

This Nursing College Students ‘Perception of COVID19, Ethical Perception, and Career Status Survey is Title of the Article

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Abstract

Background/Objectives: The purpose of this study is to analyze infectious disease perceptions, ethical perceptions, and career identities of COVID19 infection. **Methods/Statistical analysis:** This study is a study of COVID19 infection. The questionnaire among 310 nursing students from May 11, 2020 to May 15, 2020 was administered to nursing college students located in J city of J area and K group of J area. A total of 305 nursing students were surveyed, excluding the five unfaithful. Data analysis was performed using descriptive statistics, t-test and correlation analysis using spss26. **Findings :** Of the epidemic awareness of COVID19 infection (2.34 ± 2.7), interest in COVID19 (98.4%), adequacy of WHO (97.7%), adequacy of government drug storage (75.1%), and predictive adequacy of experts (85.3%), Positive results such as the government's response ability (75.8%) and infectious disease classification stage judgment criteria (46.6%) appeared, and ethical awareness (2.70 ± 5.8) accepted hospital guidelines (98.4%), and ethical guidelines to protect medical personnel Development (99.7%), fair opportunity allocation, and fairness (51.1%). It appeared as a career identity (1.77 ± 17). In the recognition of infectious diseases, the higher the infectious disease awareness, the higher the career identity, indicating a positive correlation, and the ethical awareness was not correlated. **Improvements/Applications:** It is thought to influence the development of better nurses through research on infectious diseases. We propose research using various variables for infectious diseases and development of various tools for infectious diseases.

Keywords: Covid19, Infection. epidemic awareness, ethical awareness, career identity

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Introduction

Recently, new infectious diseases have been emerging. As exchanges with foreign countries have been increasing, opportunities to be exposed to diseases have been increasing and as the purposes of overseas travels have been gradually diversified, cases where travelers visit areas that have been rarely visited before have been increasing leading to increases in the risk of contracting a local epidemic disease or infectious disease and spreading it in South Korea. In addition, as the number of foreigners from various countries in the world visiting Korea on the contrary has been increasing due to the Korean Wave hot blast, the chances of infection by infectious diseases have been increasing. These infectious diseases spread rapidly and have fatal effects. Due to the foregoing, infectious diseases are becoming an issue worldwide and many things are changing due to infectious diseases. Among infectious diseases that have occurred in South Korea, severe acute respiratory syndrome (SARS) in 2003, influenza A virus subtype H1N1 in 2009, MERS in 2012, and COVID19 virus in 2020 are representative. Due to these infectious diseases, pandemic phenomena have been occurring leading to numerous deaths and economic losses. Although preparations for and research into infectious diseases have been carried out to prevent such great confusions, COVID19 has not yet ended. Therefore, analyses of the causes of infectious diseases and thorough preparations for infectious diseases are urgently needed. French et al (P. E. *et al.* 2009). advised that the likelihood of an influenza pandemic within 20 years is very realistic, predicted the potential for global threats, and suggested that emergency plans and extensive guidelines for federal and local public officials are needed. In addition, it was stated that the government's institutional support, such as education and material support, is necessary to support medical personnel for stable treatment (Park *et al.* 2008).

Another issue that has emerged through such studies is related to the medical ethics in the event of the pandemic of infectious diseases. When the issues of medical ethics were presented, issues such as the obligation for care, and restrictive measures were presented as health care workers' ethical issues. Torda (2006) stated that in emergencies of pandemics, the ethical system and decision-making process should be important, many ethical issues would occur in relation to the spread of infectious diseases, and controversies may occur in relation to many determined plans such as the distribution system of antiviral drugs, occupational risks, staff assignments, and medical workers' responsibilities, and governmental issues. However, currently, there are few studies conducted on healthcare workers' ethical consciousness about their response to new infectious diseases (Park. 2016). and healthcare workers' perception of ethical problems when they respond to the pandemic of a new infectious disease (Kim. 2011). These studies suggested

that ethical guidelines for pandemics are necessary. In addition, as the moral dimensions and ethical are magnified out of the essential elements of the professionalism that healthcare workers must possess, systematic studies on professional ethics are urgently needed in the medical field too. Domestic studies that have been conducted thus far are mostly those conducted with doctors or nurses related to biomedical ethics(Park. 2016; Kim. 2011)and those conducted with medical college students(Ahn..*et al.* 2008;Kwon. 2002). Since there are few studies on infectious diseases that are currently prevalent, studies on ethical issues related to infectious using diverse tools seem to be necessary.

