

# The Effects of Nursing Ethics and Major Satisfaction on Patient Safety Management Activities of Nursing Students

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## Abstract

**Background/Objectives:** The purpose of this study is to determine the relationships between nursing ethics, major satisfaction, and the patient safety management activities of nursing students and find the factors that affect the patient safety management activities of nursing students.

**Method/Statistical Analysis:** This is a descriptive research study for which 240 participants were selected from nursing students in Jeollabuk-do and Jeollanam-do. Data were collected from March to April 2019. Descriptive statistics, independent t-test, one-way ANOVA, Pearson correlation coefficient and multiple regression were used for analysis.

**Findings:** This study confirmed that factors of nursing ethics and major satisfaction directly affect the patient safety management activities of nursing students.

**Improvements/Applications:** The purpose of this study is to identify the correlation between nursing ethics, major satisfaction, and patient safety management activities, to understand what factors affect patient safety management activities, and to develop programs for improving the students' nursing ethics.

**Keywords:** *Nursing students, nursing ethics, patient safety management activities, major satisfaction, correlation.*

## Introduction

Patients and people who care for them who visit medical institutions expect to receive high-quality treatment in a safe environment without accidents or side effects<sup>[1]</sup>. The number of patients who are injured or die in hospitals due to increasing medical technologies and complex procedures<sup>[2]</sup>. Such patient safety accidents include all kinds of accidents that occur without protecting the safety of patients, including all kinds of errors, mistakes and accidents that occur in hospitals<sup>[3]</sup>.

Patient safety accidents have emerged as a major threat to patients, and the number of incidents has become an important issue in terms of medical quality management<sup>[4]</sup>. In order to prevent patient safety accidents, systematic activities are needed to prevent and manage the occurrence of various errors, including medical accidents. Nursing ethics is being newly emphasized by expanding the rights of patients and strengthening their responsibility for the rights of patients by raising the medical awareness of patient safety<sup>[5]</sup>.

Ethical issues are becoming more important due to extended life expectancy as a result of the development of medical technology, shortage of health care resources, and the conflicts with sociocultural and religious norms<sup>[6]</sup>. In addition, with the revision of the 2017 Medical Law, health care professionals' ethics are included in conservative education, emphasizing the importance of

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ethical literacy, and the nursing community emphasizes the ethical thinking of students by emphasizing nursing ethics<sup>[5]</sup>. Since nurses have basic responsibilities to promote the health of subjects, prevent illness, restore health and alleviate pain<sup>[7]</sup>, nursing students are encouraged not only to have human dignity but also morality and clear nursing ethics with knowledge and literacy education<sup>[8]</sup>. If nursing students are fully aware of the need for nursing ethics and patient safety management and practice proper knowledge, they will be able to play a role in strengthening ethical nursing and patient safety after graduation<sup>[9]</sup>.

Major satisfaction refers to the level of satisfaction with a major determined by an individual based on a job and the evaluation from the people around him or her. It is influenced by various factors. The higher the level of satisfaction with their major, the clearer their thoughts on their career and the more comfortable they are in their decisions<sup>[10]</sup>. As discussed above, if a nurse has the right decision making, clear nursing ethics with satisfaction with his or her major, he/she is expected to actively conduct patient safety management. Prior studies on nursing ethics, major satisfaction, and patient safety activities are inadequate. The purpose of this study was to investigate the effects of ethics and major satisfaction of nursing students on patient safety management activities, and to present basic data for improving ethics, major satisfaction, and the patient safety management activities of nursing students

## Method

This is a descriptive research study to identify the factors affecting the ethics of nursing students in safety management activities. For this, 240 participants were recruited from nursing students in Jeollabuk-do and Jeollanam-do. Sufficient information about this study was given to them and the students who agreed to participate in this study were selected. The data were collected from March to April 2019. In order to protect the study subjects, the contents and purpose of the study were explained, and a consent form was signed only if they agreed to participate in the study. We also discussed privacy, anonymity, and the possibility of withdrawing from the research. The students who participated in the survey were given a gift.

Structured questionnaires were used as a study instrument, which included the general characteristics, nursing ethics<sup>[3]</sup>, and patient safety management

activities<sup>[4]</sup> of nursing students. General characteristics consisted of gender, age, marital status, motivation to enter, friendship, and religion. For ethical awareness, the ethical awareness measuring tool devised by Jang Deok-pil was used<sup>[11]</sup>. There was a total of 30 questions in three areas consisting of 10 questions on ethics for patients, 10 questions on professional work, and 10 questions on ethics for partners. The tool ranged from 1 point not at all to 4 points at all times, with higher scores indicating higher ethical awareness. In this study, Cronbach's  $\alpha$  was .77. The inverse of the measurement tool was inverted.

The Major Satisfaction Index was used a 34-item satisfaction survey made by Kim & Ha<sup>[12]</sup> was used by Lee<sup>[13]</sup>. The higher the score on the 5-point Likertscale, the higher the major satisfaction. In this study, Cronbach's  $\alpha$  was .94.

