Original Article

Factors affecting career turnover intention after graduation among nursing students: A cross-sectional study in Central Vietnam

Tran Thi Thu Ha, Luu Thi Thuy*, Do Thi Hoai Thanh

Faculty of Nursing, Da Nang University of Medical Technology and Pharmacy, Da Nang, Vietnam

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Corresponding Author:
Luu Thi Thuy, Faculty of Nursing, Da Nang University of Medical Technology and Pharmacy, Da Nang, Vietnam.
E-mail: luuthithuy@dhktyduocdn.edu.vn

ABSTRACT

Background & Aim: Turnover intention can predict the actual turnover behavior of nurses. Previous studies identified a variety of factors influencing nurses' turnover intention. However, few studies investigate nursing students' career turnover intention. This study aimed to examine turnover intention and associated factors among nursing students in Central Vietnam.

Methods & Materials: A cross-sectional study was implemented among 425 nursing students recruited through a multistage sampling technique from April to May 2022. Data were collected using a questionnaire including demographic characteristics, fear of COVID-19, perceived academic stress, and turnover intention. Descriptive statistics were used to describe demographic characteristics and study variables. Independent t-test, one-way analysis of variance, and Pearson's correlation coefficients were computed to examine the association between variables.

Results: Approximately one-third (32.5%) of the respondents will look for jobs without patient contact, 32.2% would not study nursing if given a choice, and 31.1% often think of not staying in the nursing profession. The sum scores of turnover intention ranged from 3 to 15 with a mean of 9.19 (SD= 2.49). The turnover intention was associated with the year of study, the reason to study nursing, and preparation for nursing school (p<.05). Perceived academic stress had a moderate correlation with turnover intention (r= -.325, p<.05). In contrast, the association between fear of COVID-19 and turnover intention was not significant.

Conclusion: A considerable number of nursing students had turnover intention upon graduation. Factors affecting turnover intention should be considered to retain students in educational programs and avoid a future nursing shortage.

Introduction

The nursing profession is the largest occupational group in the healthcare system that significantly contributes to delivering healthcare services to the community (1). Nurse-led interventions remarkably effectively improve patient outcomes and satisfaction (2). Thus, maintaining adequate nursing staff is crucial to ensure patient safety and quality of care (3). However, nursing has faced staff shortage issues, particularly after the COVID-19 pandemic (4). Globally, there was an estimated shortfall of 5.9 million nurses before COVID-19; however, this number has increased to 13 million because of the pandemic effect (1,4). Career turnover is considered a main cause of nursing shortage worldwide. The nurse turnover rate is relatively high, ranging from 17% to 50% (5,6). The turnover rate has especially increased dramatically after the pandemic (4). In Vietnam, thousands of nurses quit their job in the first six months of 2022, which has exacerbated the shortage of nursing resources in hospitals, especially in big cities (7).

The existing literature also highlighted increased rates of turnover intention which will probably cause the nursing workforce crisis in the foreseeable future (4). The

turnover intention has been defined as the "willingness or attempts of employees to leave their current workplace voluntarily." It is a multistage process that starts with negative psychological reactions to the job context, continues with cognitive responses, and ends with withdrawal behaviors (8). Turnover intention is the strongest factor predicting the actual turnover behavior of nurses (8). The finding from a recent review revealed the percentage of nurses' turnover intention ranged from 11.2% to 42.2%. Most importantly, this rate hit highs of 30.5% to 59.5% in post-COVID-19 studies (9). Several factors were found to be associated with nurses' turnover intention. The most mentioned factors include work overload, burnout, job stress, job satisfaction, and salary. Recently, fear of COVID-19 has been recognized as an important influence on the turnover intention of nurses (9,10).

As the need for nurses continues to increase worldwide, nursing students are an essential future labor workforce. Increasing the number of students in training is an effective solution to augment the nursing workforce (4). However, many nursing students intend to leave the profession in the future, ranging from 17.6% to 45.4% (11,12). The number of students signing up for nursing schools in Vietnam has also significantly declined, particularly after the COVID-19 pandemic (7). Similar to studies conducted on nurses, burnout, stress, and fear of COVID-19 influenced nursing students' career turnover intention (12,13). Other related factors included clinical experience and life satisfaction (11,12).

