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Satisfaction of Major and Self-Efficacy of Nursing Students According to Career Preparation Activities

Joohyun LEE¹

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Abstract

This study investigated nursing students' major satisfaction and self-efficacy in relation to career preparation activities during high school. Career preparation activities included career education, counseling, club activities, and volunteer activities. The subjects were 246 nursing students from G and C Province and Seoul. The data were collected from 10 July to 16 August 2018 using a structured questionnaire. SPSS 21.0 program was used for data analysis with frequency and percentage, t-test, ANOVA, and Scheffé test. The results showed that there were significant differences in major satisfaction and self-efficacy according to subjects' age, gender, and grade. Subjects who had chosen their major themselves or who had experienced career education and guidance during high school also had higher levels of major satisfaction and self-efficacy. Subjects who participated in club activities during high school showed higher self-efficacy, and subjects who performed volunteer activities showed higher satisfaction with their major. In conclusion, since various career preparation activities during high school seem to be closely related to major contentment and self-efficacy among nursing students, it would be necessary to allow high school students to explore their interested major in a variety of ways, including education, counseling, club activities, and volunteer work.

Keywords: Nursing Student, Satisfaction of Major, Self-Efficacy, Career Preparation Activity

Major Classifications: Health general, Health other, Nursing and Mental Health

1. Introduction

Career preparation activities in high school are of significant importances and exert a considerable influence on career decisions (Jang & Mok, 2011). The career preparation activities undertaken in high school typically encompass career education, career counseling, participation in extra-curricular activities and volunteer work. Career education is designed to facilitate an

understanding of the rationale behind pursuing higher education and to provide guidance on the most appropriate course of study, based on the individual's aptitudes, interests and aspirations (Choi & Shin, 2016). The object of career counseling provided by teachers or professional career development centers is to assist high school students in making informed career decisions and in identifying their personal characteristics in order to facilitate the selection of an appropriate career path. Extracurricular activities can be

¹ First Author. Ph.D. RN, College of Nursing, Associate Professor, Eulji University Seongnam Campus, Republic of Korea. Email: leejoohyun@eulji.ac.kr

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implemented as career preparation activities during high school, allowing students to explore their career path independently, discover their interests and aptitudes, and gain skills and knowledge that can be utilized in future careers (Kim & Kim, 2013).

Through these activities, high school students gain an understanding of self, which can subsequently lead to enhanced career awareness, rational decision-making, and experiential competence. This, in turn, can improve self-efficacy (Shin et al., 2016). It has been reported that the attitude of high school students towards volunteering has a significant impact on their career decisions at university (Kim & Kim, 2013). Furthermore, volunteering can assist students in acquiring information about their future, developing the skills and attitudes required for professional activities, and increasing their self-efficacy (Ryu, 2015).

The decision of which college major to pursue represents a significant challenge for many high school students. In the absence of accurate information and guidance regarding academic options, this choice can impede the formation of a coherent career identity, leading to elevated stress levels and potential difficulties in adapting to and thriving in the college (Cho, 2014). Nevertheless, upon entering college, Korean high school students continue to prioritize entrance examination scores, employment rate, and recommendations from others in their decision-making process regarding a major (Kim et al., 2016). For nursing students, whose career direction is determined from the time they enter college, it is particularly important to have sufficient time to explore their aptitudes and interests in high school, as they lack the opportunity to explore their career and major during college. This study aimed to explore the effect of nursing-related career education, career counseling, extracurricular activities, and volunteering during high school on the satisfaction of nursing majors and the self-efficacy of nursing students.

