

Analysis of Factors Affecting Major Satisfaction

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Summary

The purpose of this study was to analyze general characteristics and empathy factors of nursing student's major satisfaction. Participants in this study were 235 students from both located in J do and C do Universities. The research method was a cross-sectional survey and the survey period was from September 1 to 10, 2017. The questionnaire was used to investigate general characteristics, empathy, and major satisfaction. The analysis was based on frequency analysis, p value of t or F value, Pearson correlation, regression analysis, and hierarchical regression analysis using SPSS 18.0. The result of this study were as follows: (1) The C University showed higher satisfaction than J University(3.44), (2) the factors affecting major satisfaction were school location, grade, religion, cognitive empathy, and emotional empathy correlated, Regression analysis was used to examine factors that correlated with major satisfaction, followed by hierarchical regression analysis to identify the most influential factors. (3) The result of the analysis showed that the greatest influence factors on major satisfaction were the University location($\beta=.325$, $p<.01$), the cognitive empathy ($\beta=.287$, $p<.01$), and the next order was negative grade($\beta=-.230$, $p<.01$). Based on the results of this stud, the following conclusions can be drawn. The most influential factor in the major satisfaction was the school location, but this was an irreversible factor. Therefore, if the cognitive empathy factor and grades are corrected, it can be said that it can increase the satisfaction of major in nursing University students. In this study, it was emphasized that cognitive empathy contained in the course of nursing education program and suggested guidance on major satisfaction in lower grades.

Keywords: Empathy, Major satisfaction influential factor, University students.

1. Introduction

In recent years, the number of students in the nursing department has rapidly increased in response to social demands. According to statistics from the Korea Educational Development Institute, the number of graduates of nursing Department from Nursing college in 2013 was about 17,000[1]. There were many students who know the characteristics of the nursing department and meet their aptitudes, but there were

many cases where they are admitted according to the will of their parents or others. Nurses are nursing professionals who have the qualities of nursing emotional as well as physical care of various people. Therefore, if nursing students are not satisfied with their majors, it will be unfortunate not only for their own suffering but also for those who receive nursing care[2]. Analysis of what has been studied so far suggests that there were many students who were not satisfied with their major in the University, and therefore many students were not able to adapt to the major of the department after admission, and the problem was serious. Especially, the nursing department has a job to deal with the clients immediately after graduation due to the nature of the department. If they graduate with a low degree of satisfaction, including their understanding of the major, they will not only begin unhappily with their first start in their 20s, but will also be a huge obstacle to understanding clients. Major satisfaction is the result of a judging process that evaluates the department to which it belongs in comparison with the standard of career or occupation set by the individual. In Ha and Kim's study, major satisfaction was classified into school satisfaction, subject satisfaction, perception satisfaction, general satisfaction, and relationship satisfaction[3]. School satisfaction means satisfaction with the current college, curriculum satisfaction means satisfaction with content learned in the current department, perception satisfaction means satisfaction with the department's social reputation or awareness. Finally, relationship satisfaction refers to satisfaction with interpersonal relationships, such as advice on how to study or contents[4]. In Kim & Ha's study on factors affecting major satisfaction, school perception was the biggest factor[5]. In other words, the social recognition and reputation was a very important factor in explaining the satisfaction of college students in Korea. In Korea, the closer the University is located in Seoul metropolitan area, the higher the social awareness. However, many Universities are located outside the metropolitan area. In other studies, it was found that grade, socioeconomic factors, and interaction influenced major satisfaction. According to Kim's research in 2007, the degree of satisfaction with the major has a positive effect on college students' efficacy of career decision and maturity of career attitude[6]. If college students are not satisfied with their major, they may cause psychological problems such as loss of interest due to loss of learning, alienation due to social isolation in school, and anxiety about college life. The results of the study showed that social recognition, grade, socioeconomic factor, and interaction with people were influential on major satisfaction, and positive effect with career decision including career decision attitude. Based on the above research, it can be seen that high major's satisfaction was positively affecting the future career attitude. The department of nursing is a practical department that needs to acquire expertise to become a medical professional, to be qualified as a practitioner through clinical practice, and to solve problems in the clinical field based on the knowledge of nursing learned in theoretical learning[7]. Due to nature of nursing, which is a practical discipline, the department of nursing studies diverse discipline of human anatomy, physiology, human relations, communication, and clinical based curriculum. Especially when dealing with clients, the field of emotional support is difficult to solve by other medical staff. Empathy serves as the basis for emotional support. Empathy means understanding and sharing with others the specific emotional state of others. Empathy is an important element that contributes to active mutual exchange and altruistic behavior. Therefore empathy enhances the survival value of man and provides for human moral sentiment as well as mediates pro-social behavior. Empathy can be divided into cognitive empathy and emotional empathy[8]. The nurses' lack of sympathy when dealing with clients may cause many problems in understanding and communication. As mentioned above, the nursing department is a practical study in direct contact with the subjects, and it can be understood that empathy for understanding the clients should be the most basic. However, research on empathy and major satisfaction has not been done yet. In this study, we tried to analyze factors affecting major satisfaction of nursing students including empathy. In recent years, the evaluation standards for nursing departments in Korea have been standardized by Korean Accreditation board of Nursing Education. It also continually encourages nursing students to develop curricula to suit their field adaptation. The results of this study will be used as basic data to develop a curriculum suitable for clinical practice emphasized by the Korean accreditation Board of Nursing Education. The specific objectives of this study were as follows. First, identify the general characteristics of participants. Second, the difference of major satisfaction according to characteristics of participants is analyzed. Third, analyze the effect of characteristics of participants on major satisfaction. Fourth, analyze factors that have the greatest effect on major satisfaction.

