



Original Article

Impact of resilience, social support, and perceived health status on happiness among nursing students: A cross-sectional studyNguyen Ngoc Quynh Nga¹, Diep Thi Tieu Mai², Pham Thi Thuy², Tran Thi Tuyet Linh^{2*}¹Yen Bai General Hospital, Yen Bai, Vietnam²Faculty of Nursing, Da Nang University of Medical Technology and Pharmacy, Da Nang, Vietnam

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<http://npt.tums.ac.ir>**Keywords:**happiness;
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ABSTRACT

Background & Aim: Happiness is essential for the success of nursing students, but it is often challenged by academic, clinical, and personal stressors. The COVID-19 pandemic further disrupted nursing education, adversely affecting mental health and potentially impacting students' happiness. This study aimed to examine factors influencing nursing students' happiness in the post-pandemic era to inform interventions for improved well-being and future success.**Methods & Materials:** A cross-sectional study was conducted on 250 full-time nursing students at a university in Vietnam. A proportional sampling method was applied. The Brief Resilience Scale, Multidimensional Scale of Perceived Social Support, and Oxford Happiness Questionnaire were used to assess participants' resilience, social support, and happiness, respectively. The ANOVA test, Pearson's correlation coefficient, and multiple linear regression were employed to analyze data with a p-value less than 0.05.**Results:** The mean happiness score of nursing students was 3.99 (SD=0.51) out of 6. Reason for enrolling in nursing ($p=0.021$), satisfaction with the nursing field ($p<0.001$), perceived health status ($p<0.001$), resilience ($r=0.493$, $p<0.001$), and social support ($r=0.628$, $p<0.001$) were related to happiness. Perceived health status ($\beta=-0.214$, $t=-0.214$, $p<0.001$), resilience ($\beta=0.322$, $t=7.373$, $p<0.001$), and support from family ($\beta=0.361$, $t=5.316$, $p<0.001$) were predictors of happiness.**Conclusion:** The study revealed a moderate level of happiness among nursing students in the post-pandemic era. Key determinants of happiness included perceived health status, resilience, and family support. These findings emphasize the importance of institutions to prioritize interventions aimed at enhancing resilience, promoting healthy lifestyles, and strengthening family support systems.**Introduction**

Happiness is a fundamental human need, essential for overall well-being and quality of life (1). Research consistently shows that happiness enhances creativity, problem-solving, and social engagement (2, 3). These positive attributes contribute to overall life satisfaction, including better physical and mental health, and greater professional success (4).

For nursing and healthcare students, who often navigate stressful learning environments, happiness is particularly important (4). It directly impacts their academic performance, professional development, and hence improves the quality of care (5). Happier nursing students tend to be more engaged, compassionate, and motivated, whereas unhappiness can lead to

stress, burnout, and difficulty forming strong relationships (5).

Despite its significance, studies indicate that nursing students often experience low levels of happiness. For instance, a study in Iran reported a mean happiness score of 40.73 (SD = 11.20) out of 87 (5), while studies in Korea and India reported moderate scores of 4.24 (SD= 0.62) and 3.96 (SD= 0.59) out of 6, respectively (6, 7). Various factors have been proven to influence happiness among nursing students. Social support, resilience, perceived health status, adaptation to college life, motivations for pursuing nursing, and satisfaction with their major positively impact happiness, while stress negatively affects it (6). These findings collectively emphasize the importance of a

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holistic approach for understanding and enhancing the happiness of nursing students.

The COVID-19 pandemic has profoundly disrupted healthcare systems and education, worsening nursing students' happiness. Before the pandemic, university students faced declining happiness due to career pressures, academic demands, and social transitions (8). COVID-19 further diminished students' happiness by limiting social interactions and disrupting academic and professional progress, leading to feelings of isolation, burnout, and anxiety (9). Combined with the ongoing pressures of the healthcare system, these challenges have significantly affected students' happiness and fulfillment. As they transition into professional roles, the lasting effects of the pandemic continue to shape their happiness, underscoring the urgent need for sustained mental health support and resources (10).