In order to measure patient safety management activities, a tool developed by Lee<sup>[14]</sup> and revised and supplemented by Lee<sup>[15]</sup> was used. A total of 17 questions consisted of five on patient confirmations, two oral prescriptions, five on medicines, one on surgery/procedure, one on infection control, two on fall prevention, and one on pressure control. This tool used a 5-point Likertscale ranging from "not at all" to "very yes much," meaning that the higher the score, the higher the performance of the individual's patient safety management activities. Reliability with Cronbach's  $\alpha$  was .95 in this study. The inverse of the measurement tool was inverted.

The collected data were statistically analyzed using IBM SPSS Statistics 18.0. A descriptive statistical method was used to calculate the general characteristics, frequency, percentage, mean and standard deviation of subjects' characteristics. Differences in nursing ethics according to the general characteristics of the subjects were analyzed by independent t-test and ANOVA. The correlation between subjects' nursing ethics and patient safety management activities was calculated using the Pearson correlation coefficient. Finally, hierarchical multiple regression analysis was used to identify the factors affecting patient safety management activities.

## Result and Discussion

1. **Differences in Nursing Ethics by General Characteristics:** According to the general characteristics of the subjects, the degree of patient safety management activities was determined by

Admission ( $F = 2.834, p = .025$ ), and Relationship ( $t = 5.036, p = .001$ ), Prospects for Nursing ( $t = -2.508, p = .013$ ), Ethical Education Experience ( $t = -2.615, p = .009$ ) showed a difference. In contrast, there were no statistically significant differences

among gender ( $t = -.394, p = .694$ ), age ( $F = .852, p = .467$ ), marital status ( $t = 1.695, p = .091$ ), religion ( $t = 1.939, p = .054$ ), and achievement ( $F = .386, p = .081$ ) [Table 1].

**Table 1. Differences in Nursing Ethics by General Characteristics (N = 240)**

Characteristics	Categories	N()	M±SD	t or F	p
Gender	Man	59	4.04±.57	-.394	.694
	Women	181	4.08±.60		
Age	20-24	163	4.04±.60	.852	.467
	25-29	47	4.10±.63		
	30-34	10	4.32±.58		
	35 or more	20	4.13±.41		
Marital Status	Single	219	4.09±.59	1.695	.091
	Married	21	3.86±.55		
Religion	Have	140	4.13±.59	1.939	.054
	None	100	3.98±.58		
Motive for admission	Invitation around	32	4.09±.50	2.834	.025*
	Employment	103	3.93±.61		
	Aptitude	72	4.20±.55		
	Volunteer	18	4.20±.62		
	Other	15	4.21±.63		
Relationship	Very good	2	4.38±.87	5.036	.001**
	Good	8	3.94±.41		
	Moderate	79	4.11±.58		
	Bad	103	3.91±.59		
	Very bad	48	4.07±.59		
Achievement	Very good	10	2.82±.20	.386	0.81
	Good	47	2.85±.23		
	Moderate	95	2.83±.22		
	Bad	66	2.87±.27		
	Very bad	22	2.83±.23		
Prospects for Nursing	Good	215	1.69±.46	-2.508	.013*
	Bad	25	1.44±.50		
Ethical Education Experience	No	81	3.93±.56	-2.615	.009**
	Yes	159	4.14±.60		

**2. Description statistics of the measured variable:**

The Nursing Ethics score was 2.84 (SD = .23), which was similar to that of Song [8]. It was similar to the results of Yun & Kim [16], which studied nursing college students. The patient's Major Satisfaction score was 3.76 (SD = .71), similar to

Whang's [17] report (3.71). The mean score for Patient Safety Management Activities was 4.07 (SD = .59), which was similar to that of Song [8] based on clinical nurses. The study of nursing students by Song & Moon [18] was 3.96 and Kim & Oh's [19] showed 3.99; the subjects here were slightly higher. [Table 2].

**Table 2. Description statistics of the measured variable (N = 240)**

Variable	M±SD	Minimum value	Maximum value
Nursing Ethics	2.84±.23	2.23	3.80
Major Satisfaction	3.76±.71	1.00	5.00
Patient Safety Management Activities	4.07±.59	2.88	5.00

**3. Correlations between Nursing Ethics, Major Satisfaction and Patient Safety Management Activities:** Correlation analysis was conducted for nursing ethics, major satisfaction, and patient safety management activities, including motivation for admission, experience of ethics education, and relationships. The results are as follows.

Patient safety management activities and Motive for Admission ( $r = .138, p = .033$ ), safety management activities and Ethical Education Experience ( $r = .167, p < .001$ ), patient safety management activities and Prospects for Nursing ( $r = .191, p = .003$ ), patient safety management activities and Nursing Ethics ( $r = .484, p < .001$ ), patient safety management activities and Major Satisfaction ( $r = .431, p < .001$ ), Major Satisfaction and relationship ( $r = .131, p = .042$ ), major Satisfaction and Motive for Admission ( $r = .208, p < .001$ ), Major Satisfaction and Prospects for Nursing ( $r = -.245, p < .001$ ), Major Satisfaction and Nursing Ethics ( $r = -.428, p < .001$ ), Nursing Ethics and Major Satisfaction ( $r = .150, p < .02$ ), Nursing Ethics and Prospects for Nursing ( $r = -.189, p = .003$ ) were all statistically significant correlations. Shown [Table 3].