As nursing students are the backbone of the future nursing workforce, their career turnover intention will lead to a continuous shortage in the nursing workforce. Numerous studies have been conducted to investigate nurses' turnover intention, but evidence regarding this issue among undergraduate nursing students has been scarce. The

researchers reported several predictors of nurses' turnover intention, including organizational, work environment, individual, and external factors (9,10). However, as students are not actually employed, it is necessary to focus on individual factors of turnover intention, such as motivation to study nursing profession or academic-related stress. Moreover, since the pandemic just ended recently, the impact of COVID-19 fear on nursing students' turnover intention should be additionally considered. Thus, this study aimed to examine turnover intention and identify its related factors (the reason to study nursing, preparation for nursing school, fear of COVID-19, and perceived academic stress) of undergraduate nursing students. Considering the current nursing shortage situation in Vietnam, the findings may be useful for nursing schools or government authorities in proposing initiatives to retain students in the nursing profession.

Methods

A cross-sectional study was implemented to investigate turnover intention and its association with study variables. The current study was conducted at one university of Medicine and Pharmacy in Da Nang, Vietnam, from April to May 2022. This is a public university under the direct management of the Ministry of Health. The university is tasked with training quality healthcare resources for Vietnam's Central and Central Highlands regions. At the time of data collection, there were total of 1122 full-time undergraduate nursing students from the first to the fourth year. Students were divided into different classes, including five classes for the fourth year and six classes for each remaining year. The number of students in each class ranged from 15 to 90, depending on the specialized subjects that they selected for study.

In this study, the inclusion criteria were full-time nursing students and their

willingness to participate in the study. Those who were not in the classroom at the time of collecting data were excluded from the study.

The sample size was estimated using the formula for cross-sectional studies as follows (14):

$$n=Z^2_{1-\frac{\alpha}{2}}\frac{p(1-p)}{d^2}$$

Where: $Z_{1-\alpha/2}$ is standard normal variate. It is 1.96 at a type 1 error of 5%. d is precision, choosing d= 5%. p is the proportion of students having a turnover intention. Choosing p = 50% to estimate the largest sample size.

The estimated sample size was 384 individuals. To address anticipated non-response, an attrition rate of 10% was added; therefore, the total sample size was rounded to 425 students. The participants were selected using the multistage sampling technique. The proportional sampling method was applied first to determine the sample size for each year of study and each class. And then, the participants were conveniently selected from nursing students in each class.

Four instruments were used for data collection, including a Demographic information form, the Fear of COVID-19 Scale, the Perception of Academic Stress Scale, and the Turnover Intention Scale. Excluding the Demographic information form, the remaining scales are valid and reliable for students; among these, the Fear of COVID-19 Scale was previously translated and validated on Vietnamese medical students (15). The developers granted permission to use these scales. In this study, the Perception of Academic Stress and Turnover Intention Scale were back-translated from English into Vietnamese. The psychometric properties of the scales were tested by a pilot study with 30 nursing students.

The "Demographic information form" was developed by the researcher to collect information about gender, year of study, the reason for studying nursing, and preparation for nursing school.

The "Fear of COVID-19 Scale" was used to examine the fear of COVID-19 of the participants. It has 7 items evaluated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The sum score is from 7 to 35, with a higher score reflecting greater fear of COVID-19 (15). The Cronbach's alpha of the scale in the pilot study was .80.

The 18-item "Perception of Academic Stress Scale" developed by Bedewy và Gabriel (16) was conducted to measure the perceived academic stress of the participants, including pressure to perform, perception of workload and examinations, self-perception, and time restraint. The 5 positive items are rated from 1 (strongly disagree) to 5 (strongly agree), while scores for the 13 negative items are reversed. The total score is from 18 to 90, with a higher score indicating a lower level of perceived academic stress. The Cronbach's alpha was .60 with 30 participants.

