



# The Open Public Health Journal

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## RESEARCH ARTICLE

### Factors Related to Nursing Students' Career Preparation Activities

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#### Abstract:

#### Introduction:

The purpose of this study was to identify career preparation activities among nursing students.

#### Methods:

The study was designed as a descriptive study. Typically, 353 nursing students in the second and third year of the program who were living in D city were included in the study.

#### Results:

There were statistically significant differences in career preparation activities with respect to self-reported career aptitude, satisfaction with the nursing school, university life satisfaction, and motivation to study nursing. The variables that affected the students' career preparation activities were identified as career satisfaction and career search efficacy.

#### Conclusion:

Based on the outcomes of the present study, it is considered necessary to develop customized programs to identify the obstacles confronted by students in the process of career preparation activities and ways to overcome them.

**Keywords:** Nursing students, Career preparation, Career aptitude, Satisfaction, Motivation, Obstacles.

#### Article History

Received: March 25, 2019

Revised: April 11, 2019

Accepted: April 15, 2019

## 1. INTRODUCTION

The competition rate of four-year college nursing schools is 10.4:1 on an average and ranks eighth among all four-year colleges in Korea. A full-time employment rate of 91.9% has been reported for nursing schools with the first rank amongst all four-year colleges and 89.5% has been reported for vocational colleges [1]. The rate of passing the national nurses' examination in 2016 was 93.8% and the average passing rate for the past two or three years has been over 94%, indicating that most of the students passed the exam successfully. Apparently, most of the students begin working in the nursing field right after graduation. However, along with the high employment rate, the turnover rate among nurses is also high; in 2014, the rate was 13.9% compared with 2.16% for other health occupations [2]. In particular, the turnover rate of new nurses within one year after graduation was 30%. Considering

the fact that maladjustment accounted for 12.4% of the reasons for job turnover [2], it is presumed that employment right after graduation with insufficient preparation is the main reason for the high turnover rate. In contrast, the turnover rate for new nurses in other countries is 13.0% [3], indicating that nursing students in Korea need education and guidance to systematically plan their careers before they begin employment.

Korean nursing students tend not to think deeply about their careers because they have already committed to nursing as a career by enrolling in nursing school [4]. The concept of career preparation was proposed by Lee *et al.* [5] and it refers to the extent of effort people put forth to make correct career decisions and how faithfully they attempt to achieve their career goals. Lee and Lee reported that the greater the degree of career preparation, the higher the college students were satisfied with their first jobs [6]. With respect to nursing schools, it is inferred that the preparation for career development among students is insufficient as most of the students think that after entering into the field of nursing, they will start working in the general hospitals in Korea and do not

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concentrate on other career options. Only a few who wish to work overseas become active in career preparation compared with nursing students who want to work in Korea [7]. A majority of students start working after graduation without sufficiently exploring career options, which result in less satisfaction with nursing work and higher turnover intentions [8, 9]. In addition, nursing professors deliver information on nursing employment from medical institutions such as hospitals rather than providing more systematic guidance on career and life [8, 10]. Currently, the nursing departments of Korean colleges are validating their education programs by introducing a certification system, and the Korean Accreditation Board of Nursing Education [11], which is in charge of evaluating the certification system, also requires that career adaptation programs should be operated systematically.

As the high turnover rate of nurses has become a social issue, a number of related studies have been carried out. Researchers reported their findings on major aspects of career preparation such as career satisfaction, career search efficacy, the nursing professional perspective, and career identity [4, 11, 12]. The imperative findings revealed that with greater career search efficacy, students showed stronger career identities, more career search activities, and stronger career adaptation [7]. In addition, Jung, Jeong, and Yoo [13] reported career satisfaction as a factor affecting career identity, which shows that each study has different variables. The purpose of this study is to provide basic data for developing a career preparation program that can improve job adaptation among nurses and reduce the turnover rate by analyzing the relationships between the variables that affect career preparation activities.