2. Literature Review

It has been reported that the experience of career counseling in high school is significantly correlated with subsequent satisfaction with one's chosen major (Kim et al., 2016). Additionally, the self-efficacy of students who received group counseling related to career decision-making was found to be significantly higher than that of students who did not have access to career counseling (Kim & Kim, 2013). College students' satisfaction with their chosen majors is closely linked to their subsequent career decisions upon graduation (Cho, 2014). Furthermore, nursing students' satisfaction with their major is associated with their values regarding the nursing profession, which may shape the beliefs and attitudes necessary for future nursing practice (Barron et al., 2007). A discrepancy between a student's

distinctive personality characteristics and their chosen major can result in diminished levels of satisfaction with the major, a loss of interest in learning, and an inability to adapt to the demands of college life (Kim et al., 2016). Nevertheless, a considerable number of nursing students have selected this field of study due to the high job placement rates, entrance exam scores, or recommendations from others, rather than their own aptitude and interest. The decision to pursue a particular major without sufficient consideration of future aspirations and the potential implications for one's career can result in a lack of satisfaction with the chosen path (Ko et al., 2011). This is particularly pertinent for nursing students, who often have limited opportunities to distinguish between their career aspirations and their academic major, as the direction of their career is largely predetermined from the time which they enter university (Yang et al., 2012). Consequently, it is crucial for individuals considering a nursing major to engage in self-exploration and identify their aptitudes and interests during their high school years.

In comparison to other academic disciplines, the nursing curriculum places greater emphasis on the acquisition of professional knowledge. Consequently, the stress levels experienced by nursing students undertaking hospital clinical practice and national examinations are significantly elevated. In such challenging circumstances, individuals with high self-efficacy tend to possess robust belief about their capacity to organize and execute goals and courses of action in each task, and to hold these beliefs firmly (Kim & Lee, 2014). It can therefore be expected that nursing students with high self-efficacy will be able to cope well with stressful situations during their studies and perform well in their assignments (Choi et al., 2009). The self-efficacy of an individual is significantly influenced by the successes and failures encountered during their previous life experiences. Adolescence can be a period characterized by low self-efficacy due to difficulties in forming relationships with others, challenges in social interactions, failure in tasks, and confusion regarding values (Jang & Mok, 2011). Consequently, the adequacy of career preparation activities to successfully select a major can also impact self-efficacy.

3. Research Methods and Materials

3.1. Study Design

This descriptive survey study aimed to compare the self-efficacy and major satisfaction of nursing students who had engaged in career preparation activities during high school with those who had not.

3.2. Subjects and Data Collection

In this study, a total of 280 university students enrolled

in nursing programs in Gyeonggi-do, Chungcheong-do, and Seoul were asked to complete an online survey. A total of 255 students responded to the questionnaire. Following the exclusion of nine respondents with more than 25% of their data missing, the remaining 246 survey responses were subjected to analysis. The survey was conducted between July 10 to August 16, 2018, with each respondent requiring approximately 20 minutes to complete the questionnaire.

3.3. Ethical Consideration

Prior to the commencement of data collection, the purpose and objectives of the study were fully explained, the anonymity of the subjects was guaranteed, and the consent form was signed online. The authors clarified that the personal information used in this study would solely be employed for research purposes and would be entirely anonymous and confidential. Additionally, it was emphasized that the data would be irrevocably destroyed upon the conclusion of the study, and that there would be no penalty for not participating in the study. If the subjects agreed, they were asked to sign and proceed with the survey.

3.4. Research Tools

3.4.1. Career Preparation Activities

In order to investigate the contents of high school students' career preparation activities, four types of career preparation activities were set based on previous literature (Jang & Lee, 2015; Jang & Mok, 2011; Ryu, 2015). These were nursing-related career education experience, career counseling experience, club activity experience, and volunteer service experience. The number of items for each type was limited to five, and respondents were permitted to provide multiple responses in the detailed activity content, assuming that they had engaged in multiple activities. Respondents were instructed to indicate whether they had experience in career activities by selecting 'yes' (1 point) or 'no' (0 point), and the proportion of each response was calculated.