The 3-item "Turnover Intention Scale" modified by Lin et al. (12) was conducted to measure turnover intention after graduation of the participants. The response to all items followed a 5-point Likert-rating scale ranging from 1 (strongly disagree) to 5 (strongly agree). The total score is from 3 to 15 and a higher score means greater intention to leave the nursing profession. The Cronbach's alpha coefficient was .7 in the pilot study with 30 nursing students.

Data were collected from April to May 2022. The researchers met the eligible participants in the classroom. Those who satisfied the inclusion criteria were explained about the study. Once they agreed to participate in the study, they were given a questionnaire to fill in the questions. The researchers immediately collected the questionnaire after completing it. Collecting data took approximately 15 minutes.

Data analysis was performed using SPSS version 20.0. Firstly, data were entered and double-checked for completeness of data. After that, descriptive statistics were used to describe demographic characteristics and all study variables. Then, the normality of turnover intention was tested by looking at the histogram of the variable. Because the histogram showed a normal distribution, an independent t-test and one-way analysis of variance were conducted to examine the difference in turnover intention between demographic variables.

Moreover, looking at the histogram of fear of COVID-19 and perceived academic stress indicated that these variables were normally distributed. Before conducting Pearson's correlation, another assumption of linearity between turnover intention and study variables was also checked by the scatterplots of two variables. The scatterplots showed that the relationship between turnover intention and study variables was linear. The assumptions of normality and linearity were satisfied; thus, Pearson's correlation coefficients were computed to examine the correlation between turnover intention with fear of COVID-19 and perceived academic stress with $p < .05$.

The Ethics Committee in Biomedical Research approved this study, Da Nang University of Medical Technology and Pharmacy, Da Nang, Vietnam (118/BB-HĐĐĐ) on March 2, 2022. All the participants were explained about the study, confidentiality, and the right to refuse or withdraw from the study. Informed consent was obtained before administering the questionnaire.

Results

Among 425 nursing students who participated in the study, most of them were female (93.4%). The percentage of first-year students was slightly higher than in other years. The majority of participants (73.6%) decided to study nursing according to their personal interests. Approximately 8.2% of the participants chose nursing as a career because of other reasons, such as failure to get into other university programs and the availability of job opportunities after graduation. In addition, 83.3% had preparation before applying to nursing school (Table 1).

Table 1. Demographic characteristics of the participants (n = 425)

Demographic characteristics	N	%
Gender		
Male	28	6.6
Female	397	93.4
Year of study		
1st year	123	28.9
2nd year	108	25.4
3rd year	100	23.5
4th year	94	22.2
The reason to study nursing		
Personal interest	313	73.6
Family desires	77	18.2
Other reasons	35	8.2
Preparation for nursing school		
Yes	354	83.3
No	71	16.7

As shown in Table 2, the mean score of fear of COVID-19 was 21.62 (SD=6.45). Regarding the perceived academic stress of the participants, the results showed a mean score of 52.07 (SD=7.59). Concerning the dimensions of perceived academic stress, the dimension with the highest mean score was time restraints (15.23 ± 2.32), followed by pressures to perform (13.93 ± 2.93).

Table 2. Fear of COVID-19, perceived academic stress, and turnover intention of the participants (n = 425)

Variables	Possible range	Actual range	Mean± SD
Fear of COVID-19	7 – 35	7 – 35	21.62 ± 6.45
Perceived academic stress	18 – 90	31 – 90	52.07 ± 7.59
Pressure to perform*	5 – 25	5 – 25	13.93 ± 2.93
Perception of workload and examinations*	4 – 20	4 – 20	9.95 ± 2.52
Self-perception*	4 – 20	5 – 20	12.95 ± 2.38
Time restraint*	5 – 25	8 – 25	15.23 ± 2.32
Turnover intention	3 – 15	3 – 15	9.19 ± 2.49

*Dimensions of perceived academic stress

In view of turnover intention, the sum scores ranged from 3 to 15 with a mean of 9.19 ± 2.49 (Table 2). Approximately one-third of the participants will look for another healthcare job that has no patient contact in the future, would not study nursing if given another chance, and often think of not staying in the nursing profession (Table 3).