## 2. METHODOLOGY

### 2.1. Participants and Data Collection

Undergraduates in the Chungcheong area were enrolled as the study subjects. Initially, 370 subjects were selected based on their understanding of the contents of the questionnaire and agreement to participate voluntarily. Inappropriate responders were excluded, resulting in a final total of 353 subjects (95%). Based on G\*Power statistical software and the t-test standard, 120 was the suggested sample size to maintain the significance level (0.05), effect size (0.25), and statistical power (0.8).

### 2.2. Instrumentation

Satisfaction with nursing as a major was measured with 19 items rated on a five-point Likert scale that was revised from a program evaluation survey questionnaire developed by Illinois college. Higher scores reflected greater satisfaction with nursing and the Cronbach's alpha was 0.890.

### 2.3. Career Search Efficacy

Career search efficacy was measured using 20 five-point Likert-scale items that were revised from the career search efficacy scale developed by Solberg *et al.* [14] and then modified with tools developed by Choi [15]. The higher the score, the higher the career search efficacy and the Cronbach's alpha was 0.920.

### 2.4. Professional Nursing Value

How the students valued the nursing profession was measured with 25 items rated on a five-point Likert scale developed by Yeun *et al.* [16]; the higher the score, the more positive the student's nursing professional perspective. Cronbach's alpha was 0.761.

### 2.5. Career Preparation Activities

The students' career preparation activities were measured using 14 items, also rated on a five-point Likert scale, that were revised from tools developed by Kim [17]. The higher the score, the greater the number of career preparation activities, and Cronbach's alpha was 0.826.

### 2.6. Data Analysis

For general characteristics, occurrence and percentage were measured using descriptive statistics, while the multiple regression was used to investigate the factors related to nursing students' career preparation activities. For the result of the two-sided test and ANOVA & Scheffe's test,  $p < 0.05$  was set as statistically significant. SPSS ver. 22.0 was used.

### 2.7. Ethical Considerations

The self-rated questionnaire was distributed only to the subjects who listened to the explanation of the need for research and voluntarily agreed to participate in the study. In addition, the students were explained that their responses could be interrupted even in the middle of the survey.

## 3. RESULTS

### 3.1. General Characteristics of the Respondents

Amongst the students who completed the questionnaires, 90.1% were female and their median age was 21.05 ( $\pm 3.38$ ) years. Based on the school year, 39.9% were in the first year, 30.6% were in the second year, and 29.5% were in the third year. More than half of the students (58.1%) answered that nursing was suitable for their aptitude, 56.1% were satisfied with the nursing course, and 31.7% were satisfied with their school. Majority of the students provided a positive answer rather than negative or neutral response.

The students' biggest worries were about employment (41.6%), personal finance (26.3%), and aptitude (17.0%). Their motives for applying to the nursing school were aptitude (37.1%), employment (30.6%), a recommendation from an acquaintance (25.2%), and individual grade records (3.7%). Most of the respondents (89%) answered yes to the question of whether they wanted to continue working as nurses after graduation, and they wanted to work as nurses for 6.75 years.

Gender differences ( $t = -.551$ ,  $p = .585$ ), age ( $t = 0.776$ ,  $p = .466$ ), grade ( $t = 1.261$ ,  $p = .285$ ), religion ( $t = 0.124$ ,  $p = .946$ ), current difficulties ( $F = 1.068$ ,  $p = .378$ ), or willingness to continue working as a nurse ( $t = 1.294$ ,  $p = .196$ ) had no influence on the career preparation activities. On the contrary,

Table 1. General characteristics of the respondents.