During the COVID-19 pandemic, the Vietnamese Ministry of Education and Training and universities implemented measures such as isolation, school closures, and transition to digital learning platforms to cope with the pandemic. These measures, although necessary, have had a significant impact on students' well-being. Vietnamese nursing students have experienced high levels of stress, anxiety, and depression during the pandemic and remote learning (11). Despite the challenges faced by Vietnamese nursing students, there is little research on their happiness. Based on our literature review, research on happiness has focused on students in general. One study found that only 13.5% of students felt happy, highlighting an important gap in understanding their well-being (12).

While the COVID-19 pandemic has subsided, the rapid advancements in nursing education, including the increased reliance on technology and distance learning, have significantly altered the learning environment (13). Concurrently, evolving professional demands and changing perceptions of work have created new challenges for nursing students (14). Adapting to this dynamic context is crucial for student success, and assessing nursing students' happiness can provide

valuable insights into their capacity for adaptation and resilience. Therefore, this study aimed to determine the level of happiness among nursing students and identify its predictors in the post-pandemic era to inform interventions for improving well-being and future success.

Methods

Study design

A cross-sectional study was conducted in Danang, Vietnam.

Sample and sampling

The study population comprised 250 full-time nursing students enrolled in the bachelor's program at a university during the 2021–2022 academic year. Inclusion criteria were nursing students who were actively enrolled at the time of the study. Students having mental health issues, such as anxiety or depression, were excluded. The sample size was determined using the formula $n = Z^2 \frac{\sigma^2}{d^2}$, where $Z^2 = 1.96$ corresponds to a 95% confidence level, $\delta = 0.61$ as the standard deviation, and $d = 0.08$ representing the confidence interval around the point estimate. The initial calculated sample size was 223. To account for potential sample loss, an additional 10% was included, resulting in a final sample size of 250 participants.

A two-step proportional sampling method was used to enhance sample representativeness and minimize selection bias. In step 1, the sample size for each class within the nursing field was determined, with each class representing a stratum. The sample size for each stratum was calculated using the formula $n_i = (n * N_i) / N$, where n_i denotes the sample size for each class, n represents the overall sample size, N_i is the number of students in each class, and N is the total number of students in the nursing program. In step 2, the required number of samples from each class was selected by generating random numbers using the Research Randomizer website (<https://www.randomizer.org>), based on the student number list for each class.

Measurements

Social-demographic questionnaire

The social-demographic questionnaire included four questions assessing participants' year of study, reasons for enrolling in nursing, satisfaction with the nursing program, and perceived health status.

Brief Resilience Scale

The Brief Resilience Scale (BRS), developed by Bruce W. Smith et al. in 2008, was used to assess students' resilience (15). It comprises six items rated on a 5-point Likert scale ranging from 1 (completely disagree) to 5 (completely agree), where higher scores indicate greater resilience. The original scale demonstrated a Cronbach's alpha of 0.91

Multidimensional Scale of Perceived Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS), developed by Zimet in 1988, was used to measure students' perceived social support (16). This scale consists of 12 items divided into three subscales: (1) support from relatives (4 items), (2) support from family (4 items), and (3) support from friends (4 items). Responses were recorded on a 7-point Likert scale, ranging from 1 (mostly disagree) to 7 (mostly agree), with higher total scores reflecting greater perceived social support. The original MSPSS demonstrated a Cronbach's alpha of 0.91.

Oxford Happiness Questionnaire

The Oxford Happiness Questionnaire (OHQ) was used to assess students' happiness (17). The scale includes 29 items that cover aspects of happiness. Each item was rated on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (completely agree). Notably, 12 items (1, 5, 6, 10, 13, 14, 19, 23, 24, 27, 28, and 29) were reverse-scored. The total score was divided by 29, resulting in a final score ranging from 1 (lowest) to 6 (highest), with higher scores indicating greater happiness.

Translation and Validation

Permission was obtained from the developers for using BRS, MSPSS, and OHQ in this study. These scales were subsequently translated into Vietnamese following the back-translation procedure described by Cha et al. (18). The translated versions were then subjected to content validity assessment by an expert panel, including three nursing educators and two mental health professionals. The content validity index (CVI) was determined for each scale: BRS (CVI = 0.97), MSPSS (CVI = 0.98), and OHQ (CVI = 0.96). A pilot study with 30 nursing students was conducted to assess the reliability of the translated instruments. Internal consistency reliability, assessed using Cronbach's alpha, was satisfactory for all scales: BRS ($\alpha = 0.79$), MSPSS ($\alpha = 0.97$), and OHQ ($\alpha = 0.91$). Data from the pilot study were not included in the main study analysis.