Table 3. Responses for the turnover intention of the participants (n = 425)

Items	Strongly agree/Agree N (%)	Strongly disagree/Disagree/Neutral N (%)
Looking for a career without patient contact in the healthcare sector in the future	138 (32.5)	287 (67.5)
Not study nursing if I could choose again	137 (32.2)	288 (67.8)
Thinking of not going into the nursing profession in the future	132 (31.1)	293 (68.9)

In this study, turnover intention score was significantly different by year of study (F=15.315, p < .05). Those in the 4th year had the highest mean score of turnover intention. Inversely, the 1st year students had the lowest mean turnover intention score. Similarly, there was a significant difference between turnover intention and the reason to study nursing (F=10.957, p < .05). The participants who took the nursing program according to personal interest had a lower mean score of turnover intention than others. In addition, the mean score of turnover intention was statistically different between students who had preparation for nursing schools compared to those who did not (t=-2.587, p < .05). Table 4 presented the relationship between turnover intention and demographic variables.

Table 4. The association between demographic variables and turnover intention (n = 425)

Demographic variables	Turnover intention		
	M ± SD	t/F	p
Gender			
Male	9.61 ± 2.99	.909*	.364
Female	9.16 ± 2.46		
Year of study			
1st year	8.58 ± 2.43	15.315**	.000
2nd year	8.71 ± 1.97		
3rd year	9.14 ± 2.04		
4th year	10.61 ± 2.98		

The reason to study nursing			
Personal interest	8.86 ± 2.31		
Family desires	10.06 ± 2.73	10.957**	.000
Other reasons	10.22 ± 2.87		
Preparation for nursing school			
Yes	9.05 ± 2.47	-2.587*	.010
No	9.89 ± 2.51		

* T-test; ** F-test

As shown in Table 5, Pearson correlation analysis found a moderate correlation between turnover intention and perceived academic stress (r= -.325, p<.05). Because a higher score of perceived academic stress indicates a lower level of perceived academic stress, the result shows that students with a lower level of perceived academic stress are less likely to leave nursing career after graduation. In terms of the dimensions of perceived academic stress, turnover intention had a significant correlation with pressure to perform, perception of workload and examinations, and time restraint. There was no significant correlation between turnover intention and fear of COVID-19.

Table 5. Correlation between turnover intention and study variables (n= 425)

Variables	Turnover intention	
	r	***p***
Fear of COVID-19	.065	.178
Perceived academic stress	-.325	.000
Pressure to perform*	-.309	.000
Perception of workload and examinations*	-.296	.000
Self-perception*	-.063	.196
Time restraint*	-.287	.000

*Dimensions of perceived academic stress

Discussion

Nursing students are an important future nurse workforce with a tremendously important role in delivering healthcare services to the community. Career turnover intention can highly predict the probability of leaving the profession in nurses and nursing students. In the current study, the participants had an average score of turnover intention of 9.19 (SD=2.49). When comparing with a score range of 3 -15, this finding indicates that the participants have moderate turnover intention. The finding was similar to the previous study conducted in China which reported nursing students' mean score of 9.2 (SD= 2.5) (12). Our finding also showed that approximately one-third of the participants would not stay in the nursing profession in the future. This finding discloses an important message that there is a considerable number of students who may turn away from the nursing profession before graduation, resulting in a potential loss of nurses in the upcoming years. Therefore, retention strategies are urgently required to enhance students' engagement in the nursing program. Social and academic strategies have been shown to be effective in retaining nursing students in a program. These strategies should combine some important components such as mentorship, tutoring, study skills, psychological support, and student fundings (17).

This study identified three demographic factors affecting the turnover intention of the participants, including the year of study, the reason for studying nursing, and preparation for nursing school. According to the finding, the 4th year students have the highest mean score reflecting the greatest turnover intention, followed by the 3rd year, 2nd year, and 1st year, respectively. A similar finding was reported in a study previously conducted on Korean nursing students (18). It is possible that students at higher education levels may have more advanced subjects, more internship activities,

higher burnout, and more experiences as a nurse. Moreover, the proximity to the completion of the program may make students feel doubtful and uncertain when entering the labor market. These all may be the reasons behind students' intention to not pursue a nursing career in the future.

