

Reasons Behind Generation Z Nursing Students' Intentions to Leave their Profession: A Cross-Sectional Study

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Abstract

This study aims to identify predictors of turnover intention within 2 years of employment among 3rd and 4th grade Generation Z nursing students. Turnover intention is a multi-stage process ranging from mere desire, to serious thoughts, decision-making, and actual planning. Previous studies have focused on identifying the factors affecting turnover intention among practicing nurses. However, undergraduate nursing students also contemplate their decision to stay or leave the nursing profession after graduation. This cross-sectional descriptive study recruited 210 nursing students from 3 colleges in South Korea. A self-administered survey was conducted using the Career Preparation Behavior Scale, the Calling and Vocational Questionnaire, the Social Responsibility Scale, and the Revised Self-Leadership Questionnaire. Four questions were used to explore participants' turnover intention, their motivation for studying nursing, their major satisfaction, and their clinical experience satisfaction. Descriptive and multiple logistic regression statistics were obtained using SPSS. Of the participants, 17.6% had turnover intention within 2 years of employment. Multiple logistic regression analysis indicates that clinical experience satisfaction is the only significant predictor. In the univariate analysis, nursing students who had turnover intentions were less likely to practice career preparation behaviors and had lower levels of vocational consciousness and social responsibility. To keep a proficient nursing workforce in the profession, professional commitments from universities and hospital institutions are needed to provide quality clinical learning experiences for nursing students. Further prospective study is needed to observe how Generation Z undergraduate students' turnover intentions change and what factors influence this process.

Keywords

nursing student, turnover, intention, nursing education, clinical clerkship

What do we already know about this topic?

Previous studies have focused on identifying the factors affecting turnover intentions among practicing nurses.

How does your research contribute to the field?

By identifying the predictors of early turnover intentions of Generation Z students, preemptive intervention strategies can be sought.

What are your research's implications toward theory, practice, or policy?

To keep the proficient nursing workforce on the job site, professional commitment from universities and hospital institutions is needed, providing quality clinical learning experiences for nursing students.

Introduction

Nurses make up the largest portion of the healthcare workforce. Nurse acquisition levels have a direct impact on key health outcomes.¹ Presently, increased acuity levels of patients, decreased duration of hospitalization, and the proliferation of healthcare technology and specialization have increased the need for highly experienced nurses. Benner² classifies the major shifts in the style of practice with the

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development of expertise into 5 stages: novice (first year of education), advanced beginner (new graduate), competency (1-2 years in practice), proficiency (a transitional stage), and expertise (phronesis/practical wisdom). The most qualitatively distinct difference lies between the levels of competency and proficiency, when nurses increasingly begin to change their perceptions on the nature of the situation and deliberate about changing their plans in response. The study titled "A Model of New Nurse Transition"³ further defined the timeframe spanning the 2 years after graduation as an important period for new nurses as they are challenged in their attempts at making a successful transition.

However, many new nurses leave their jobs before they reach the level of competency. The nurse shortage has become a worldwide phenomenon⁴; high turnover rates of new nurses is an important reason in the continuous shortage in healthcare staff. As of 2015, the turnover rate of nurses in the United States was 17.2%; in extremis, the turnover rate hit highs of 35% to 60% within the year.^{5,6} In South Korea, the turnover rate of nurses who have been employed for less than a year has also increased rapidly, growing from 29.0% in 2013 to 42.7% in 2017.⁷ The turnover of nurses is detrimental to healthcare organizations in terms of replacement costs (which is 3 times the average salary of nurses) and work disruption.⁸ Additionally, a high turnover rate causes burnout of the remaining human resources, such as in the case of the preceptor who is tasked with educating new nurses.⁹ Therefore, nurse turnover also adversely impacts patient health outcomes with increased potential patient errors and compromised quality of care.¹⁰

