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Research Article

The Impact Of Post-COVID-19 On Nursing Students' Career Preparation Behavior

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ABSTRACT

This study attempted to determine the factors affecting the career preparation behavior among nursing students in post-COVID-19. We conducted an online descriptive survey among 160 4th grade nursing students. Data collection was done by using structured self-reported questionnaires from January to March 2022. Outcomes measures were sociodemographic characteristics, career identity, career decision level, career decision-making self-efficacy, and career preparation behavior. Descriptive statistics, Pearson's correlation, and multiple regression analysis were performed to find the relationship between career preparation behavior and covariates. Most of the participants were female (63.8%, n= 102), and the age group was 22–24 years (70.6%, n = 113). The mean score of the outcome measure of the career identity (2.85±0.82), the career decision level (2.98±0.77), the career decision-making self-efficacy (4.88±0.64), and the career preparation behavior (2.72±0.71). Career preparation behavior was negatively correlated with career identity (r = -0.65, p = 0.22), while career decision level (r = 1.32, p<0.001) and career decision-making self-efficacy (r =1.55, p<0.001) were positively correlated. The factors of age, gender, and job guidance approach and guidance are highly associated with career preparation behavior. The study's results identified a significant level of employment preparation behavior. The study's results suggest that nursing institutions should formulate intervention strategies pertaining to job searches in order to encourage nursing students to engage in career preparation, mitigate mental health changes caused by career searches, and encourage positive perspectives on preferred career paths on career planning.

Keywords: *Professional career; career identity; career preparation; nursing students; COVID pandemic.*

Introduction

The World Health Organization officially recognized the outbreak of COVID-19 as a pandemic on March 11, 2020 [1]. With the announcement of the pandemic, organizations and educational institutions in South Korea ceased operations immediately. Students faced many challenges as the COVID-19 pandemic profoundly transformed nursing education [2]. This situation caused significant stress among many final grade students, affecting their daily routines, health, social interactions, job prospects, and other concerns (3-4).
After the first COVID-19 case in January 2020, South Korea faced a substantial outbreak that led to significant changes in university curricula [5]. Due to the necessity of social distancing, universities swiftly transitioned to online courses in the first semester of 2020 [6]. Traditional theoretical teaching methods were adapted into online learning formats, featuring video lectures provided through online platforms and emphasizing assignment-based classes and live video sessions [7]. Existing research during the summer of 2021 examined the experiences of students who had transitioned to new teaching and learning modalities [8-9]. In response to COVID-19 restrictions, nursing professional organizations and accrediting agencies provided resolutions

and guidelines, conducted webinars, and temporarily modified education standards [10-11]. Many nursing programs have suspended internships for extended periods, ranging from several months to a year, and have substituted them with online activities [11-13]. However, only a couple of institutions have attempted to keep clinical rotations available on a voluntary basis, carefully balancing the potential risks to students against outstanding learning opportunities.

Career identity, also known as "self-concept" or "professional self," is how nurses or nursing students perceive their job [14-15]. According to some of the research that has been conducted on nurse burnout and overall job unhappiness in other professions, this is consistent with the findings. Although nurses received recognition for their efforts throughout the pandemic, it was clear that they were understaffed and overworked [16]. A study conducted on nurses working in intensive care units (ICUs) revealed that 68% of the sample had burnout risk overall [17]. subsequently additionally comprises the values and beliefs that determine how they approach their work and communicate with patients.

Career decision making self-efficacy (CDMSE) is a significant preexisting parameter that influences nursing students' professional career. COVID-19 has caused significant disruptions in nursing education as a major threat to the existing healthcare system [17-18]. It was highly disturbed in nursing students' routine learning methods and led to a greater impact in preparation of their job [19]. Career preparation behavior involves exploring job search, gathering information, and demonstrating professional ability to achieve desired job [20-21]. Situations related to handling and preparing for employment have become worse because of COVID-19.

Nevertheless, there is not enough data to assess how nursing students' career preparation practices have affected their outcomes. From that point on, the researchers have kept their attention on the final-grade students' career possibilities to preserve their professionalism and nursing image both during and after the COVID pandemic. As a result, we sought to explore the factors affecting career preparation behavior among nursing students after COVID-19. The researcher intends to build on their previous investigation attempts with this study. [22-23].

Methods

Design and participants.

This is a descriptive study with an online survey design focused to find out the factors affecting the career preparation behavior among final grade students. Consequently, the study's subjects were fourth grade nursing students who voluntarily agreed to take part, studying at the same university as the investigators. Sample size was determined using G Power 3.1.9.7. It was necessary to have 120 students. The online survey was created, and a selection of questionnaires were sent out and retrieved at a time and location that best suited the students. Data collection was conducted from January to March 2022. A total of 180 students participated in the study; after excluding the missing data, 160 answers are retained for the data analysis.