In this study, students who chose to study nursing based on their personal interest had a lower mean score of turnover intention, reflecting a lower likelihood of leaving the nursing profession than those who applied to nursing programs because of other reasons. Similarly, the average score of turnover intention was found to be lower among students who had preparation before signing up for nursing programs. These findings imply that students who started the nursing program with their interest or preparation are more likely to stay in the profession compared to others. As such, career orientation programs should be emphasized to help students clearly understand the profession before they select and apply to nursing schools. Choosing the right career will motivate students to make an effort during their studies as well as commit to a career after graduation.

Most importantly, this study found a significant correlation between turnover intention and perceived academic stress. The correlation coefficient shows a moderate negative relationship between the two variables. This result indicates that students with a lower mean score of perceived academic stress, reflecting a higher level of academic stress, had a greater intention to quit the nursing profession after graduation. This finding was consistent with previous studies in which students' commitment to nursing programs is hindered by a high level of stress (13,19). The prior studies also highlighted the negative influence of stress on turnover intention amongst nurses, particularly occupational stress (20,21). Regarding health science students, including nursing students, the source of stress mostly comes from academic activities (22). When students experience stress, they may not believe in their ability to succeed in the program. They may also think that studying nursing program is no longer the best choice (19). This may cause their intention to leave the profession upon graduation.

With regards to dimensions of perceived academic stress, the current study found that students' turnover intention was significantly correlated with pressure to perform, perception of workload and examinations, and time restraint, while its correlation with self-perception was not significant. Previous studies revealed several factors contributing to academic stress among health science students. The most mentioned factor was examinations and a high academic workload. High parental expectations, lack of adequate leisure time, and negative relationships with faculty members were other factors that compounded the stress for students (22). The impact of these dimensions of academic stress on students' career intention necessitates the need for nursing schools to review the form and timing of assessments and support services in order to reduce stress for nursing students.

In relation to the COVID-19 pandemic, although its impact on nursing career decisions was previously investigated in some countries, the reported findings were inconsistent. The current study found no correlation between fear of COVID-19 and career turnover intention in nursing students. This finding is in line with the study conducted in Taiwan reporting that nursing students' career decision-making behavioral intention was not affected by COVID-19 attitude. Although this study did not directly examine COVID-19 fear, COVID-19 attitude was measured through four dimensions, including emotional burden and hazard of COVID-19 (23). Likewise, nearly two-thirds of Chinese nursing students stated that COVID-19 has no impact on their perception of clinical nursing

work (24). Conversely, another study in China indicated that fear of COVID-19 had a significant effect on nursing students' turnover intention. Students who had a higher level of COVID-19 fear showed a greater intention of future career turnover (12). These inconsistent findings may be related to the pandemic control situation in each country. In Vietnam, during the fierce periods against COVID-19, all universities were closed across the country. Whilst the majority of healthcare students stayed home, a small number of them voluntarily participated in COVID-19 control activities, including nursing students. Those students were trained on COVID-19 prevention measures and were mainly assigned to the epidemiological investigation in the community (25). Students might have less burden on caring for COVID-19 patients compared to nurses. This might be one of the reasons that accounts for the unrelated relationship between fear of COVID-19 and students' career turnover intention. Furthermore, the current study was conducted in 2022 when the pandemic was well controlled by vaccination in Vietnam. As a result, the pandemic might no longer be serious compared to previous years (26). Therefore, fear of COVID-19 may not influence the career intention of nursing students.

The current study had some limitations that should be taken into consideration. Data were conducted at only one public university; thus, it may not represent a majority of nursing students in Central Vietnam. Additionally, this study examined the association between turnover intention and some selected factors. Hence, other important factors influencing students' turnover intention might have been overlooked, such as clinical experience satisfaction, life satisfaction, compensation, and recognition for the nursing profession.