Although the career direction of nursing students has been already determined, the students' career identify will vary depending on whether they had motives when they selected the nursing department, and unlike students of other departments, nursing students may have a burden due to excessive learning and clinical practice. In addition, when a pandemic phenomenon has occurred as such, nursing students may feel confused about their career due to the weight they have to bear later. Therefore, due to a pandemic phenomenon, students who selected the nursing department may change their thinking about their career according their infectious diseases recognition and ethical awareness. In addition, the ethical conflict situations in relation to the forced actions taken toward healthcare workers in the event of a pandemic of a new infectious disease felt by those students who will become medical personnel in future and actual situations should be understood, ethical awareness about upcoming new infectious diseases should be shared, and a bond of sympathy should be held. Therefore, this study was carried out so that the ethics education necessary for the foregoing can be carried out in the nursing department in order to reduce the confusion that will be experienced by medical workers due to the problems of new infectious diseases that may occur later and cultivate their ability to jointly respond to the problems thereby playing positive roles in the medical world.

Materials and Methods

2.1. The design of This Study

The purpose of this study is to investigate the infectious disease recognition, ethical perception, and career identity of nursing college students. This study was conducted to understand the relationship between the recognition of Pandemic and career identity caused by COVID19.

2.2. The Subject of This Study

The study included 305 out of 310 nursing college students from J-City's J-City and J-City's G-City, and five were disqualified. The study used general traits, epidemic awareness(Kim. 2011), ethical awareness(Kim. 2011), and career identity(Kwon. 2009)as tools. Data collection was

collected from May 11, 2020 to May 15, 2020, and it was fully explained that before participating in this study, students with negative emotions such as impulse control and depression difficulty could stop participating.

2.3. The Tool of This Study

The study used structured questionnaires, including general characteristics, infectious disease awareness(Kim. 2011), ethical awareness(Kim. 2011), and career identity(Kwon. 2009).

2.3.1. Infectious disease awareness and ethical awareness

The questionnaire used in this study is a total of 54 questions and is an ethical tool developed by researcher Jung-A Kim(2011) according to the purpose of the study through the revision of contents and vocabulary based on domestic prior research on bioethics. The questionnaire consists of 12 questions about the awareness of new infectious diseases, 11 ethical considerations caused by the epidemic of new infectious diseases, 11 questions, and 7 questions about ethical awareness of cases of new infectious diseases, and 13 questions of individual sociodemographic characteristics. It's very, very much, not 5 to 1, but I use 5 Likert scales.

2.3.2. Career Identity

Kim Bong-hwan (1997) prepared the 18 questions of the identity scale, a subscale of the My Vocational Situation (MVS) developed by Holland, Daiger and Power (1980), and Kwon Yoon-hee (2002) was a Korean nursing student. It is a tool that has been modified and supplemented with 14 questions to fit. It consists of a total of 14 questions and a 4-point scale, and the scores are calculated by reversing them (1 point-very yes, 4 points-not at all). The higher the measured score, the higher the career identity.

2.4. Data Analysis

The SPSS WIN 26.0 version program is used for data analysis. The general characteristics of the object were used for frequency analysis, descriptive statistics, and Pearson's correlation analysis.

Results and Discussion

3.1. General Characteristic

A total of 305 people participated in this study. The population under 24 is 188. 3rd grade and 4th grade 151 (83%), and admission recommendation 134 (43.9 %). Ethics education experience was 216 (70.8%). [Table 1].

Table 1. Career identity according to the general characteristics of the subject(N=305)

Characteristics	Categories	N()	M±SD	t or F	p
Gender	Man	79	2.71±.55	.294	.76
	Women	226	2.69±.59		
Age	20-24	188	2.61±.56	8.960	.00**

	25-29	60	2.71±.57		
	30 or more	57	2.97±.59		
Grade	two	52	2.72±.59	.133	.87
	three	151	2.71±.56		
	four	102	2.67±.61		
Marital Status	Single	275	2.64±.55	-5.368	.00**
	Married	30	3.22±.59		
Religion	Have	105	2.83±.63	2.691	.008**
	None	200	2.63±.54		
Grade	over 4.0	67	2.42±.47	12.760	.00**
	3.0-3.9	125	2.70±.60		
	2.0-2.9	113	2.86±.56		
Motive for admission	Invitation	42	2.46±.55	25.13	.00**
	around	129	2.51±.48		
	Employment	134	2.95±.59		
Ethical Education Experience	No	89	2.60±.56	1.910	.057
	Yes	216	2.74±.59		
Whether or not to practice in the field during corona infection	Yes	59	2.81±.61	1.721	.08
	No	246	2.67±.57		