Measurement tools

Outcome measures were the sociodemographic characteristics such as, gender, age, perceived of job seeking behavior, Job related source of information, desired occupation. Four tools were used to address Career identity, career decision level, career decision making self-efficacy (CDSES-SF) and behavior to career preparation behavior. The details of the measurement tool are described below.

Career identity scale

The Career identity Scale was used to measure job identity. Holland et al [24] was developed the 'My Vocational Situation scale', which was modified in Korean and validated by Kim and Kim [25]. This instrument consists of 18 items, ranging from 1 to 4 (1= "not at all") to 4 (4= "highly agree"); higher scores denoted a more defined set of aims desires, behaviors, and abilities. The Cronbach's α of 0.89 for the prior study and it was 0.88 in this study..

Career decision scale

The Career Decision Level Scale was developed by Osipow, Carney, and Barack [26] was applied to Korean by Koh [27] and was developed and modified by Yoon [28]. The career decision level is composed of 18 items and measured by four-point scale. The higher score means that the career path is less decided, so it is calculated as a reverse question, and a higher total score indicates a higher level of confidence. Cronbach's α was .86 in the original study, and Cronbach's α was .89 in this study,

Career decision making self-efficacy.

The original version of CDSES-SF was developed by Betz, Klein, and Taylor [29] and The Korean version of CDSES-SF was translated and modified version utilized among Korean college students by Lee& Lee [30]. The modified version has 25 with 5 sub scales including self-assessment (5items), collecting employment information (5items), goal setting (5items), planning (5items), and problem resolution (5items). Each question is measured on a Likert scale ranging from 1 'not at all' to 5 points 'very much', with higher scores indicating a

higher level of career decision-making self-efficacy. The tool reliability was Cronbach's α = 0.94 and Cronbach's α was 0.90 in this study.

Career preparation behavior

This instrument was created by Oh [31], the Korea Job Information Service. The questionnaire comprises forty items and subdivisions, comprising eight formal job search items, ten informal job search items, fifteen preliminary job preparation elements, and seven job preparation behavior items. 4-point Likert scale was used to evaluate the career preparation behavior. The higher ratings reflect an increasing level of career preparation. The instrument's reliability was Cronbach's α =0.96, yet in our study, it was α=0.92, showing reliability.

Data collection

The researchers conducted a random selection of students who met the criteria to participate in this study. The selected students were invited to participate in the study by indirect notification due to the clinical practice for the final year students. The chosen questionnaire was provided and collected at a time and location that worked best for the students. The study period included January 2022 to March 2022. Prior to completing the self-reported questionnaire, each participant had to provide written consent. The entire process took about thirty to forty minutes on average. Following the completion of the questionnaire, all the data was evaluated, and if more information was needed, the participants were asked to provide it.

Data Analysis

Three steps were included in the data analysis process. First, the students' general characteristics were calculated using frequency, percentage, means, and standard deviations in relationship to career decision level, professional identity, career decision making self-efficacy, and career preparation behavior. To ascertain the difference in career preparation behavior and general characteristics, the t-test, ANOVA, and Scheffe's test were run at a 5% level of significance. Using Pearson's correlation coefficient, the relationship between the variables was examined. A stepwise multiple regression analysis was conducted to determine the level of multicollinearity, using the Variance Inflation Factor (VIF). IBM SPSS 25.0 was used to conduct all of the analyses. At the threshold of $p < 0.5$, the statistical significance was computed

Results

Study participants

There were 160 students who participated in this study; of these, 63.8% (n = 102) were female and 70.6% (n = 113) were aged 22–24 years. Family economic status was medium (63.1% n = 101), and most of them used university-based job cafés (50.6% n = 81). 76.9% (n = 123) of the students who desired to work in clinical settings were medium, 56.9% (n = 91) were not satisfied with job guidance opportunities, and 56.9% (n = 91) were not satisfied with their self-perceived clinical practice. Self-reported academic achievement was good; about 53.1% (n = 85) and 64.4% (n = 103) had not satisfied job attainment ability (Table 1)

Table 1. Sociodemographic Characteristics undergraduate students (N=160).