Procedures

A face-to-face interview using a structured questionnaire was conducted to collect data. Participants were recruited from student lists (names, classes, emails, phone numbers) provided by the Student Management Department. Before conducting the interview, the participants were informed of the purpose of the survey and their right to withdraw at any time without consequence. Interviews were conducted only after participants agreed and signed a consent form. Each interview lasted 15-20 minutes. Interviewers received 2 hours of training on bias, neutral questioning, and consistent evaluation. Collected data were kept confidential and anonymous in password-protected files to protect the privacy of the participants. All identifying information was removed before analysis.

Data analysis

Data were analyzed using SPSS version 26.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics (frequencies and percentages) were employed to summarize the sample characteristics. One-way ANOVA was

conducted to compare mean happiness across groups defined by year of study, reasons for enrolling in nursing, satisfaction with the nursing field, and perceived health status. Pearson's correlation coefficient was used to assess the correlation between resilience, social support, and happiness. A multiple linear regression model was constructed to identify predictors of happiness among nursing students.

Before conducting multiple linear regression, its assumptions were assessed. The normality of residuals was confirmed via visual inspection of a histogram. Multicollinearity was evaluated using the Variance Inflation Factor (VIF). The observed VIF values ranged from 1.10 to 4.55, indicating that the assumption of no multicollinearity was met (19). Although the VIF of 4.55 for family support is below the commonly used thresholds of 5 or 10, it suggests that the effect of family support should be interpreted in the context of the other variables in the model. A Durbin-Watson statistic close to 2 indicates no evidence of autocorrelation. Finally, homoscedasticity was confirmed by visual inspection of a scatterplot of residuals. Independent variables that have a statistically significant relationship with the dependent variable in the univariate analysis were included in the model. A p-value of less than 0.05 was considered statistically significant,

corresponding to a 95% confidence level. This common choice balances precision and the risk of error.

Ethical considerations

The study was conducted in accordance with the ethical guidelines of the Declaration of Helsinki. The study protocol was approved by the Research and Ethics Committee at X university (No.34/CT-HDDD, dated 03/02/2022). Participants were provided a detailed explanation of the study's purpose, objectives, and procedures. Informed consent was obtained from all subjects.

Results

Characteristics of the participants

A total of 250 nursing students participated in this study. Of these, 97.1% were female and 31.2% were first-year students. Nearly half (42.4%) of students reported personal fulfillment as a reason for enrolling in nursing. Dissatisfaction with the nursing field was expressed by 8.4% of the participants. Regarding perceived health status, 94.8% of students self-reported being in good or normal health. The mean score of age score was 20.38 ±1.15, ranging between 19 and 23 (Table 1).

Table 1. Characteristics of participants (n=250)

Characteristics	n	%
Gender		
Male	07	2.9
Female	243	97.1
Year of study		
First-year	78	31.2
Second-year	69	27.6
Third-year	51	20.4
Fourth-year	52	20.8
Reasons for enrolling in nursing		
Personal fulfillment	106	42.4
Entrance exam score	52	20.8
Advice from others	51	20.4
Graduate employability	20	8.0
Other reasons	21	8.4
Satisfaction with the nursing field		
Satisfaction	97	38.8
Normal	132	52.8
Dissatisfaction	21	8.4
Perceived health status		
Good	100	40.0
Normal	137	54.8
Not good	13	5.2

Age (year): Mean±SD (Min-Max) = 20.38 ± 1.15 (19-23)

Resilience, social support, and happiness among participants

Participants demonstrated a mean resilience score of 3.15 (SD = 0.58) on a 5-point

Likert scale and a mean social support score of 5.26 (SD = 0.98) on a 7-point Likert scale. The overall mean happiness score was 3.99 (SD = 0.51) on a 6-point Likert scale (Table 2).

Table 2. Distributions of resilience, social support, and happiness among participants (n=250)

Variables	Mean	SD	Min	Max	Range
Resilience	3.15	0.58	1.50	5.00	1-5
Social support	5.26	0.98	1.42	7.00	1-7
Support from friends	5.13	1.07	1.00	7.00	1-7
Support from family	5.47	0.99	1.00	7.00	1-7
Support from relatives	5.19	1.09	1.00	7.00	1-7
Happiness	3.99	0.51	1.86	5.38	1-6

Abbreviations: M, mean; SD, standard deviation.