2. Research Method

2-1. Participants

The participants of this study were 235 students who agreed to participate voluntarily in the nursing students at two Universities in J do and C do. Using the G power 3.0 program, the mean effect size required to analyze the difference of one sample case was 0.30, significance level 0.05, the statistical power of 0.95 was used to calculate the relationship between the variables was 115. Therefore participants were sufficiently secured for this study.

2-2. Method

Data were collected from September 1 to 10, 2017 as a structured questionnaire. The researchers explained the purpose of the questionnaire and distributed the questionnaire to the students who agreed to participate in the study. We also informed that the collected questionnaire will be used for confidentiality and research purposes. Information was provided on the possibility of refusing to participate in the study at any time during the study. The questionnaire was immediately collected after it was written.

2-3. Research Tools

2-3-1. Empathy

In order to measure empathy ability, Developed by Devis[9], and Park[10] used the reconstructed test tool by Chung [11].

2-3-2. Major satisfaction

The major achievement tools were the tools of Brakamp, Wise & Hengstler[4] developed by the University of Illinois and modified by Kim & Ha (2000)

2-4. Statistical analysis

The collected data were analyzed using SPSS 18.0. The characteristics of the participants were analyzed by frequency analysis and descriptive statistics, and the difference of major satisfaction according to the characteristics of the participants was analyzed using t-test and ANOVA, Scheffe's test was used for post test. Pearson correlation coefficient was used to correlate the characteristics of the participants with the major satisfaction. The hierarchical regression analysis was conducted to find out the factors that have the greatest effect on the satisfaction of the major.

3. Result

3-1. General characteristics

The frequency characteristics of participants were analyzed. A total of 235 subjects were studied, 129 of them (54.9%) in A(located in J do) university, and 106 (45.1%) in B(located in C do) university participated in the study. By grade, the second highest grade was 37.4%, followed by 36.6% in fourth grade, 15.3% in first grade, and 10.6% in third grade. By age, 119 (50.6%) were the most frequent among 21-22, 46 (19.6%) were below 20, 61 (26.0%) were 23-24, , And 2 (0.9%) over 27 years of age. By type of residence, 92 persons (39.1%) were traced, 74 persons (31.5%) were attending school, 67 people (28.5%) were dormitories, and 2 persons (0.9%) were others. The highest number of students who answered "no" in religion was 147 (62.6%), followed by protestants 44 (18.7%), Buddhism 9 (8.1%), others 15 (6.4%), 10 (4.3%), and Buddhism 9 (8.1%). As a result of research on pocket money to be used in a month, 11 (47.2%) of pocket money with a monthly allowance of 300,000 won or more was found. The next number was the allowance of 260,000 won-300,000 won for 40 (17.0%), 160,000 won -20,000 won for 30 (12.8%), 210,000 won for

250,000 won for 21 (8.9%) and 60,000 won- 19 (8.1%), 10 (4.3%) less than 50,000 won, and 4 (1.7%) between 110,000 and 150,000 won.