Characteristics	Categories	N (%)	Career preparation behavior	
	Total		Mean±SD	t or F (p)
Sex	Male	58 (36.3)	1.70±1.07	22.46
	Female	102 (63.8)	1.53±1.05	20.42
Age (years)	22-24	113 (70.6)	1.78±1.17	21.43
	≥25	47 (29.4)	1.72±0.55	43.89
Grade (Types)	Regular	148 (92.5)	2.20±0.98	31.48
	Transferred	12 (7.5)	2.49±0.82	42.51
Family economic status	Low	22 (13.8)	2.43±1.16	29.55
	Medium	101 (63.1)	2.32±0.86	37.81
	High	37 (23.1)	2.85±0.52	33.09
Daily routines/Activities	Good	61 (38.1)	2.34±0.54	21.58
	Not good	99 (61.9)	3.32±0.48	28.21
Sleeping pattern	Satisfied	102 (70.0)	2.30±0.47	31.54
	Not satisfied	58 (30.0)	2.29±0.71	26.14
Preliminary preparation of job	Yes	126 (78.8)	2.37±0.91	36.62
	No	34 (21.3)	2.44±1.33	25.82
Source of job information	University job cafe	81 (50.6)	1.85±0.83	31.31
	Internet & SNS	63 (39.4)	2.61±0.80	45.97
	Consultant & others	16 (10.0)	2.30±0.70	46.34
Desired occupation	Clinical oriented	123 (76.9)	2.12±0.97	30.91
	Education & research	19 (11.9)	2.89±1.25	32.46
	Business & others	18 (11.3)	1.69±0.94	24.84
Job guidance satisfaction	Satisfied	69 (43.1)	2.13±1.08	27.31
	Not satisfied	91 (56.9)	2.66±1.07	34.92

Self-perceived clinical practice ability	Satisfied	64 (39.4)	1.74±1.10	51.42
	Not satisfied	97 (60.6)	2.59±0.71	22.29
Self-reported academic achievement	Good	85 (53.1)	2.36±0.86	38.64
	Not good	75 (46.9)	2.61±0.73	50.05
Goal (Job)-attainment ability	Satisfied	57 (35.6)	2.03±1.04	27.30
	Not satisfied	103 (64.4)	2.05±0.98	29.55

N= Frequency; SD, Standard deviation; SNS= Social network service.

Degrees of measurement scale score for career identity, career decision level, career decision making self-efficacy, and Career preparation behavior

Table 2. displays the mean and standard deviation for the career preparation behavior: the career identity (2.85±0.82), the career decision level (2.98±0.77), the career decision-making self-efficacy (4.88±0.64), and the career preparation behavior (2.72±0.71)

Table 2. Score level of the Career identity, career decision level**, career decision making self-efficacy, and Career preparation behavior**

Variables	Range	Min	Max	Mean±SD
The Career identity	1 - 4	0.28	3.10	2.85±0.82
The career decision level	1- 4	2.43	4.00	2.98±0.77
The career decision making self-efficacy	1 - 5	1.00	5.00	4.88±0.64
The Career preparation behavior	1 - 4	1.58	4.00	2.72±0.71

Correlation between Career identity, career decision level, career decision making self-efficacy, and Career preparation behavior.

Table 3 illustrates the correlation between selected variables. Career preparation behavior was negatively correlated with career identity (r = -0.65, p = 0.22), while career decision level (r = 1.32, p<0.001) and career decision-making self-efficacy (r = 1.55, p<0.001) were positively correlated (Table 3).

Table 3. Correlation between Career identity, career decision, career decision making self-efficacy, and Career preparation behavior

Variables	Career identity	Career decision	career decision making self-efficacy	Career preparation behavior
	r(p)	r(p)	r(p)	r(p)
The Career identity	1			
The career decision	-.37	1		
The career decision making self-efficacy	0.80***	0.72***	1	
The Career preparation behavior	-0.65	1.32***	1.55***	1

*** p<0.001

Factors influencing the career preparation behavior.

Table 4 diplsys the regression analysis results of the factors that influence career preparation behavior. The sociodemographic general characteristics such as age (years), grade (types), family economic status, preliminary preparation of a job, source of job information, and desired occupation were considered dummy variables for identification of the affecting factors for student's career preparation. The stepwise multiple regression analysis adjusted all these variables. As a result, it was found that the level of career decision-making (β = 0.63, t = 1.48), and career decision-making self-efficacy had higher impact on the career preparation behavior. The explanatory power of these variables was 36% (F = 15.53, p < 0.001), and Durbin Watson was 1.98, which was nearly two, confirming the multiple regression model was appropriate. (Table 4).