Factors associated with happiness among participants

Univariate analysis shows that there were significant differences in happiness

according to the reason for enrolling in nursing (p=0.021), satisfaction with the nursing field (p<0.001), and perceived health status (p<0.001) (Table 3).

Table 3. Univariate analysis of demographic factors associated with happiness (n=250)

Characteristics	Happiness			
	Mean	SD	F-value	p-value
Gender				
Male	3.89	0.59	0.249	0.618
Female	3.99	0.51		
Year of Study				
First-year	4.02	0.48	0.245	0.87
Second-year	3.95	0.45		
Third-year	3.97	0.39		
Fourth-year	3.99	0.72		
Reasons for enrolling in nursing				
Personal fulfillment	4.07	0.50	2.049	0.021
Entrance exam score	3.88	0.60		
Graduate employability	4.08	0.50		
Advice from others	3.99	0.39		
Other reasons	3.71	0.51		
Satisfaction with the nursing field				
Satisfaction	4.11	0.46	14.545	<0.001
Normal	3.96	0.44		
Dissatisfaction	3.48	0.72		
Perceived health status				
Good	4.21	0.45	26.762	<0.001
Normal	3.87	0.45		
Not good	3.40	0.70		

Abbreviations: M, mean; SD, standard deviation.

Table 4 shows positive correlations between happiness and both resilience (r=0.493, p< 0.001) and social support (r=0.628, p< 0.001). Additionally, happiness was found to be positively associated with

each category of social support, including support from family (r= 0.619, p<0.001), support from friends (r= 0.545, p< 0.001), and support from relatives (r= 0.585, p< 0.001).

Table 4. Univariate analysis of resilience and social support associated with happiness (n=250)

Variables	Happiness	
	r	P-value
Age	-0.039	0.541
Resilience	0.493	<0.001
Social support	0.628	<0.001
Support from family	0.619	<0.001
Support from friends	0.545	<0.001
Support from relatives	0.585	<0.001

Predictors of happiness among participants

A multiple linear regression analysis was conducted to investigate the determinants of happiness among nursing students. The overall regression model was found to be statistically significant ($R^2=0.580$, $F(7, 242)=47.706$, $p<0.000$). Several predictive

variables were significantly associated with students' happiness, including perceived health status ($\beta=-0.214$, $t=-0.214$, $p<0.001$), resilience ($\beta=0.322$, $t=7.373$, $p<0.001$), and support from family ($\beta=0.361$, $t=5.316$, $p<0.001$). Collectively, these variables explained 56.8% of the variance in the happiness scores of nursing students (Table 5).

Table 5. Multivariate linear regression analysis of factors associated with happiness (n=250)

Variables	B	SE	β	t	p-value
Constant	2.073	.202	-	10.289	.000
Reasons for enrolling in nursing	0.010	.017	0.028	0.59	0.556
Satisfaction with the nursing field	-0.055	.041	-0.067	-1.359	0.175
Perceived health status	-0.191	.040	-0.214	-4.76	<0.001
Resilience	0.285	.039	0.322	7.373	<0.001
Support from family	0.185	.035	0.361	5.316	<0.001
Support from a friend	0.009	.040	0.019	0.234	0.815
Support from relatives	.065	.042	0.138	1.558	0.121
Model	Square $R^2 = 0.580$, Adjusted $R^2 = 0.568$, $F(7, 242) = 47.706$, $p < 0.001$				

Abbreviations: β , regression coefficients;

Discussion

This study aimed to investigate the level of happiness among nursing students in the post-pandemic era and to identify the factors influencing their happiness. The findings revealed a moderate level of happiness among the participants. Univariate analyses identified several factors associated with happiness, including reasons for enrolling in nursing, satisfaction with the nursing field, perceived health status, resilience, and social support. However, multivariate regression analysis indicated that only perceived health status, resilience, and family support were the most significant predictors of nursing student happiness.