3-2. Difference of major satisfaction according to participants' characteristics

The characteristics of the major satisfaction were compared and analyzed. The average satisfaction level of university B was 3.77, which was significantly higher than that of university B (3.44) ($p < .01$). According to the analysis by age, there was no difference in satisfaction with department by age. According to the analysis by religion, the highest score was 3.65, followed by Catholic 3.62, Protestant 3.59, Buddhist 3.56, and other religions 3.02 ($P < .01$). The result of analysis by residence type showed no meaning. The results of analysis by allowance spent for one month also showed no meaning. Empathy was categorized into cognitive empathy and emotional empathy. The students with the highest satisfaction level of cognitive empathy were 4.01-4.50 score, and the mean was 4.00 ($p < .01$), In the following cases, it was 3.83 points higher than 4.51 and 3.67 higher than 3.60-4.00, 3.56 points between 3.51 and 3.59, 3.56 points between 3.51 and 3.59, 3.49 points between 3.01 and 3.05, and 3.15 points below 3 points $p < .01$). The emotional empathy was the highest with 4.51 points ($p < .01$), followed by 3.51-3.59 points (3.76), 4.01-4.50 (3.65), 3.60-4.00 (3.64) (3.53) and 3.01-3.50 (3.41), respectively ($p < .01$).

Table 1. General characteristics

(N=235)							
Char.	Category	N	%	Char.	Category	N	%
University	A	129	54.9	Residence type	Commute	74	31.5
	B	106	45.1		Dormitory	67	28.5
					Self living	92	39.1
	Others	2	0.9				
Grade	1	36	15.3	Religion	Protestant	44	18.7
	2	88	37.4		Catholic	10	4.3
	3	25	10.6		Buddhism	9	8.1
	4	86	36.6		Others	15	6.4
					None	147	62.6
Age	20↓	46	19.6	Money allowance per month	50↓	10	4.3
	21-22	119	50.6		60-100	19	8.1
	23-24	61	26.0		110-150	4	1.7
					160-200	30	12.8

				210-250	21	8.9
	25-26	7	3.0	260-300	40	17.0
	27↑	2	0.9	300↑	111	47.2

Table 2. Difference of major satisfaction according to participants' characteristics

(N=235)

Dependent variable	Independent variables	Category	Mean	SD	F/t (p)
Major Satisfaction	University	A	3.44	.51	28.538 (.000)**
		B	3.77	.45	
	Age	20↓	3.67	.35	2.098 (.082)
		21-22	3.57	.52	
		23-24	3.59	.55	
		25-26	3.25	.83	
		27↑	4.31	.3	
	Grade	1	3.83	.30	13.405 (.000)**
		2	3.72	.47	
		3	3.16	.30	
		4	3.47	.57	
	Religion	Protestant	3.59	.44	5.575 (.000)**
		Catholic	3.62	.82	
		Buddhism	3.56	.52	
		Others	3.02	.14	
		None	3.65	.50	
	Residence type	Commute	3.50	.53	2.124 (.098)
		Dormitory	3.57	.46	
		Self living	3.68	.52	
		Others	2.00	3.15	
Money allowance per month (1,000)	50↓	3.75	.38	1.249 (.282)	
	60-100	3.43	.26		
	110-150	3.62	.34		
	160-200	3.65	.44		
	210-250	3.40	.65		

	260-300	3.54	.48	
	300↑	3.64	.55	
	3.00↓	3.15	.41	
	3.01-3.50	3.49	.45	
Cognitive Empathy	3.51-3.59	3.56	.43	7.977 (.000)**
	3.60-4.00	3.67	.53	
	4.01-4.50	4.00	.38	
	4.51↑	3.83	.08	
	3.00↓	3.53	.51	
	3.01-3.50	3.41	.56	
Emotional Empathy	3.51-3.59	3.76	.65	3.624 (.004)**
	3.60-4.00	3.64	.44	
	4.01-4.50	3.65	.50	
	4.51↑	4.01	.42	