Table 4. Factors affecting Career preparation behavior

Dependent variable	B	SE	β	t
Constant	2.13	.10		20.15
Job guidance satisfaction (Satisfied)†	.26	.04	.28	4.21
Preliminary preparation of job (Yes) †	.38	.11	.31	2.78
The Career identity	-.13	.02	-.33	-4.74
The career decision	.30	.06	.63	1.48
The career decision making self-efficacy	.20	.05	.51	1.07
The Career preparation behavior	.06	.02	.16	2.27
	F=15.53; p<0.001, Adj R2=0.36, Durbin Watson= 1.98			

† Dummy variable

Discussion

This study focused on the career preparation behavior among final grade nursing students and factors influencing it after COVID 19. Nursing students' career preparation behavior may have changed significantly because of COVID-19's crucial challenge. Our previous studies found that relevant concept by using the different outcome measurement tools [23]. Most of the students were female, of medium economic status, and desired to work in a clinical setting. The job guidance was not satisfactory, while self-reported academic achievement was good. It was reported that most of the nursing students were motivated to achieve a nursing degree for the betterment of job assurance in the clinical setting [6, 7, 9, 10].

The mean score findings for the selected instruments showed notable changes in career preparation behaviors. There were notable differences in the responses to all career preparation behavior and career decision-making self-efficacy questions during pandemic and quarantine periods. This implies that COVID-19 had a significant effect on nursing students' clinical practice to become registered nurses [10-13]. Only 29.7% of the participants in a Turkish study believed their curriculum adequately prepared them for an acute pandemic [32]. Prior studies noted that online learning has been shown to be beneficial in nursing education, while the career preparation behavior differed in various settings [19-22, 33-34]. However, sudden, and unexpected changes in approaches without the required infrastructure and learning systems may be less effective. A lack of clinical experience severely hindered career preparation behavior [2, 15, 17]. Furthermore, students qualitatively observed that their mental health affected their study confidence and competence [8]. Because these are fundamental abilities incorporated into nursing school curricula, the findings of this study demonstrated that the pandemic undermined confidence in their placement [34-35]. It shows that the skills instructed were inadequate to handle an acute pandemic or other emergency. These findings demonstrate how important it is for nursing programs to adequately educate their students for emergency situations, like pandemics.

Career identity was negatively correlated with career preparation behavior. Prior research has indicated that the degree of specialization identity and employment prospects are factors linked to job-seeking effectiveness [14, 15, 19, 24]. These results suggested that interventions aimed at enhancing the degree of specialization identity are necessary to improve employment preparation [15]. A pandemic scenario might cause concern in nursing students who desire to work in a clinical practice setting that extends further an important challenge and may threaten their wellbeing and future career identity [9, 33-34]. Furthermore, it was believed that nursing students have a higher employment rate than other departments, so there is less need for career preparation activities such as talking about careers or visiting job search cafes. However, since this is not enough to generalize, it is believed that it is necessary to identify and clarify the career preparation behavior of subjects according to their major and find better job placement at reputed institutions or hospitals.

Our findings showed a positive correlation between career decisions and self-efficacy when adjusting the general characteristics of job guidance satisfaction and preliminary preparation for the job during the COVID period. In addition, significant variations were observed in the career decision attitude while feeling the career decision-making-based self-efficacy compared to career preparation behaviors according to the general characteristics. Nursing students indicated that they were able to relax more and sleep for longer periods of time while they were under quarantine and had higher self-efficacy towards career preparation [19, 21, 33]. These results are in contrast with those of other studies, which found that university students in quarantine experienced an increase in depressive symptoms and a decrease in academic preparation [4, 6, 16, 17, 19]. Further investigation into the correlation between shifting in daily routines among nursing students amidst the COVID-19 pandemic and psychological transformation, as well as its implications for employment preparedness, would be beneficial in light of these insightful findings.

Conclusion

Nursing students' career preparation was positively correlated with level of career decision- and decision-making self-efficacy. Additionally, the general characteristics had a degree of impact over career preparation behavior, including job guidance satisfaction. Academic institutions ought to inspire third-grade students to improve their practical skills much more prior to taking their final grade through clinical practice. Career education programs, job cafés, and job search portals should be readily available to nursing students so that they can discover their career identity and find satisfaction in their major. These programs could also lessen job preparation anxiety by examining career decision skills and why certain students find career choices mentally unbearable. Additional evidence-based study is required to investigate the efficacy of job preparation strategies in promoting greater professional engagement.

Ethics Statement

The Research and Bio-ethics Committee of the affiliated university approved the study. Permission for data collection was also taken from the respective in charge. Written informed consent was obtained from the participants prior to data collection, in accordance with the national legislation and the institutional requirements.

Author Contributions

JK and VR conceptualized and designed the study. JK collected the data while VR analyzed and interpreted the data. The study was supervised by JK. Both the authors have met the criteria for authorship and had a role in preparing the manuscript. All authors have approved the final manuscript.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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