Categories	Classifications	N(%)	CPA <sup>1</sup>	t/F	p	Scheffe's Test
			Mean(S.D)			
Sex	Male	35(9.9)	2.86(0.72)	-0.551	0.585	
	Female	318(90.1)	2.92(0.54)			
Age (years)	18-20	205(58.1)	2.89(0.55)	0.776	0.466	
	21-25	120(34.0)	2.93(0.56)			
	26-51	28(7.9)	3.03(0.66)			
	Mean(S.D)		21.05(3.38)			
Year	Freshman	141(39.9)	2.92(0.56)	1.261	0.285	
	Sophomore	108(30.6)	2.86(0.54)			
	Junior	10(29.5)	2.98(0.60)			
Religion	None <sup>A</sup>	187(53.0)	2.91(0.58)	0.124	0.946	
	Christianity <sup>B</sup>	104(29.5)	2.93(0.56)			
	Catholicism <sup>C</sup>	37(10.5)	2.96(0.56)			
	Buddhism <sup>D</sup>	25(7.1)	2.88(0.47)			
Aptitude for nursing	Inconsistent <sup>A</sup>	24(6.8)	2.52(0.59)	14.282	<.001	A<C**
	Indifferent <sup>B</sup>	124(35.1)	2.80(0.55)			B<C**
	Consistent <sup>C</sup>	205(58.1)	3.04(0.54)			
Satisfaction with nursing	Unsatisfactory <sup>A</sup>	37(10.5)	2.62(0.60)	12.793	<.001	A<C**
	So-so <sup>B</sup>	118(33.4)	2.81(0.53)			B<C**
	Satisfactory <sup>C</sup>	198(56.1)	3.04(0.55)			
Current	Aptitude related	60(17.0)	2.77(0.59)	1.068	0.378	
Difficulties	Economic state	93(26.3)	2.97(0.52)			
	Disease in family	6(1.7)	2.88(0.71)			
	The difference of opinion with parents	4(1.1)	3.05(0.70)			
	Career related	147(41.6)	2.94(0.56)			
	Other	43(12.2)	2.92(0.62)			
Satisfaction with university	Unsatisfactory <sup>A</sup>	80(22.7)	2.75(0.55)	8.612	<.001	A<C**
	So-so <sup>B</sup>	161(45.6)	2.89(0.52)			B<C*
	Satisfactory <sup>C</sup>	112(31.7)	3.09(0.59)			
Certification	Yes	57(16.1)	3.14(0.52)	3.24	0.001	
	None	296(83.9)	2.88(0.56)			
Reason for studying nursing	Consistent with aptitude <sup>A</sup>	131(37.1)	3.07(0.56)	4.495	0.001	A>B*
	Recommendation from others <sup>B</sup>	89(25.2)	2.82(0.53)			A>C*
	For employment <sup>C</sup>	108(30.6)	2.85(0.52)			A>D*
	Based on SAT score <sup>D</sup>	13(3.7)	2.60(0.66)			
	Other <sup>E</sup>	12(3.4)	2.98(0.84)			
Intention to continue working as a nurse	Yes	314(89.0)	2.93(0.56)	1.294	0.196	
	No	39(11.0)	2.81(0.58)			
Planned length of time to continue working as a nurse				Mean(S.D)	6.75(7.35)	

Note 1.  $p < 0.05^*$ ,  $p < 0.01^{**}$

Note 2. †In Levene's homogeneity of variance test,  $p = .016$  is not assumed. All other variables are  $p > .05$  assuming equidistribution

statistically significant differences were observed in aptitude for nursing, satisfaction with nursing, satisfaction with college, relevant qualifications, and motivation for applying to be a nurse. The results indicated that students who answered that their aptitude for nursing was suitably engaged in more career preparation activities compared to students who answered that they were not fit or did not have a nursing inclination, and a

similar pattern was observed in case of students who answered that they were satisfied with their nursing major and university. In addition, students who were motivated by their aptitude for nursing reported more career preparation activities compared to students who chose nursing for other reasons (Table 1).