Several factors affect nurses' turnover intentions. Previous studies have shown that organizational factors (organizational characteristics, organizational climate/culture, interpersonal relations within the organization, and management style), work environment (role stress, workload, financial rewards, the characteristics of working conditions, and employees' access to power), individual factors (demographic factors, vocational consciousness, motivation to choosing nursing profession, professional values, job satisfaction, job performance, organizational commitment, burnout, and role perceptions), and external factors (work-life balance and the external job market) were predictive of nurse turnover or turnover intention.¹¹⁻¹⁵

Today's workforce mainly consists of individuals from 3 generations: Baby Boomers (born 1946-1964), Generation X (born 1965-1980) and Generation Y (born 1981-1996).¹⁶ In a large-scale study examining the work values of the Baby Boomers, Generation X, and Generation Y, leisure values and extrinsic values increased over the generations, while altruistic work values (eg, helping, societal worth) and intrinsic values (eg, an interesting, results-oriented job) decreased.¹⁷ Some intergenerational differences have emerged on the part of nurses in current workplaces. Generations have different degrees of work engagement and factors that affect workplace well-being, satisfaction, and retention.¹⁸ In a previous

study, Generation X nurses experience their work life as being less consistent with their personal professional values, and display more indicators of burnout and a lower inclination to participate in knowledge sharing than do nurses from the Baby Boomer generation.¹⁹

Today, Generation Z (generally referring to those born between 1997 and 2012),¹⁶ a unique and digitally native generation, are entering nursing colleges and the workplace. Those characterized as Generation Z are known to be pragmatic, in possession of underdeveloped social and relationship skills, are individualistic, exhibit a desire for convenience and immediacy, and are cautious and concerned with emotional, physical, and financial safety.²⁰ Therefore, grasping how nursing students—who will become the backbone of future nursing staff—perceive their jobs is important in hospital recruitment and retention strategies.

Turnover refers to employees leaving the boundary of an organization.²¹ Meanwhile, *turnover intention* is a multi-stage process triggered by negative psychosocial responses to the job context which may initiate a cognitive and behavioral withdrawal process. The intention ranges from mere desire, to serious thoughts, decision-making, and actual planning.¹⁵ That is, turnover is a process rather than a single, discrete event.²² Therefore, to reduce the nurse turnover, it is essential to identify the early signs of turnover intention and prevent nurses from moving along the turnover path.¹⁵

Undergraduate nursing students, especially those undergoing training in clinical placements (3rd and 4th grade), may feel skeptical about their career path while experiencing negative clinical experiences. This could cause them to contemplate whether they will stay or leave the nursing profession after graduation.²³ However, studies on turnover intention in undergraduate nursing students have been scarce. Since nursing students are not actually employed, it is necessary to focus on individual factors among the various (organizational, work environment, individual, and external) factors known to influence turnover intention.¹¹⁻¹⁵ This study aimed to understand the individual factors of turnover intention (career preparation, vocational consciousness, social responsibility, self-leadership, motivation to study nursing, major satisfaction, and clinical experience satisfaction) of Generation Z nursing students and to identify predictors of their turnover intention within 2 years of employment.

Methods

Study Design and Participants

This study uses a cross-sectional descriptive design. Using a convenience sampling method, nursing students were recruited from 3 nursing colleges in G city, South Korea. The inclusion criteria for participants were being currently enrolled 3rd and 4th grade nursing students. Although, there is debate surrounding the appropriate sample size needed for

logistic analysis,^{24,25} a recent study recommended that samples are more than 500 or $100 + 50i$ (i =independent variable).²⁶ Since there were 6 predictors in this study, at least 400 samples were required. We approached 500 eligible students, but the voluntary participation rate was as low as approximately 50%. Of the 247 students who initially responded to the survey, 210 participants were finally selected for analysis. The 37 excluded questionnaires belonged to those who had reported insufficient information.

Measures

Questionnaires consisted of scales on career preparation, vocational consciousness, social responsibility, and self-leadership. We selected instruments that were frequently used in previous studies, developed, or translated into Korean, and psychometrically evaluated.

Career preparation was assessed using the *Career Preparation Behavior Scale*, as developed in Korean by Choi and Kim.²⁷ The scale consists of 25 items rated on a 5-point Likert scale, with higher scores indicating a greater career preparation behavior. The Cronbach's alpha for the scale was 0.90 in this study.