To ascertain the respondents' experiences of career education, five questions were posed. There were as to the extent of participation in career education, the experience of undertaking career-related tests (including aptitude and interest tests), the experience of listening to career-related lectures, the experience of receiving guidance from the school or department, and the experience of participating in work experience programs. With regard to career counseling experiences, respondents were asked whether they had participated in career counseling, received career counseling from a high school teacher, a professional in the nursing field, a senior college student majoring in nursing, or visited a vocational skill development center or other counseling

organization. Regarding extracurricular activities, respondents were invited to indicate whether they were engaged in such activities, the type of extracurricular activities, the duration of their involvement, the frequency of participation, and the contents of the activities. With respect to volunteer experience, respondents were asked to confirm whether they had engaged in volunteer work, the length of their involvement, the type of volunteer activity, the number of hours devoted to volunteering, and the area of volunteer activity.

3.4.2. Satisfaction of Major

To measure satisfaction with the nursing major, we employed the Major Satisfaction Scale questionnaire, which was adapted and supplemented by Song (2014) from the questionnaire of Ha (1999). In this study, the term 'major department' was modified to 'nursing department' in the questionnaire. The instrument comprised 22 items and encompasses four sub-factors: general satisfaction, course satisfaction, relationship satisfaction, and recognition satisfaction. The items were responded to on a five-point Likert scale, ranging from 'not at all' to 'very much'. The total score ranges from 22 to 110 points, with higher scores indicating higher satisfaction with the major. The reliability, as indicated by Cronbach's alpha was .91 for the scale development, and .87 for the overall scale in this study. The sub-factor reliability was .87 for general satisfaction, .73 for course satisfaction, .67 for relationship satisfaction, and .81 for perceived satisfaction.

3.4.3. Self-Efficacy

The self-efficacy scale, originally developed by Sherer et al. (1982) and subsequently modified and supplemented by Hong (1995), was employed to assess the self-efficacy of nursing students. The scale comprises 23 items, 17 of which pertain to general self-efficacy and 6 to social self-efficacy. The items were responded to on a 5-point Likert scale, ranging from 'not at all' (1) to 'very much so' (5). The question statements comprised 10 positive and 13 negative statements, with the negative statements counted in reverse order when calculating the total score. The total score ranged from 23 to 115, with higher scores indicating higher self-efficacy. The reliability, as indicated by Cronbach's alpha, was .86 in Hong's study (1995) and .90 in the present study.

3.5. Data Analysis

The data obtained from the survey were analyzed using SPSS 21.0 statistical program. The general characteristics, career preparation activities, major satisfaction and self-efficacy of the subjects were analyzed using frequencies, percentages, means and standard deviations. The differences

between the general characteristics and self-efficacy of the subjects with and without career preparation activities were analyzed using t-test and ANOVA, and Scheffé test was used for post-hoc analysis.

4. Results and Discussion

4.1. General Characteristics of the Subjects

A total of 246 participants were included in the study, of whom 217 (88.2%) were female students with a mean age of 20.21 ± 1.73 years. Among the participants, 91 (37.0%) were sophomores, 80 (32.5%) were freshmen, and 75 (30.5%) were juniors. Regarding the type of college admissions, 82 (33.3%) were admitted via regular decision (Korean SAT). 84 (34.1%) were admitted via early decision (college-specific academic competence test), while 64 (26%) were admitted via early decision (general test). In terms of the students' prior semester GPA, 116 (47.2%) reported a GPA of between 3.0 and 4.0, while 78 (31.7%) reported that they had not achieved a GPA in the previous semester as either a first-year student or a transfer student. Of the participants, 182 (74.0%) indicated that they had made the decision to pursue nursing independently, while 53 (21.6%) reported that they had done so with the input of their parents. 11 (4.4%) participants stated that they had made the decision with the input of friends or high school teachers (see Table 1).