### 3.2. PN, CPA, CSE, and SNM<sup>2</sup> of Nursing Students

The nursing students' career preparation activities averaged 2.92 ( $\pm 0.56$ ) out of 5; the value of the nursing profession averaged 3.87 ( $\pm 0.43$ ), average career satisfaction was 3.76,

<sup>1</sup> CPA(Career preparation Activity)

<sup>2</sup> PNV(Professional Nursing Value), CPA(Career Preparation Activities), CSE(Career Search Efficacy), SNM(Satisfaction with the Nursing Major)

and average career search efficacy was 3.41 (±0.49). Professional value and career satisfaction were positively over three neutral points, whereas career preparation activities were slightly below three points. Career search efficacy was higher than the career preparation activities by more than three points, signifying that although students were not preparing for their careers, they were confident in their searching. Some students had strong negative responses for professional value, career search efficacy, and career satisfaction, which were negative in skewness. However, some students had strong positive responses for career preparation activities, which was positive in skewness. The results showed great symmetry because the absolute value was not high. The kurtosis was flat at 3 or less, and the differences between students were not large (Table 2).

**Table 2. PNV, CPA, CSE, and SNM of nursing students.**

	Mean	S.D	Skewness	Kurtosis	Max	Min
PNV	3.87	0.43	-0.44	1.248	2.5	4.96
CPA	2.92	0.56	0.047	0.178	1.07	4.57
CSE	3.41	0.49	-0.174	0.683	1.3	5
SNM	3.76	0.43	-0.034	-0.421	2.58	5

**Note 1.** SNM: satisfaction with a nursing major, CSE: career search efficacy, PNV: professional nursing value, CPA: career preparation activities

**Note 2.** Each item was rated on a 5-point Likert scale: 1=Absolutely no, 2=No, 3=So-so, 4=Yes, 5=Absolutely yes.

**3.3. Factors Related to Career Preparation Activities**

The variables that affected career preparation activities were career search efficacy and career satisfaction; these two explained 21.2% of career preparation activities. The model was significant and the Durbin-Watson result was 1.997, indicating no autocorrelation (Table 3).

**4. DISCUSSION**

The subjects of this study included 90.1% female and 10% male students, and their proportions reflected the characteristics of nursing schools in Korea; the students were evenly distributed across all three school years. The students' career satisfaction was 3.76 out of 5, slightly higher than the values reported by Jung *et al.* [13] (3.56) and Kim and Lee [18] (3.64). The students' value of the nursing profession was 3.88 out of 5, higher than the average (3.83) reported in the study of Seong, Yeom, and Do [19], which is similar to the results of this study. Career search efficacy was also above the average reported value. This means that students who are admitted to

the Department of Nursing are proud of the job of being a nurse.

In contrast, students in this study rated their career preparation activities as 2.92 points out of 5, contrary to 2.51 reported by Jang [20] using the same tool. The college nursing students judged their nursing departments to be more than satisfactory, and their value of nursing as a professional career and of nurses was also high. However, there exists a need for a program that presents and guides students in specific types of career preparation activities because the students reported confidence in their career searches but not actual career preparation activities.

The general characteristics of the subjects that influenced their career preparation activities were an aptitude for nursing, satisfaction with nursing, satisfaction with college, possessing related qualifications, the motivation for nursing, and support, and significant differences were observed in career preparation activities. In contrast, gender, age, grade, and religion did not significantly affect career preparation activities in this study. Jirwe and Rudman [21] reported that students' concerns and interests were high in research on the motivation to study nursing, suggesting that students' autonomous selection of this career would reduce turnover rates. In other words, a variety of career aptitude guides are needed to ensure that students do not choose a nursing school based only on consideration of practical reasons such as high employment opportunities.

In foreign countries, the importance of the career decision is recognized from childhood, and a variety of job opportunities are available. Korea is attempting to make a positive change that will provide students with opportunities to explore their careers and find their aptitude by running a free school system beginning in middle school. These opportunities are desirable as they will allow students to pursue specific career paths through universities. In previous studies in Korea, Go & Kim [7] showed differences in career preparation activities based on gender, and Jang [20] found differences based on grade; thus, repeated research considering different variables is necessary.