3.2 Results of the four principles of career identity, infectious disease awareness, and medical principles.

The average of infectious disease awareness, ethical awareness, and career identity was (2.70±.58). Ethical perception (2.34±.27) and career identity (1.77±.17) were shown, indicating that the infectious disease awareness and ethical awareness were average, and that the career identity was not much shaken. [Table 2]

Table 2. Results of the four principles of career identity, infectious disease awareness, and medical principles (N=305)

variable	M±SD	Maximum value	Minimum value
career identity	2.70±.58	1.36	4
infectious disease recognition	2.34±.27	1.45	2.91
medical ethics	1.77±.17	1.13	2

3.3 Correlation between general characteristics and career identity of nursing college students, awareness of infectious diseases, and four principles of medical principles

Ethical education and field practice ($t = -1.14$, $p = .04$), medical ethics and career identity ($t = .347$, $p = .00$), ethical education experience and epidemic awareness ($t = -.163$, $p = .00$), field

practice and epidemic awareness ($t = -.123, p = .03$), career identity and epidemic awareness ($t = 135, p = .01$)[Table 3].

Table 3. Correlation between general characteristics and career identity of nursing college students, awareness of infectious diseases, and four principles.(N=305)

	EEE	MA	F P	ME	CI	IDR
	r(p)	r(p)	r(p)	r(p)	r(p)	r(p)
EE E	1	-.102(.07)	.114 ^{*(.04)}	-.027(.64)	-.109(.05)	-.163 ^{***(.00)}
MA		1	-.086(.13)	.124 ^{*(.03)}	.347 ^{***(.00)}	.055(.33)
FP			1	-.025(.66)	-.098(.08)	-.123 ^{*(.03)}
ME				1	.079(.17)	.032(.58)
CI					1	.135 ^{*(.01)}
IDR						1

unit: cm, ***: $p < 0.005$, **: $p < 0.05$

Correlation is significant at the 0.01 level.

E EE; Ethical Education Experience MA: Motive for admission

FP: field practice C I: career identity

M E: medical ethics I D R: infectious disease recognition

3.4 Covid- 19 Pandemic awareness

A clear explanation of the Covid-19 epidemic is Yes 130 (42.6%), attention to the process is Yes 233 (76.4%) and WHO (World Health Organization) response suitability Yes 238 (78%), government drug reserves are usually 126 (41.3%), 178 (58.4%) of expert forecasts, 139 of government response capacity (45.6%), 163 (53.4%), not classified and rationalized by national epidemic crisis stage criteria. Korea's future pandemic potential is 138 (45.2%) at moderate, the severity of the larger disease is 238 (78%) compared to Covid-19, and the pandemic duration is 182 (59.7%) in examples, future vaccination and Antiviral vaccination predictions are shown at 194 (63.6%). [Table 4].

Table 4. Covid- 19 Pandemic awareness(n=305)

Characteristics	Categories	N(%)	M±SD
Clear description of Covid- 19	no	46(15.1)	2.27±.71
	usually	128(42.0)	
	yes	130(42.6)	
Continued interest in the Covid-19 Pandemic process	no	4(1.3)	2.75±.46
	usually	67(22.0)	
	yes	233(76.4)	
Appropriateness of WHO's response to Covid- 19 Pandemic	no	7(2.3)	2.75±.48
	usually	60(19.7)	
	yes	238(78.0)	
Appropriateness of securing government drug storage for Covid- 19 Pandemic	no	103(33.8)	1.90±.76

	usually	126(41.3)	
	yes	75(24.6)	
Appropriateness of experts' predictions during Covid- 19 Pandemic	no	44(14.4)	2.44±.73
	usually	82(26.9)	
	yes	178(58.4)	
Excellence in Government Response to Covid- 19 Pandemic	no	74(24.3)	2.05±.73
	usually	139(45.6)	
	yes	92(30.2)	
Validity of national infectious disease crisis stage classification and criteria for Covid- 19 Pandemic	no	163(53.4)	1.55±.65
	usually	114(37.4)	
	yes	28(9.2)	
It is predicted that there is a high possibility of Pandemic in Korea in the future	no	31(10.2)	2.34±.65
	usually	138(45.2)	
	yes	136(44.6)	
Predict the severity of the disease to be greater than Corona Pandemic	no	10(3.3)	2.74±.50
	usually	57(18.7)	
	yes	238(78.0)	
Predicted to be similar to the past Pandemic duration	no	41(13.4)	2.46±.72
	usually	82(26.9)	
	yes	182(59.7)	
Predicted to be similar to the past Pandemic duration	no	51(16.7)	2.46±.76
	usually	60(19.7)	
	yes	194(63.6)	