Table 1: General Characteristics of the Participants (N=246)

Variables	Categories	N	%
Gender	Male	29	11.8
	Female	217	88.2
Age (year)	18	33	13.4
	19	62	25.2
	20	66	26.9
	21	50	20.3
	≥22	35	14.2
Grade	Freshman	80	32.5
	Sophomore	91	37.0
	Junior	75	30.5
Mode of college admission	Regular (Korean SAT)	82	33.3
	Early (general test)	64	26.0
	Early (admission officers)	8	3.3
	Early (university academic competency test)	84	34.1
	Early (others)	8	3.3

Past semester GPA	<3.00	27	11.0
	3.00-3.99	116	47.1
	≥4.00	25	10.2
	No grade	78	31.7
Decision-maker of nursing career	Self	182	74.0
	Parents	53	21.6
	Others (teachers, friends etc.)	11	4.4

Note: GPA=grade point average; SAT=the scholastic assessment test;

4.2. Career Preparation Activities, Satisfaction of Major, and Self-Efficacy of the Subjects

A total of 105 students participated in career education, with 103 (31.2%) taking career tests, 90 (27.3%) receiving guidance from schools and departments, and 72 (21.8%) listening to lectures. A total of 193 students engaged in career counseling. Of the participants, 179 students (58.3%) were counseled with high school teachers, followed by 59 (19.2%) who consulted with nursing professionals. Regarding extracurricular activities, a relatively modest number of students, 52 out of 246 participants engaged in extracurricular activities during high school. In terms of club activities, 38 students (27.5%) participated in subject-related knowledge acquisition activities, followed by 24 students (17.4%) in campaigns, and 22 students (16.0%) in industrial visits. With regard to volunteering, 84 students out of 246 participants reported that they had engaged in volunteer activities, predominantly in the form of individual activities. In terms of volunteer activities, 63 students (36.0%) engaged in activities for welfare facilities, 45 students (25.7%) for activities involving assistance to others, and 24 students (13.7%) for charitable activities (see Table 2).

Table 2: Type of Career Preparation Activities (N=246)

Variables	Categories	N	%
Career Education	Career test	103	31.2
	Listening lectures	72	21.8
	Receiving guidance from school or department	90	27.3
	Book reading program	33	10.0
	Participating in nursing clinical practice	32	9.7
Career Counseling	High school teachers	179	58.3
	Nurses	59	19.2
	Nursing students	42	13.7
	Career counseling center	27	8.8
Club activities	Participating in competition	15	11.5

	Campaigns	24	18.3
	Industrial visits	22	16.8
	Supplemental learning	12	9.2
	Mentoring with seniors	20	15.3
	Acquiring nursing-specific knowledge	38	29.0
Volunteer work	At welfare facilities	63	36.0
	At education facilities	22	12.6
	Helping various work	45	25.7
	Consolation activities	21	12.0
	Charitable relief activities	24	13.7

The total mean score for overall satisfaction with the subjects' majors was 81.53±10.70. The mean scores for the four subcategories of satisfaction were as follows: general satisfaction (25.63±4.29), course satisfaction (21.78±3.03), relationship satisfaction (13.72±2.37), and perception satisfaction (20.40±2.88). The total mean score for self-efficacy was 76.41±11.22, with a mean score of 56.77±8.95 for general self-efficacy and a mean score of 19.65±3.63 for social self-efficacy (see Table 3).

Table 3: Major Satisfaction and Self-Efficacy of Participants (N=246)

Variables	Categories	M±SD	Min.	Max.
Satisfaction of Major	General	25.63±4.29	9	35
	Course	21.78±3.03	12	30
	Relationship	13.72±2.37	6	20
	Perceived	20.40±2.88	10	25
	Total	81.53±10.70	42	108
Self-Efficacy	General	56.77±8.95	22	81
	Social	19.65±3.63	7	30
	Total	76.41±11.22	31	104