**p<.01, *p<.05

3-3. The effect on major satisfaction according to participants' characteristics

The mean difference in major satisfaction was chosen as the significant variable. Multiple regression analysis was performed to determine the cause and effect of the selected variables (Table 3). The analysis of variance was conducted to examine the effect of the participants on the satisfaction of the students. As a result of the analysis of variance, the p value is 0.00, which is less than 0.05, so this regression equation is suitable for analysis. The Durbin-Watson value is 1.956, which is close to 2, so it is interpreted as having no correlation with residuals. It is interpreted that Multi-collinearity occurs when the tolerance limit is less than 0.1 or the VIF value is more than 10.0,, In this analysis, it is not applicable, so it is interpreted that there is no problem in Multi-collinearity. Based on these results, multiple regression analysis showed that 5 independent variables had a 30.1% (R^2) effect on the dependent variable, majors' satisfaction.

Table 3. The effect on major satisfaction according to participants' characteristics

(N=235)

Independent variables	Non-standardization factor		β	T	p	Tolerance Limit
	B	SE				
Constant	2.808	.167	-	16.823	.000	
Univ. type	.336	.058	.325	5.810	.000**	.983
Grade	-.105	.026	-.230	-4.096	.000**	.977
Religion	.013	.018	.041	.738	.461	.995
Cognitive empathy	.120	.027	.287	4.449	.000**	.738
Emotional empathy	.042	.025	.108	1.677	.095	.977

$R^2=.301$, Modified $R^2=.286$, $F=19.564$, $p=.000$, Durbin-Watson=1.956

Dependent variable : Major satisfaction * . $p<.05$, ** . $p<.01$

3-4. Hierarchical regression analysis that affects major satisfaction

In order to determine which variables have the greatest effect on major satisfaction, hierarchical multiple regression analysis was performed (Table 4). The variance analysis showed that the p value was 0.00 and less than 0.05, so this regression equation was suitable for analysis. The Durbin-watson value is 1.956, which is close to 2, so it is interpreted that there is no correlation for residuals. It is interpreted that multi-collinearity occurs when the tolerance limit is less than 0.1 or the VIF value is more than 10.0, in this analysis, it is not applicable, so it is interpreted that there is no problem in multi-collinearity. As a result of hierarchical regression analysis based on these results, it was found that factors affecting the major of the majors were the university type ($\beta = .325$, $P <.01$). Second, cognitive empathy influenced ($\beta = .287$, $P <.01$), followed by grade level negative ($\beta = -.230$, $P <.01$).

Table 4. Hierarchical regression analysis that affects major satisfaction.

(N=235)

Model	Non-standard factor		Standard factor	t	p	Tolerance limit	Statistic
	B	SE	β				
Constant	3.095	.098	-	31.535	.000	-	$R^2=.108$, modified $R^2=.104$, $F=28.000$, $p=.000$
Univ. type	.340	.064	.329	5.291	.000	1.000	
Constant	3.029	.127	-	23.850	.000	-	$R^2=.111$, modified $R^2=.103$, $F=14.324$, $p=.000$
Univ. type	.341	.064	.330	5.305	.000**	.999	
Religion	.017	.020	.052	.829	.408	.999	
Constant	3.392	.149	-	22.777	.000	-	$R^2=.177$, modified $R^2=.166$, $F=16.392$, $p=.000$
Univ. type	.320	.062	.310	5.156	.000**	.994	
Religion	.013	.019	.039	.646	.519	.997	
Grade	-.118	.028	-.258	-4.286	.000**	.992	
Constant	2.882	.162	-	17.836	.000**	-	$R^2=.292$, modified $R^2=.280$, $F=23.564$, $p=.000$
Univ. type	.326	.058	.315	5.644	.000**	.993	
Religion	.014	.018	.045	.803	.423	.997	
Grade	-.102	.026	-.223	-5.973	.000**	.982	
Cognitive empathy	.143	.023	.342	6.106	.000**	.990	

Constant							
Univ. type	2.808	.167	-	16.823	.000	-	
Religion	.336	.058	.325	5.810	.000**	.983	R ² =.301, modified
Grade	.013	.018	.041	.738	.461	.995	R ² =.286,
Cognitive empathy	-.105	.026	-.230	-4.096	.000**	.977	F=19.564, p=.000,
Emotional empathy	.120	.027	.287	4.449	.000**	.738	Durbin-Watson=1.956
	.042	.025	.108	1.677	.095	.738	

Dependent variable : Major satisfaction *p<.05, ** P<.01

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