Conclusion

The findings of the current study indicated that a considerable number of nursing students may leave the profession upon graduation. Students' turnover intention was significantly related to the year of study, the reason for studying nursing, and preparation for nursing school. Most importantly, this study highlighted the significant influence of academic stress on the turnover intention of nursing students. Those with a higher level of academic stress had a greater likely to turn away from a nursing career after graduation.

This study suggests that career orientation programs need to be addressed to help students understand the profession before choosing the educational path that befits their interests. In addition, it is necessary to provide more scholarships or support tuition fees in order to attract and retain students in the nursing profession. Since academic-related stress has a detrimental influence students' turnover intention, nursing schools should pay more attention to creating a friendly learning environment for students and establishing student support services such as psychological counseling, mentoring, and tutoring. Altering examination methodologies is also crucial to lessen student stress. Regarding nursing research, future studies should include nursing students in other regions of Vietnam to have a better understanding of turnover intention. Furthermore, the association between turnover intention and other factors needs to be clarified.

Conflict of interest

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

References

1. World Health Organization. State of the world's nursing 2020: Investing in education, jobs and leadership. [Internet]. Geneva: World Health Organization, 2020 [cited 2023 Mar 20]. Available from: https://www.who.int/publications/i/item/9789240 003279.

2. Lukewich J, Martin-Misener R, Norful AA, Poitras ME, Bryant-Lukosius D, Asghari S, Marshall EG, Mathews M, Swab M, Ryan D, Tranmer J. Effectiveness of registered nurses on patient outcomes in primary care: a systematic review. BMC Health Services Research. 2022 Dec;22(1):1-34. https://doi.org/10.1186/s12913-022-07866-x

3. Musy SN, Endrich O, Leichtle AB, Griffiths P, Nakas CT, Simon M. The association between nurse staffing and inpatient mortality: A shift-level retrospective longitudinal study. International Journal of Nursing Studies. 2021 Aug 1;120:103950. https://doi.org/10.1016/j.ijnurstu.2021.103950

4. International Council of Nurses. ICN policy brief- The global nursing shortage and nurse retention. [Internet]. Geneva: International Council of Nurses, 2021 [cited 2023 Mar 22]. Available from: https://www.icn.ch/sites/default/files/inline-files/ICN%20Policy%20Brief_Nurse%20Shortag e%20and%20Retention_0.pdf.

5. Park B, Ko Y. Turnover rates and factors influencing turnover of Korean acute care hospital nurses: A retrospective study based on survival analysis. Asian Nursing Research. 2020 Dec 1;14(5):293-9. https://doi.org/10.1016/j.anr.2020.09.001

6. Wang Y, Yuan H. What is behind high turnover: a questionnaire survey of hospital nursing care workers in Shanghai, China. BMC Health Services Research. 2018 Dec;18(1):1-7. https://doi.org/10.1186/s12913-018-3281-9

7. Viet Nam News. Measures needed to ease the nursing shortage. [Internet]. Hanoi: Viet Nam News, 2022 [cited 2023 Mar 22]. Available from: https://vietnamnews.vn/society/1351166/m easures-needed-to-ease-the-nursing-shortage.html.

8. Takase M. A concept analysis of turnover intention: Implications for nursing management. Collegian. 2010 Mar 1;17(1):3-12. https://doi.org/10.1016/j.colegn.2009.05.001

9. Falatah R. The impact of the coronavirus disease (COVID-19) pandemic on nurses' turnover intention: an integrative review. Nursing Reports. 2021 Oct 19;11(4):787-810. https://doi.org/10.3390/nursrep11040075

10. Tolksdorf KH, Tischler U, Heinrichs K. Correlates of turnover intention among nursing staff in the COVID-19 pandemic: A systematic review. BMC Nursing. 2022 Jul 4;21(1):174. https://doi.org/10.1186/s12912-022-00949-4

11. Kim J, Chae D, Yoo JY. Reasons behind generation Z nursing students' intentions to leave their profession: A cross-sectional study. INQUIRY: The Journal of Health Care Organization, Provision, and Financing. 2021 Mar;58:0046958021999928. https://doi.org/10.1177/0046958021999928