**Table 3. Correlations between Nursing Ethics and Patient Safety Management Activities (n = 240)**

Variable	Rel	MA	EEE	PN	NE	MS	PMA
	r(p)	r(p)	r(p)	r(p)	r(p)	r(p)	r(p)
Rel	1	-.006(.923)	.118(.068)	-.091(0.16)	.033(.613)	.131*(.042)	.086(.185)
MA		1	.05(.437)	-.015(.823)	.150*(.02)	.208**(<.001)	.138*(.033)
EEE			1	-.081(.211)	.111(.086)	.109(.092)	.167**(<.001)
PN				1	-.189**(.003)	-.245**(<.001)	-.191**(.003)
NE					1	.428**(<.001)	.484**(<.001)
MS						1	.431**(<.001)
PMA							1

Correlation is significant at the 0.01 level., Rel: Relationship, MA: Motive for Admission, EEE: Ethical Education Experience, PN: Prospects for Nursing, NE: Nursing Ethics, MS: Major Satisfaction, PMA: Patient Safety Management Activities

**4. Factors Influencing Patient Safety Management Activities:** In order to identify factors affecting the patient safety management activities of nursing college students, patient safety management activities were the dependent variables, and motivation for admission, ethical education experience, prospects of nursing jobs, and nursing ethics all showed a significant correlation with patient safety management activities. In addition, multiple regression analysis was conducted using major satisfaction as the explanatory variable.

As a result of testing the multicollinearity between the variables included in the regression analysis, the tolerance limit was .58 and the variation information factor was 1.76, so there was no multicollinearity problem. This 1.82 confirms that there is no auto correlation.

The results showed that the nursing ethics ( $\beta = .35, p < .001$ ) and major satisfaction ( $\beta = .25, p < .001$ ) of nursing students had a positive effect on the patient safety management activities of nursing students ( $F = 178.65, p < .001$ ), and the explanatory power of the model was 20.9% [Table 4].

**Table 4. Factors Influencing Patient Safety Management Activities (n = 240)**

Variable	B	SE	$\beta$	t	p
NE	.887	.153	.352	5.799	<.001**
MS	.211	.052	.251	4.045	<.001**
MA	.016	.033	.027	.49	.625
PN	-.042	.044	-.055	-.967	.335
EEE	.119	.069	.095	1.728	.085
Adjusted R2 = .309. F = 20.919. p < .001					

NE: Nursing Ethics, MS: Major Satisfaction, MA: Motive for Admission, PN: Prospects for Nursing, EEE: Ethical Education Experience

## Discussion

In the case of a patient safety accident in a hospital, the impact is not only directly related to the patient's life, but is also a legal issue. However, the accidents that may occur with patients can be prevented by medical institutions and their workers by reducing or eliminating risks. Therefore, systematic patient safety management activities are very important for nurses and an important factor in determining the quality of care<sup>[20]</sup>.

The purpose of this study was to investigate the effects of ethics and major satisfaction of nursing students on patient safety management activities, and to present basic data for improving the ethics, major satisfaction, and patient safety management activities of nursing students.

The relationship between nursing ethics and the patient safety management activities of nursing students was positively correlated with statistically significant results. In other words, the higher the ethics of nursing students, the higher the performance of patient safety management activities. This is consistent with Song's results measured for clinical nurses using the same tool<sup>[8]</sup>. Nursing students should be trained in correct and positive nursing ethics with the right education so that they can be more actively involved in patient safety management. They should also be provided with clear and positive nursing ethics to ensure proper patient safety management activities.

The relationship between major satisfaction and the patient safety management activities of nursing students was positively correlated with statistically significant results. In other words, the higher the major satisfaction of nursing students, the higher the performance of patient safety management activities.

As a result, this study confirmed that factors of nursing ethics and major satisfaction directly affect the patient safety management activities of nursing students. This implies that it is necessary to develop strategies for educational programs to improve students' nursing ethics.

It is difficult to compare the effect of major satisfaction on patient safety management activities in this study with previous studies. However, the direct effects of higher nursing ethics and higher degree of major satisfaction were found to improve patient safety management. Based on this, the development

of education programs and other programs to improve nursing ethics is needed.

## Conclusion

This is an explanatory study to identify factors that affect the ethics of nursing students in safety management activities.

As a result, it was found that nursing ethics and key satisfaction factors have a direct impact on nursing students' patient safety management activities.

As a result of this study, it is necessary to develop programs that can improve the degree of satisfaction and inspire the right ethics by acquiring the right values and beliefs for nursing students. We also need to develop strategies for patient safety management programs to prevent life-threatening safety accidents.

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**Conflict of Interest:** Nil

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