The mean happiness score for nursing students in this study, as interpreted through the OHQ, suggests a neutral level of overall well-being. These findings align with a previous study conducted in India (7). However, the mean happiness score in this study was slightly lower than that reported among Korean nursing students (4.24 ± 0.62) (6). These results underscore the need for

nursing educators to implement strategies to enhance the overall well-being of nursing students, which may positively impact their academic and clinical performance.

This study found a statistically significant difference in mean happiness scores among nursing students based on their satisfaction with the nursing field. Students reporting satisfaction levels exhibited greater happiness compared to those reporting normal feelings or dissatisfaction. These findings align with previous research demonstrating a positive association between academic satisfaction and overall well-being (6). Such satisfaction has been linked to enhanced learning experiences, improved academic performance, and more informed career decisions, ultimately contributing to increased happiness.

This study revealed a significant association between happiness and motivations for enrolling in nursing. Students driven by personal fulfillment and graduate employability reported significantly higher happiness levels compared to those influenced

by entrance exam score, advice from others, or other reasons. This suggests that intrinsic motivation and career-oriented aspirations positively correlate with students' well-being. These findings align with previous studies (6, 20), supporting the notion that a clear understanding and interest in the nursing profession contribute to increased students' happiness.

Perceived health status significantly influenced happiness among the nursing students in this study. Students reporting good health demonstrated significantly higher happiness scores. These findings are consistent with prior research among Korean nursing students (21) and a study conducted in Turkey, which also indicated that perceived general health status affects student happiness (22). Indeed, serious illnesses, permanent disabilities, and mental health disorders are frequently associated with sustained negative effects on happiness (23). Consequently, improvements in student health status are likely to positively impact their overall happiness.

Resilience was a significant predictor of nursing students' happiness, consistent with prior research demonstrating this positive association among students (24). Those with greater resilience are better equipped to manage stress and adversity, leading to reduced distress and increased happiness (25). The demanding nature of healthcare education, compounded by pandemic-related stressors as heightened anxiety, witnessing patient suffering, life disruptions, likely explains this relationship. Resilience mediates the negative effects of pandemic-associated stress on life satisfaction and psychological well-being in nursing students (26). Future research should explore interventions to enhance resilience and happiness in this population.

Consistent with a previous study (6), social support correlated significantly with happiness among nursing students. This connection is likely mediated by the positive influence of social support on self-confidence, self-esteem, goal attainment, life satisfaction, and ultimately health and happiness (27). By receiving social support, people are provided with tangible psychological resources to cope

with stressful life conditions and daily problems, leading to greater happiness (28). However, in the present study, only family support emerged as a significant predictor. This may reflect the central role of family in mitigating emotional and behavioral difficulties and fostering prosocial behaviors among Vietnamese adolescents (29). Furthermore, the COVID-19 pandemic and associated lockdowns likely shifted reliance toward family as a primary support source, even for individuals who previously depended more on friends or extended relatives (30). This could explain the strengthened association between family support and happiness observed in this post-pandemic sample.

The COVID-19 pandemic has had a profound impact on mental health globally, including in Vietnam. The pandemic had disrupted social connections, increased economic uncertainty, and heightened stress levels (9). Our findings suggest that resilience and family support may be particularly important protective factors in the post-pandemic era, helping individuals to cope with ongoing challenges and maintain their happiness and well-being. The pandemic may have also reinforced the importance of family bonds in Vietnamese culture, further strengthening the link between family support and happiness.

This study has several limitations. First, the data were collected from a single university, potentially limiting the generalizability of our findings to the broader population of nursing students. Second, the construct validity of the instruments requires further investigation. While multicollinearity was assessed and deemed not to be a major concern (VIF for family support = 4.55), the shared variance among predictors, particularly family support and likely related constructs, may affect the precision of individual effect estimates. Future research should address these limitations by including more diverse samples from multiple institutions and conducting thorough construct validation of the instruments, potentially employing techniques such as factor analysis to disentangle the relationships among related variables.

Conclusion

This study revealed a moderate level of happiness among nursing students. Perceived health status, resilience, and family support were significant determinants of happiness among nursing students. These results provide educators and institutions with insights to implement interventions geared towards enhancing student happiness. These interventions should encompass strategies addressing both internal and external aspects to promote a comprehensive approach to well-being.

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Conflict of interest

The Authors declare that there is no conflict of interest

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