy. The study has indicated emotional intelligence, critical thinking, nursing profession awareness, intuition, emotional intelligence, critical thinking propensity, and problem-solving ability to greatly affect the clinical performance of nursing students. Conversely, we advise repeating and expanding future studies on social support, emotional intelligence, and care effectiveness, as prior research is insufficient to make comparisons. We propose conducting a study to develop and implement a structured educational program and teaching and learning technique, aiming to enhance care efficacy, and subsequently verify its effectiveness while taking into account the unique characteristics of nursing students.

AUTHORS' CONTRIBUTION

J.K.: Study conception and design; J.P.: Analysis and interpretation of results; V.R.: Writing manuscript and Editing. All authors have reviewed the results and approved the final version of the manuscript.

LIST OF ABBREVIATIONS

WLEIS	=	Wong and Law Emotional Intelligence Scale
GSE	=	General Self-efficacy (GSE)
SMS	=	Short Message System

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The researchers have obtained approval from the research ethics review committee of the affiliated university, South Korea, IRB approval number (K-IRB-290).

HUMAN AND ANIMAL RIGHTS

All human research procedures followed were in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national), and with the Helsinki Declaration of 1975, as revised in 2013.

CONSENT FOR PUBLICATION

Informed consent was obtained from the participants.

STANDARDS OF REPORTING

STROBE guidelines were followed.

AVAILABILITY OF DATA AND MATERIALS

The dataset used and/or analyzed during the current study will be available from the corresponding author [J.K.] upon reasonable request.

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None.

CONFLICT OF INTEREST

The author(s) declare no conflict of interest, financial or otherwise.

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