Note: M=mean; Max=maximum; Min.= minimum; SD=standard deviation

4.3. Satisfaction of Major and Self-Efficacy according to General Characteristics of the Participants

There was a significant difference in major satisfaction levels by age ($F=4.907, p<.001$), and post-hoc analysis revealed that individuals aged 21 exhibited a significantly lower level of major satisfaction compared to those in the 18-20 age range. Additionally, there was also a significant difference in major satisfaction based on grade level ($F=4.788, p=.009$), and post-hoc analysis revealed that third-year students were significantly less satisfied than first-year students. A significant difference in major

satisfaction was observed based on the previous semester's grade ($F=3.780, p=.011$). Students with a grade below 3.0 in the previous semester showed significantly lower major satisfaction than freshmen and transfer students. Students who were the primary selectors of their majors demonstrated significantly higher levels of satisfaction with their majors compared to those who did not play a primary role in selecting their major ($t=3.662, p<.001$). No significant differences in major satisfaction were observed based on gender or mode of college admissions (see Table 4).

A significant difference was observed in self-efficacy based on the gender of the subject ($F=-2.073, p=.039$), with male students reporting significantly higher self-efficacy than female students. Additionally, self-efficacy differed significantly by age ($F=3.061, p=.017$), with post hoc analyses showing that individuals aged 21 reported lower self-efficacy levels compared to those aged 19. Those who had selected their own major demonstrated higher self-efficacy than those who had not ($t=4.107, p<.001$). No significant differences in self-efficacy were observed with regard to grade level, mode of college admissions, or previous semester grades (see Table 4).

4.4. Satisfaction of Major and Self-Efficacy according to Career Preparation Activities

It was found that there was a significant difference in levels of major satisfaction depending on the presence or absence of career education, career counseling, and volunteer work. Those who received career education were found to be significantly more satisfied than those who did not receive career education ($t=2.886, p=.004$), and those who received career-related counseling were also found to be significantly more satisfied than those who did not receive career-related counseling ($t=2.016, p=.045$). A significant correlation was observed between participation in career-related volunteer activities and major satisfaction ($t=2.259, p=.025$). However, no significant difference in major satisfaction was found between those who engaged in major-related club activities and those who did not participate in club activities (see Table 5).

Significant differences were observed in self-efficacy as a result of career education, career counseling, and participation in club activities. The results indicated that students who had received career education ($t=2.310, p=.022$), those who had received career counseling related to their major ($t=2.146, p=.037$), and those who had participated in club activities ($t=3.179, p=.002$) exhibited significantly higher levels of self-efficacy than those who had not. Nevertheless, no significant discrepancy was observed in self-efficacy between those with and without volunteer activities (see Table 5).

4.5. Discussion

The objective of this study was to ascertain whether there are notable discrepancies in nursing students' satisfaction of major and self-efficacy levels in accordance with the career preparation activities undertaken during their high school period. Firstly, it was found that the satisfaction of nursing major according to general characteristics was significantly lower at the age of 21 and in the third year.

These results may be related to the nursing curriculum. In general, for a four-year nursing program, the third year is the period during which students combine theoretical coursework with hospital fieldwork. It is possible that this excessive academic pressure and stress may have a negative impact on major satisfaction. Indeed, one study reported that adjustment to college life scores were lowest in the second year of a three-year nursing program, which is when students begin their hospital practicum (Choi & Park, 2013).

Table 4: Satisfaction of Major and Self-Efficacy according to General Characteristics of the Participants

(N=246)