Vocational consciousness was assessed using the *Calling and Vocational Questionnaire Korean version (CVQ-K)*, which was developed by Dik et al²⁸ and translated into Korean and validated by Shim and Yoo.²⁹ The scale consists of 12 items rated on a 4-point Likert scale, with higher scores indicating a stronger personal belief that one has been called to engage in nursing as a profession. The Cronbach's alpha for the scale was 0.90 in this study.

We used the *Social Responsibility Scale* to assess the degree of responsibility in participants' attitude, and their behaviors toward others and society at large. The scale was developed by Conrad and Hedin³⁰ and translated into Korean and modified by Kim.³¹ The scale consists of the 27 items rated on a 5-point Likert scale, with higher scores indicative of a higher level of social responsibility. The Cronbach's alpha was 0.91 in this study.

Self-leadership was assessed using the *Revised Self-Leadership Questionnaire*, which was developed by Houghton and Neck³² and translated into Korean and validated by Shin et al³³ The scale consists of 35 items rated on a 5-point Likert scale, with higher scores indicating a higher level of self-leadership. The Cronbach's alpha was 0.92 in this study.

Additionally, we included demographic questions (gender, age, school grade, religion, academic achievement, and desired job after graduation) and 4 questions aimed as exploring participants' turnover intention, motivation to study nursing, satisfaction with nursing as a major, and clinical experience satisfaction. Turnover intention was assessed by a single item, which asks "How long do you plan to work after graduation?" Responses were grouped into a dichotomous variable: responses indicating intentions of within 2 years were categorized as "having turnover intention,"

whereas those responses indicating an intention of more than 3 years were grouped as "not having turnover intention." Motivation to studying nursing was assessed by reasons for choosing nursing (1 item). Responses were grouped into a dichotomous variable: *interest* and *professional values* as "intrinsic motivation"; *opportunity for employment*, *parents wish*, and *admission exam score* as "extrinsic motivation." Nursing major satisfaction and clinical experience satisfaction were measured by a categorical variable (*very unsatisfied*, *unsatisfied*, *moderate*, *satisfied*, or *very satisfied*). Responses were grouped into a dichotomous variable: *very unsatisfied*, *unsatisfied*, and *moderate* as "not satisfied"; *satisfied* and *very satisfied* as "satisfied."

Data Collection

Data were collected from September to October 2018. After ethics approval from the institutional review board was obtained, we explained the purpose and procedure of the study to the directors of each nursing college and requested their cooperation. Potential participants were met at classrooms at the end of all classes for the day by the principal investigator of this study. The students who voluntarily agreed to participate in the study were asked to sign an informed consent form, and they then completed questionnaires in their classroom. The questionnaires were administered using a pencil and paper survey. The participants spent approximately 15 min on the questionnaires.

Ethical Considerations

This study was approved by the ethical review boards at the authors' institution. All participants were informed about the purpose and voluntary nature of their participation, and the right to refuse and withdraw from participating in the study, and they then signed an informed consent form. The surveys were returned in an unmarked envelope ensuring the participants' anonymity.

Data Analysis

Data were analyzed using IBM SPSS v 25.0 (Armonk, NY: IBM Corp.). Differences in turnover intention according to study variables were analyzed using independent *t*-tests and chi-square tests. Multiple logistic regression was used to identify the predictors of turnover intention.

Results

Descriptive Statistics

The average participant, mostly female (87.6%), had a mean age of 22.8 years. The most-common academic year among the participants was 3rd year (65.7%), with 4th year representing 34.3%. The majority of participants were non-religious (71.9%)

Table 1. Descriptive Analysis of Variables.