3.5 Awareness of ethical issues caused by Pandemic

If all daily living is controlled in accordance with the hospital's guidelines, eg 232 (76.1%), it is very necessary to develop ethical guidelines for the protection of medical personnel, eg 259 (84.9%). 287 people (94.1%) who have to work under the conditions you can get, example 299 (98%) who have to guarantee the right to be provided with clear information, and if you have a complaint about a compulsory job, about the right to an epidemic Yes, 267 (87.8%), consent for individual rights to prevent epidemics is 274 (89.8%), and 222 (72.8%) are negligent in violation of orders, such as limiting suspected patient activity and quarantine measures Costs for epidemics, infections, disabilities and deaths amounted to 238 (78%) and the government's mandated medical personnel allocation to no193 (63.3). The consideration of decision-making priorities was 156 (51.1%) of fairness.[Table 5].

Table5. Correlation between learning motivation, learning achievement, and learning immersion(N=74)

Characteristics	Categories	N(%)	M±SD
Whether or not to fully accept all daily life under hospital guidelines	no	5(1.6)	1.88±.81
	usually	68(22.3)	

	yes	232(76.1)	
I think it is very necessary to develop ethical guidelines for the protection of healthcare workers	no	1(0.3)	2.84±.37
	usually	45(14.8)	
	yes	259(84.9)	
Working under conditions that can be protected by Pandemic	no	18(5.9)	1.94±.23
	yes	287(94.1)	
Guaranteed right to receive clear information about Pandemic	no	6(2.0)	1.98±.13
	yes	299(98)	
Guarantee of rights in the event of complaints about mandatory assignments	no	3(1.0)	2.86±.36
	usually	34(11.2)	
	yes	267(87.8)	
Agree to limit individual rights to prevent pandemic	no	7(2.3)	2.87±.39
	usually	24(7.9)	
	yes	274(89.8)	
Thinking about violations of orders, such as limiting the activity of putative patients and quarantine measures of confirmed patients	Not a fatality	43(14.1)	2.58±.72
	usually	40(13.1)	
	Overkill	222(72.8)	
Health care workers responsible for infectious disease infection or disability during work and liability for payment in case of death	individual	11(3.6)	2.74±.51
	Working hospital	56(18.4)	
	government	238(78)	
Government's mandatory medical personnel allocation	yes (do your duty)	112(36.7)	1.63±.48
	No (rights and autonomy)	193(63.3)	
The most important considerations for prioritizing decisions about fair opportunity allocation	Fairness	156(51.1)	1.65±.74
	Equity	98(32.1)	
	legitimacy	51(16.7)	

Conclusion

This study was carried out to identify the degree of ethical awareness and career identity related to the response to new infectious diseases in nursing college students after the MERS that occurred in South Korea in 2012, examined the general characteristics of the study subjects, the study subjects' perception of ethics that must be considered in the event of the pandemic of a new infectious disease, and the influencing factors for the subjects' ethical decision making.

As for the general characteristics of the study subjects, 151 of the study subjects were 3rd or 4th graders accounting for 83% of the study subjects. Currently, no study has conducted a survey with college students, and since the students are taking non-face-to-face classes for theoretical major subjects and clinical practice due to Covid-19, it may be thought that confusion in the students' identity may appear.

On reviewing the relationships between variables, significant correlations were found between

field practice and ethics education ($t = -114$, $p = .04$), and between field practice and infectious disease recognition ($t = -.123$, $p = .03$) indicating that the ethics education carried out during field practice should have been effective. Therefore, which those who had longer clinical careers had higher ethical awareness, it is thought that the clinical practice carried out contributed to the improvement of ethical awareness. The correlation between experience in ethics education and infectious disease recognition ($t = -.163$, $p = .00$) was also shown to be significant. The foregoing can be interpreted as indicating that students who have received ethics education have acquired knowledge of infectious disease so that their infectious disease recognition is improved, and it is thought that field practice, infectious disease recognition, and ethical awareness are all related with each other. Since the correlation between medical ethics and career identity was shown to be significant ($t = .347$, $p = .00$), it can be regarded that the higher the medical ethics, the higher the career identity. In the general characteristics, the motives for application for the nursing department were shown to be recommendation in 129 subjects (42.3%) and easiness to get a job in 134 subjects (43.9%) indicating that the ratio of students who voluntarily applied for the nursing department was low so that it was thought that the career identity would be shown to be low. It was thought that the students' career identify would be lowered after the students saw the difficulties and pains that can be felt in the clinical field because they would think they would have the difficulties and pains in the future. However, in this study, the correlation between career identity and field practice was shown to be significant on the contrary. Therefore, it is considered that career identity was established thanks to ethics education, infection education, and field practice. In addition, with regard to the correlation between career identity and infectious disease recognition ($t = 135$, $p = .01$), it was shown that the higher the infectious disease recognition, the higher the career identity indicating that firmly established infectious disease recognition and ethical awareness also affected the career. Not only there are few studies on the survey of infectious disease recognition and ethical awareness surveys and studies on nurses and doctors are insufficient, but also there are few studies on nursing college students.