Variables	Categories	n	Satisfaction of Major			Self-Efficacy		
			M±SD	t/F	p	M±SD	t/F	p
Gender	Male	29	84.59±10.35	-1.642	.102	80.45±1.00	-2.073	.039
	Female	217	81.12±10.70			75.88±11.30		
Age (year)	18	33	83.30±8.98 ^a	4.907	.001 (a,b,c>d)	77.03±9.11	3.061	.017 (a>b)
	19	62	83.60±10.39 ^b			79.32±11.69 ^a		
	20	66	82.80±10.34 ^c			75.67±13.00		
	21	50	75.82±10.64 ^d			72.32±9.40 ^b		
	≥22	35	81.97±11.23			77.94±9.52		
Grade	Freshman	80	84.23±9.30 ^a	4.788	.009 (a>b)	78.05±8.90	2.074	.128
	Sophomore	91	81.24±11.77			76.63±13.29		
	Junior	75	79.01±1.20 ^b			74.41±1.55		
Mode of college admission	Regular (Korean SAT)	82	79.93±10.94	2.136	.120	76.21±9.63	.266	.767
	Early (academic competency test)	84	83.32±9.93			77.12±11.49		
	Early (others)	80	81.30±11.07			75.89±12.50		
Past semester GPA	<3.00	27	76.81±12.93 ^a	3.780	.011 (a<b)	73.33±12.88	2.126	.098
	3.00-3.99	116	81.16±10.27			75.45±11.78		
	≥4.00	25	79.92±12.07			79.64±11.46		
	No grade	78	84.24±9.42 ^b			77.88±9.30		
Decision-maker of nursing career	Self	182	82.98±10.03	3.662	.001	78.10±10.54	4.107	.001
	Others (parents, teachers, friends etc.)	64	77.42±11.53			71.61±11.82		

Note: GPA=grade point average; M=mean; SAT=the scholastic assessment test; SD=standard deviation

Table 5: Satisfaction of Major and Self-Efficacy according to Career Preparation Activities

(N=246)

Variables	Categories	n	Satisfaction of Major			Self-Efficacy		
			M±SD	t/F	p	M±SD	t/F	p
Career Education	Yes	105	83.78±10.10	2.886	.004	78.31±10.56	2.310	.022
	No	141	79.86±10.86			75.00±11.53		
Career Counseling	Yes	193	82.25±9.90	2.016	.045	77.65±10.91	3.369	.001
	No	53	78.92±12.98			71.91±11.29		
Club activities	Yes	52	83.75±10.80	1.689	.092	80.73±10.45	3.179	.002
	No	194	80.94±10.62			75.26±11.17		

Volunteer work	Yes	84	83.65±10.47	2.259	.025	77.51±12.46	1.104	.271
	No	162	80.43±10.68			75.85±10.53		

Note: M=mean; SD=standard deviation

Furthermore, the level of satisfaction with the major was found to vary significantly by prior semester GPA. Those with lower GPAs below 3.0 reported significantly lower satisfaction with the major compared to freshmen and transfer students. This is similar to a previous study that discovered a correlation between elevated academic adjustment and a notable increase in major credit hours (Kim & Shin, 2016). This indicates that it is imperative to cultivated a range of coping strategies to mitigate excessive academic pressure and enhance major satisfaction and academic performance during the period of concentrated required classes.

The present study revealed significant differences in self-efficacy according to gender and age group. The discrepancy in self-efficacy between gender is similar to the findings of previous studies that have found that male students reported significantly higher self-efficacy than female students (Fallan & Opstad, 2016; Hong, 1995). Additionally, significant differences in self-efficacy were observed by age, with 19-year-olds reporting significantly higher self-efficacy than 21-year-olds in this study. No other age groups demonstrated significant differences. These findings differ slightly from those of a previous study (Kim & Lee, 2014) that employed the identical scale to assess nursing students, which revealed that those aged 19 years and below showed markedly diminished self-efficacy in comparison to those aged 22 and 23 years and above. This discrepancy in findings may be attributed to the fact that the participants in the present study were all enrolled in a four-year nursing students, whereas the participants in the previous study comprised a combination of a three-year and four-year nursing students, which may explain the observed differences in academic performance.