Variables	Categories	n (%)	Mean \pm SD
Gender	Female	184 (87.6)	
	Male	26 (12.4)	
Age (years)			22.8 \pm 1.22
Grade	3rd grade	138 (65.7)	
	4th grade	72 (34.3)	
Religion	Yes	59 (28.1)	
	No	151 (71.9)	
Desired job	Hospital nurse	170 (81.0)	
	Others	40 (19.0)	
Motivation to studying nursing	Intrinsic	62 (29.5)	
	Extrinsic	148 (70.5)	
Academic achievement	Above average	108 (51.4)	
	Average or below	102 (48.6)	
Nursing major satisfaction	Satisfied	110 (52.4)	
	Dissatisfied	100 (47.6)	
Clinical experience satisfaction	Satisfied	89 (42.4)	
	Dissatisfied	121 (57.6)	
Turnover intention	Yes	37 (17.6)	
	No	173 (82.4)	
Career preparation	(range 1-5)		3.18 \pm 0.60
Vocational consciousness	(range 1-4)		2.41 \pm 0.65
Social responsibility	(range 1-5)		3.43 \pm 0.51
Self-leadership	(range 1-5)		3.62 \pm 0.52

Note. Others= Government employees, school health teacher, occupational health nurse, work abroad as a nurse, clinical research nurse, graduate school.

and chose nursing due to extrinsic motivation ($n=148$, 70.5%). Furthermore, the majority of participants wanted to be a hospital nurse right after graduation (81.0%). More than half of respondents also reported above average achievement (51.4%) and satisfaction with nursing as a major (52.4%). However, only 42.4%, were satisfied with their clinical experience. Of the participants, 17.6% reported having turnover intention within 2 years of employment. The mean score was 3.18 (SD 0.60) for career preparation behavior, 2.41 (SD 0.65) for vocational consciousness, 3.43 (SD 0.51) for social responsibility, and 3.62 (SD 0.52) for self-leadership (Table 1).

Comparison of variables between groups by turnover intention

A comparison of nursing students with and without turnover intention showed significant differences in academic achievement ($\chi^2=4.77$, $P=.029$), clinical experience satisfaction ($\chi^2=7.93$, $P=.005$), career preparation ($t=-2.15$, $P=.033$), vocational consciousness ($t=-2.18$, $P=.031$), and social responsibility ($t=-2.01$, $P=.046$). The association with nursing major satisfaction on turnover intention was only significant at $P=.051$ (Table 2).

Factors Affecting the Turnover Intention

We estimated the multiple logistic regression statistic by using five statistically significant ($P<.05$) variables demonstrated

in the univariate analysis. The P -value by Hosmer and Lemeshow test was .258. The variation inflation factor (VIF) was 1.172~2.006, which satisfied VIF of 2.5 or less required for logistic regression.³⁴ The result of the Durbin-Watson test was 1.838, which was close to 2, satisfying the residual independent condition. As a result of the logistic regression analysis, the only significant factor was clinical experience satisfaction (OR=2.52, 95% CI [1.02-6.19], $P=.044$) (Table 3).

Discussion

To the best of our knowledge, this is the first study to identify predictors of turnover intention within 2 years of employment among 3rd and 4th grade Generation Z nursing students. The results of this study show that 17.6% of Generation Z nursing students have a desire to leave the nursing profession within 2 years of employment. Although this figure is lower than the reported 42.7% of actual turnover rates among new nurses,⁷ one out of six students consider turnover before even practicing as a licensed nurse. Previous studies showed that turnover intention was positively correlated to actual turnover 12 and 18 months, respectively, after the initial turnover intention was measured.^{22,35} Therefore, turnover intention had an impact on future turnover intention and actual turnover.¹⁵

To solve the shortage of nurses, the Korean government has increased the number of nursing colleges by 160% over

Table 2. Comparison of Variables between Groups according to Turnover Intention.