As for nursing students' awareness of Covid-19 Pandemic, 130 students (42.6%) answered yes and 128 (42.0%) answered no for clear explanation, and 233 (76.4%) answered yes for interest in the progressing process. The foregoing results are thought to have appeared because clear explanations were provided as the students shared information in real time in the situation where the Internet is well distributed, and the government presented guidelines while announcing the situations of responses in real time. For the adequacy of the WHO's response, 238 students (78%) answered yes. Given that the World Health Organization (WHO) recommended to provide thorough screening of international standards, treatment protocols, and updated information as an ethical consideration of as an ethical consideration of healthcare workers when responding to the

new influenza, it can be seen that preparations were made in advance for the infectious diseases that would appear next. For the appropriateness of government's drug reserves, 126 students (41.3%) answered moderate, and this is thought to be attributable to the fact that accurate vaccines and treatments are not currently available. For the appropriateness of experts' predictions, 178 students (58.4%) answered yes, and for the excellence of the government's ability to respond, 139 (45.6%) answered moderate. This is considered attributable to the fact that the guidelines have been concretely improved after the outbreaks of influenza and MERS. However, for the suitability of the national criteria for classification and judgment of infectious disease crisis stages, 163 (53.4%) answered no, and this is considered attributable to the level of anxiety about the future, which is still high. For the prediction that the possibility of pandemics in South Korea will be still high in the future, 138(45.2%) answered yes, for the prediction that the severity of new diseases will be higher than that of Corona Pandemic, 238(78%) answered yes, for the prediction that the duration of the new diseases will be similar to that of past pandemics, 182(59.7%) answered yes, and the prediction of the shortage of vaccination and anti-viral drugs in future, 194(63.6%) answered yes, indicating that anxiety about infectious diseases that will appear in the future is high.

As for the awareness of ethical issues caused by pandemics, for the question of whether or not to fully accept when all daily life is controlled according to hospital guidelines, 232 (76.1%) answered yes, indicating trust in the guidelines and for the thinking that the development of ethical guidelines for the protection of medical personnel is quite necessary, 259 (84.9%) answered yes. For the thinking that they should work under conditions where they can be protected from pandemics, 287(94.1%) answered yes, for the thinking that their right to be provided with clear information on pandemics should be guaranteed, 299(98%) answered yes, for the statement that the right to raise complaints about mandatory work assignments is guaranteed, 267(87.8%) answered yes, to the question whether they agree to the restriction on individuals' rights for prevention of pandemics, 274 (89.8%) answered yes. The above were shown to the arguments that given the current difficulties of healthcare workers, healthcare workers should be protected, their rights should be improved, and the education, information, and protective equipment necessary for the protection of healthcare workers should be sufficiently provided. To the question of who should be responsible for payment of costs when healthcare workers have been infected with infectious diseases, became disabled, or died during working, 238 (78%) answered that the government should be responsible, to the question of whether the government's mandatory manpower assignments are acceptable, 193(63.3%) answered no, and to the question of what is the matter that is considered the most importantly in the determination of the priorities for fair assignments of opportunities, 156 (51.1%) answered that it was fairness. This seems to

indicate the students' thinking that the government should fairly evaluate healthcare workers to assign manpower with a sense of responsibility based on the wish than the government would not neglect the efforts of healthcare workers. In the studies conducted the subjects were shown to be sensitive to healthcare workers' rights to be protected, reflecting the fact that the preparation of ethical guidelines for healthcare workers is urgently needed.

Since this study has limitations because it investigated nursing students' infectious disease recognition and ethical awareness, studies should be conducted in diverse environments.

These researchers suggest the need to develop measurement tools for ethical awareness and infectious disease recognition, etc. in relation to the response to new infectious diseases.

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