A significantly higher level of major satisfaction was observed among subjects who had received career education and career counseling. These findings are consistent with those of previous studies, which have demonstrated that students who have positive career education experiences in high school are more likely to have active and specific motivations to attend college, and that this has a positive impact on their subsequent academic success (Choi & Shin, 2016). In this study, nursing students who received career education reported significantly higher levels of major satisfaction than those who did not receive career education. The most common forms of career education experiences were career testing and listening to lectures. Additionally, major satisfaction was found to be significantly higher among those who had received career counseling, which is consistent with the findings of a previous study by Au

(2011). This study demonstrated that the more satisfactory career counseling experienced during adolescence, the higher the satisfaction with the major after entering college. Upon further analysis of the results, it was observed that the highest major satisfaction scores were obtained when career counseling was conducted with senior nursing students. It is therefore recommended that opportunities be provided for current nursing students to participate more actively in high school career counseling program with a view to improving their overall major satisfaction in addition to enhancing major satisfaction among future nursing students. Subjects who had participated in nursing major-related volunteer activities exhibited significantly higher levels of major satisfaction. This finding aligns with previous studies that reported a positive association between the number of major-related volunteer activities, satisfaction level of volunteer work, and the levels of major satisfaction (Lee, 2007).

The results indicated that self-efficacy was significantly higher among those who participated in career education, career counseling, and club activities. These findings are consistent with those of Ryu (2015), who found that career education programs had a positive effect on improving high school students' self-efficacy. They are also consistent with those of Kim et al.(2008), who found that career-related group counseling had a positive effect on high school students' self-efficacy. In particular, extracurricular activities in high school have been demonstrated to enhance self-efficacy related to future careers by facilitating the acquisition of knowledge and information in areas of interest related to majors (Kim & Kim, 2013). Furthermore, career decision self-efficacy has been reported to exert a significant influence on self-determination of future careers (Shin et al., 2016). The findings of this study indicate that subjects who participated in extracurricular activities showed significantly higher levels of self-efficacy than those who did not engage in such activities. Further analysis revealed that individuals who participated in extracurricular activities for a period exceeding one year and those who held an extracurricular leadership position demonstrated significantly higher levels of self-efficacy. These findings align with those of a previous study which reported that higher levels of participation in extracurricular educational activities, which are distinct from regular curricular educational activities, are associated with higher levels of satisfaction with high school life and higher self-efficacy related to career goal selection, career information, problem solving, and future information (Kim & Kim, 2013). It is therefore recommended that education and counseling

related to various career path should be provided at the time of preparing to enter high school in order to improve nursing students' self-efficacy. Furthermore, it is important to create an environment where students can continue to participate in career-related club activities.

Nevertheless, the present study did not find a significant correlation between career-related volunteer activities and self-efficacy. This finding should be interpreted with consideration of the relatively brief duration of the volunteer activities, which were conducted over a period of six months or less than 20 hours. Previous research has indicated that the length of volunteer work and the number of hours spent volunteering are significantly associated with self-efficacy (Lee, 2007).

5. Conclusions

The findings of this study indicate that career education, career counseling, club activities, and volunteer work all exert a significant influence on nursing students' satisfaction with their chosen major and their sense of self-efficacy with regard to their future career. It can therefore be posited that ensuring that high school students who intend to major in nursing have sufficient experience with these various career preparation activities may prove an effective strategy to improve their major satisfaction and self-efficacy upon completion of the nursing curriculum. Based on the research findings, it would be advantageous to contemplate the establishment of a high school-university integrated career guidance program. Furthermore, the utilization of a guidance program tailored to specific majors would prove beneficial in optimizing the efficacy of career preparation activities.

However, the results of this study are limited in their generalizability, given that the research was conducted among a selected group of nursing students in a specific region. It would therefore be beneficial to expand the geographic scope of future studies. Furthermore, as this study confined its investigation of career preparation activities in high school to career education, career counseling, club activities, and volunteer work, additional research is required to examine other potential career preparation activities and their impact on nursing students' major satisfaction and self-efficacy. The incorporation of a qualitative analysis of career preparation activities or the extension of the study to encompass a longitudinal examination of the long-term effects of career preparation activities would be beneficial in elucidating the relationship between career preparation activities and major satisfaction and future career adjustment.

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