Variables	Categories	Yes (n=37)	No (n=173)	χ^2	P
		n (%)	n (%)		
Gender	Female	31 (83.8)	153 (88.4)	0.61	.417*
	Male	6 (16.2)	20 (11.6)		
Grade	Junior	29 (78.4)	109 (63.0)	3.20	.074
	Senior	8 (21.6)	64 (37.0)		
Religion	Yes	12 (32.4)	47 (27.2)	0.42	.518
	No	25 (67.6)	126 (72.8)		
Desired job	Hospital nurse	31 (83.8)	139 (80.3)	0.23	.629
	Others [†]	6 (16.2)	34 (19.7)		
Motivation to studying nursing	Intrinsic	10 (27.0)	52 (30.1)	0.14	.714
	Extrinsic	27 (73.0)	121 (69.9)		
Academic achievement	Above average	13 (35.1)	95 (54.9)	4.77	.029
	Average or below	24 (64.9)	78 (45.1)		
Nursing major satisfaction	Satisfied	14 (37.8)	96 (55.5)	3.81	.051
	Not satisfied	23 (62.2)	77 (44.5)		
Clinical experience satisfaction	Satisfied	8 (21.6)	81 (46.8)	7.93	.005
	Not satisfied	29 (78.4)	92 (53.2)		
		Mean \pm SD	Mean \pm SD	t	P
Age		22.65 \pm 1.06	22.84 \pm 1.25	-0.86	.392
Career preparation		2.99 \pm 0.62	3.22 \pm 0.59	-2.15	.033
Vocational consciousness		2.20 \pm 0.61	2.45 \pm 0.65	-2.18	.031
Social responsibility		3.28 \pm 0.44	3.47 \pm 0.52	-2.01	.046
Self-leadership		3.52 \pm 0.46	3.65 \pm 0.53	-1.33	.187

Note. Others = Government employees, school health teacher, occupational health nurse, work in abroad as a nurse, clinical research nurse, graduate school; * = Fisher's exact test.

Table 3. Factors Associated with the Turnover Intention.

Variables	OR	95% CI	P
Academic achievement (ref.: above average)	1.85	0.83-4.16	.135
Clinical experience satisfaction (ref.: satisfied)	2.52	1.02-6.19	.044
Career preparation	0.99	0.43-2.30	.980
Vocational consciousness	0.75	0.35-1.60	.457
Social responsibility	0.89	0.33-2.41	.817

Note. P-value by Hosmer and Lemeshow test = 0.258; $R^2_N = 0.100$.

the past decade.³⁶ So far, this policy seems unsuccessful. The number of nursing graduates per 100 000 inhabitants in Korea has reached 100, which is the second-highest level among member countries of the Organization for Economic Co-operation and Development (OECD), after Switzerland. However, during this period, the turnover rate of new nurses increased further.⁷ Consequently, the number of practicing nurses per 1000 people in Korea is still below the average observed in member countries of the OECD.³⁷ Further prospective studies are necessary to observe how undergraduate students' turnover intentions change and which factors influence this process.

Findings from the multiple logistic regression model demonstrated that clinical experience satisfaction is the only

significant predictor. The most commonly reported stressors during the nursing students' clinical experience were academic demands, relations in the clinical environment, and caring for patients and families.^{38,39} Additionally, nursing students experience limited patient interactions and educationally-unprepared preceptors.³⁹ The quality of clinical placements is influenced by many factors, such as relationships between nursing students and nurses, the length of time in practice, feelings of belongingness and attitudes, the consistency of students/supervising ward nurse assignment, the number of students on each ward, and an opportunity to develop knowledge of nursing practice.⁴⁰ A situation whereby a large number of undergraduates are in placements at the same time, as well as an insufficient number of

prepared preceptors, supporting undergraduates during clinical placements has become a challenge for nurse educators, nurse managers, and supervising ward nurses. Based on the mutual understanding of professional commitment to the next generation of nurses, close cooperation of universities and teaching hospitals or affiliated health centers are needed.

Although simulation cannot replace a clinical learning experience, it is an appropriate alternative. Recently, the Korean Accreditation Board of Nursing Education has allowed nursing schools to replace 12% of clinical practice with simulation. The Commission on Collegiate Nursing Education—American Association of Clinical-Care Nurses' autonomous accrediting arm—encourages the use of simulation, as long as there are direct-care clinical practice experiences present as well. Continuing evaluation of the relationship between simulation training and nursing students' turnover intentions is necessary.