12. Lin Y, Hu Z, Danaee M, Alias H, Wong LP. The impact of the COVID-19 pandemic on future nursing career turnover intention among nursing students. Risk Management and Healthcare Policy. 2021 Aug 27; 2021:3605-15. https://doi.org/10.2147/RMHP.S322764

13. Zhao L, Su Y, Jiang N, Zhou F, Liao L, Liu Y. Changes in professional commitment of undergraduate nurse students before and after internship: a longitudinal study. BMC Medical Education. 2022 Apr; 22 (282);1-9. https://doi.org/10.1186/s12909-022-03364-0

14. Charan J, Biswas T. How to calculate sample size for different study designs in medical research?. Indian Journal of Psychological Medicine. 2013 Apr;35(2):121-6. https://doi.org/10.4103/0253-7176.116232

15. Nguyen HT, Do BN, Pham KM, Kim GB, Dam HT, Nguyen TT, Nguyen TT, Nguyen YH, Sørensen K, Pleasant A, Duong TV. Fear of COVID-19 scale—associations of its scores with health literacy and health-related behaviors among medical students. International Journal of Environmental Research and Public Health. 2020 Jun;17(11):4164. https://doi.org/10.3390/ijerph17114164.

16. Bedewy D, Gabriel A. Examining perceptions of academic stress and its sources among university students: The Perception of Academic Stress Scale. Health Psychology Open. 2015 Jul 29;2(2):2055102915596714. https://doi.org/10.1177/2055102915596714

17. Mitchell KM, Baxter CE, Gural DM, Chorney MA, Simmons-Swinden JM, Queau ML, Nayak N. Strategies for retention of nursing students: A scoping review. Nurse Education in Practice. 2021 Jan 1;50:102956. https://doi.org/10.1016/j.nepr.2020.102956.

18. Jung YM. Nursing students' career identity, satisfaction with major, and career stress by career decision type. Japan Journal of Nursing Science. 2020 Jan; 17(1): e12281. https://doi.org/10.1111/jjns.12281

19. Riley JM, Collins D, Collins J. Nursing students' commitment and the mediating effect of stress. Nurse Education Today. 2019 May 1;76:172-7. https://doi.org/10.1016/j.nedt.2019.01.018

20. Lee EK, Kim JS. Nursing stress factors affecting turnover intention among hospital nurses. International Journal of Nursing Practice. 2020 Dec;26(6):e12819. https://doi.org/10.1111/ijn.12819

21. Chegini Z, Asghari Jafarabadi M, Kakemam E. Occupational stress, quality of working life and turnover intention amongst nurses. Nursing in Critical Care. 2019 Sep;24(5):283-9. https://doi.org/10.1111/nicc.12419

22. Henderson RM, Chetty O, Gurayah T. Coping styles and sources of stress of undergraduate health science students: An integrative review. South African Journal of Occupational Therapy. 2021 Aug;51(2):29-38. https://sajot.org.za/index.php/sajot/article/view/732

23. Lin SC, Ni LF, Wang YM, Lee SH, Liao HC, Huang CY, Tseng YC. Prelicensure nursing students' COVID-19 attitude impact on nursing career decision during pandemic threat in Taiwan: a cross-sectional study. International Journal of Environmental Research and Public Health. 2021 Mar 22;18(6):3272. https://doi.org/10.3390/ijerph18063272

24. Shengxiao NI, Chao SU, Lei WA, Xia WA. The professional identity of nursing students and their intention to leave the nursing profession during the coronavirus disease (COVID-19) pandemic. Journal of Nursing Research. 2021 Apr 1;29(2):e139. https://doi.org/10.1097/jnr.0000000000000424

25. Tran BX, Vo LH, Phan HT, Pham HQ, Vu GT, Le HT, Latkin CA, Ho CS, Ho RC. Mobilizing medical students for COVID-19 responses: Experience of Vietnam. Journal of global health. 2020 Dec;10(2):020319. https://doi.org/10.7189/jogh.10.020319

26. Hoang V. The COVID-19 pandemic in Vietnam–success, crisis, and endemic: Key thresholds and lessons. Journal of Global Health. 2022 Nov 21;12:03065. https://doi.org/10.7189/jogh.12.03065