The most significant influence on the nursing students' influencing career preparation activities was career satisfaction. A study by Park [12] confirmed that university department satisfaction significantly influenced career preparation activities, and Seong *et al.* [19] found that nursing professional perspective had a significant effect on career preparation acti-

**Table 3. Factors related to career preparation activities.**

	$\beta$	t	p	Confidence Interval		
– (Constant)		2.559	0.011	0.197	1.52	
Professional Nursing Value	-0.084	-1.184	0.238	-0.241	0.06	
Career Search Efficacy	0.274	3.514	0.001	0.143	0.507	
Satisfaction with Nursing Major	0.266	3.248	0.001	0.134	0.548	
Reason for studying nursing <sup>†</sup>	Recommendation from others	-0.01	-0.154	0.878	-0.146	0.125
	Based on SAT score	-0.067	-1.042	0.299	-0.426	0.131
F=10.988 p<0.001, R2=0.212, Durbin-Watson=1.997				–	–	

**Note 1.** †Reason for studying nursing was compared with "consistent with aptitude."

**Note 2.** SAT: scholastic ability test.

The Durbin-Watson test result of 1.997 indicated no autocorrelation

vities, similar to the results of this study. It can be interpreted that university students who are satisfied with nursing and have a sense of efficacy in their career searches are good at career preparation activities. Therefore, it is necessary to prepare career guidance plans. Therefore, in addition to theoretical knowledge, students need specific guidance and guidance to actually act.

If high school is an important phase of life to choose a field that suits one's aptitude, then college is the real time to design one's life and prepare for that field as a career and a profession. Therefore, prior to graduation, it is necessary to guide nursing students in preparing roadmaps for their future career paths and view their careers from a long-term perspective. Park [22] proposed a discipline-based career course to reduce occupational barriers and improve occupational readiness and job search efficacy. To overcome obstacles, student-tailored programs need to be actively researched and applied. Currently, nursing colleges in Korea are required to offer follow-up services after graduation along with employment guidance and preparation for the national examination, and provision of these services is evaluated as an item for nursing school certification. In accordance with these changes, each school and department needs to plan a career preparation action program in order to find a strategy to overcome the obstacles of career preparation through a diagnostic process.

## CONCLUSION

The present study is a descriptive correlation study on the effects of college nursing students' career satisfaction, career search efficacy, and nursing professional perspective on the students' career preparation activities. Data were collected from 505 nursing students using structured questionnaires from 19<sup>th</sup> to 26<sup>th</sup> November 2015.

The study results are summarized as follows: There were statistically significant differences in career preparation activities based on self-reported career aptitude, satisfaction with nursing school, university life satisfaction, and motivation to study nursing. The variables that affected the students' career preparation activities were found to be career satisfaction and career search efficacy. Based on the results of this study, the following suggestions are made.

Firstly, because the motivation to choose nursing and satisfaction with the nursing school were found to be the factors that affected career preparation activities, it is necessary that middle and high school education policies should introduce nursing with reference to career search programs that will suit the aptitude and interest of students.

Secondly, because nursing students' career satisfaction, professional perspective, and career search efficacy were above the average, and career satisfaction and career search efficacy were significant explanatory variables in career preparation activities, it is necessary to develop customized programs to identify the obstacles confronted by students in career preparation activities and strategies to overcome them.

## ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

## HUMAN AND ANIMAL RIGHTS

No animals/humans were used for studies that are the basis of this research.

## CONSENT FOR PUBLICATION

Informed consent was obtained from all the participants prior to data collection.

## AVAILABILITY OF DATA AND MATERIALS

The author confirms that the data supporting the findings of this research are available within the article and its supplementary materials.

## FUNDING

None.

## CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

## ACKNOWLEDGEMENTS

Declared none.

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