In the univariate analysis, nursing students who had the intention to leave the profession within 2 years were significantly more likely to have lower vocational consciousness ($P = .031$). The mean score of vocational consciousness was 2.41, which is higher than the 2.31 of the practicing nurses in the competent stage of their careers (1-2 years).¹³ In Park and Jung's study,¹³ vocational consciousness was the strongest influencing factor on nurses' intentions to stay. For practicing nurses, turnover intention is entertained as a serious thought, decision-making influence, or present actual planning beyond mere desire.¹⁴ In situations where the actual turnover can be carried out, the vocational consciousness might act as a pulling factor for a nurse to stay.

Social responsibility was also lower among nursing students who had the intention to leave ($P = .046$), but this was not a significant indicator in the final model. Nursing has a social responsibility of improving the health of the public. It is important to address social responsibility in the education and socialization of nursing students in school.⁴¹ It has been reported that the social responsibility of nursing students has a significant positive correlation with their satisfaction with nursing as a major, nursing professionalism, and sociality.⁴² Enhancing nursing curriculum by integrating service learning and volunteer service opportunities can foster social responsibility.⁴³

Furthermore, the turnover intention of nursing students who actively pursued career preparation was low ($P = .033$). Career preparation behavior is a concrete and practical act in understanding and exploring oneself and the environment related to an individual's career, decision-making, and implementation. It is positively correlated with career decision-making self-efficacy.²⁷ Students who made efforts to prepare for careers were highly satisfied with their first job.⁴⁴ Therefore, it is necessary to integrate career preparation opportunities in the nursing curriculum so that nursing students in college can plan their career and make decisions based on their understanding of themselves and the nursing profession.

Implication

Generation Z nursing students will become the backbone of future nursing staff. Poorly prepared clinical experiences can have a negative impact on securing the proficient nursing workforce within the nursing profession in the future. To ensure the quality of the clinical learning experience, nurse educators and nurse managers should form a clinical practicum committee to jointly participate in the design, operation, and continuous improvement activities with common understanding. Additionally, for the clinical preceptors to become positive role models for nursing students, they should be provided with ongoing training and appropriate rewards. Preceptor training contents may include clinical judgment, evidence-based practice, effective feedback, and formative evaluation.⁴⁵

Limitations

The first limitation of this study is that clinical experience satisfaction was measured by a single question. We have been unable to determine which characteristics of clinical placements affect nursing students' turnover intentions. It is, therefore, necessary to grasp the relationship between turnover intentions and various characteristics that affect the quality of clinical experience. The second limitation is that this study does not explain why nursing students continue to study nursing while attempting to leave the nursing profession within 2 years of employment. The third limitation is that we could not explore the relationship between the distinctive characteristics of Generation Z and turnover intentions. Since little is known about the turnover intention of nursing students, a qualitative approach might be more fruitful than a quantitative one. Future studies should therefore explore the reasons behind Generation Z nursing students' turnover intention using a qualitative approach. Lastly, to increase study validity, it is necessary to recruit more participants in future studies.

Conclusion

Our results show that Generation Z nursing students' turnover intention is influenced by clinical experience satisfaction. One out of six nursing students have a desire to leave the nursing profession within 2 years of employment. Nursing students with turnover intention were less likely to practice career preparation behaviors and had lower levels of vocational consciousness and social responsibility. Therefore, to keep the proficient nursing workforce within the nursing profession, cooperation and professional commitment from universities and teaching hospitals or affiliated health centers is needed to provide the best clinical experience for nursing students.

Author Contributions

Jason Kim: Conceptualization, Methodology, Formal analysis, Investigation, Writing – Original Draft, Visualization. **Duckhee Chae:** Conceptualization, Methodology, Supervision, Writing – Review and Editing. **Jae Yong Yoo:** Writing – Review and Editing. This manuscript is based on a part of the J.K.'s master's thesis from Graduate School of Nursing, Chonnam National University of South Korea.

Declaration of Conflicting Interests

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Ethical Approval

This study was approved by the institutional review board of the Chonnam National University, South Korea (No. 1040198-180619-HR-060-04).

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