

Can We Predict Turnover Intention in Nursing Students? An Exploration of the Relationship Between Resilience, Burnout and Their Relationship with Future Turnover Intention

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Abstract

Introduction:

Globally nursing is deemed a demanding profession. Recently, attention has been placed on the psychological well-being of employed nurses. Since nursing students are the future of the nursing workforce, it is essential to advance our understanding of the role of resilience in decreasing burnout and future turnover intention in nursing students.

Aim

The study aimed to assess the levels of resilience and burnout, examine the relationship between the two measures, and to determine the relationship between the two measures with future turnover intention and participants' demographics.

Methods

A cross-sectional descriptive correlational study was conducted using an online survey on 409 undergraduate nursing students from three large nursing institutions in West Bank-Palestine. The study used The Connor-Davidson Resilience Scale (CD-RISC 10), The Burnout Scale, and a demographic data sheet.

Results

Moderate levels of resilience and burnout were found among the participants. The analysis revealed a negative correlation between resilience and burnout ($r = -0.35$). In addition, the study findings showed that almost half of the students (46.9%) were not satisfied with their major when they joined the nursing program, and half of the students (50.1%) intended to leave nursing profession in the future. In this study, higher resilience was associated with male gender, wanting to study nursing, playing exercise/sports, working, living on campus, receiving support from friends and family, intention to stay in the nursing profession, and studying for a week or more of the exam. Whereas not receiving support from family & friends, not exercising, smoking, intend to leave nursing profession, higher academic level, lower GPAs, studying an hour or less daily, and studying in a day or less of the exam were all associated with higher burnout.

Conclusion

Resilience in nursing students might play an important role in decreasing global nursing shortage by enhancing academic success and decreasing future intention to leave and burnout.

Background

The obligations and the physical and psychological demands innate in nursing work have been associated with vulnerability to burnout [1, 2]. A psychological state characterized by emotional exhaustion and withdrawal from one's job (cynicism) [3]. Abundant studies have focused on burnout among health students, mainly nursing students [4, 5, 6] and the levels of burnout revealed are alarming since this syndrome can disrupt professional growth, compromise patient safety, and have serious consequences on student's physical and mental health, such as sleep disturbances, depressive symptoms, suicidal ideation, and drug use [7, 8, 9].

On the other hand, Nursing turnover is an abstraction that involves everything from resigning or transferring within a healthcare organization to leaving the profession as a whole [10]. Turnover intention is deemed as one of the struggles that several health-care organizations face, leading to inadequate nurse staffing, elevated work stress, and job dissatisfaction [11, 12]. Among the many interrelated factors that impact why nurses in common intend to leave the profession, burnout is one that has frequently been found [13, 14]. Turnover intention was widely studied in nursing; however, few studies were carried on nursing students. In a Swedish population-based study of three separate cohorts 10% (in two cohorts) and 20% (in the third cohort) of new graduates strongly intended to leave the profession one year after graduation [15]. Kovner and Djukic [16] have reported that in the United States more RN graduates left their first nursing job (26%) than nursing profession (2%) during the first two years in career. In South Korea, it was found that 17.6% of the nursing students had turnover intention within 2 years of employment [17].

Individuals' resilience is defined as their capacity to bounce back or cope well with stress when faced with adversity, especially when recovering from extremes of trauma, deprivation, danger, and severe disturbance [18, 19]. Cyrulnik adds that resilience is an individual's, 'ability to succeed, to live and to develop in a positive way despite the stress or adversity that would normally involve the real possibility of a negative outcome' [20]. Empirical evidence demonstrates that resilience enables individuals to cope successfully and recover quickly from adverse circumstances [21]. Results from epidemiological studies showed that in nursing, resilience is an important attribute of a nurse to survive and adapt to stressful working environments, optimize personal ability and establish supportive systems [22, 23]. Literature showed that resilience was negatively associated with turnover intention and burnout. Alameddine et al., [24] in his study in Lebanon revealed that Nurses' resilience was positively associated with job satisfaction and negatively associated with intention to quit and exposure to violence. Whereas Guo et al. [23] in his study on 1,061 Chinese nurses revealed that a lack of resilience was a strong predictor of burnout ($r = 0.2-0.4$, $p.001$), and low levels of individual resilience was found to be associated with higher levels of emotional exhaustion, cynicism, and reduced professional efficacy. Similarly, Kutluturkan et al., [25] in his study discovered a negative relationship between resilience and burnout.

International and national studies have been conducted to investigate the relationship between resilience and burnout in nursing; however, few studies were carried out on nursing students and even fewer studies investigated turnover intention in undergraduate nursing students. Therefore, the aim of this study is to investigate the relationship between burnout and future turnover intention with the mediating effect of resilience.

Methods

Study Design and Setting

This cross-sectional descriptive correlational study was conducted among undergraduate nursing students from different academic years in West Bank-Palestine. In order to consider the sample from different representative areas of the West Bank with varying demographic backgrounds that reflected the nursing student population as a whole. The setting for this study included three large universities. From the South-Bethlehem University; from the middle-Birzeit university; from the North- An najah National university.

Participants and Sampling

The sample size for this study was calculated based on 95% CI and 5% margin of error by using the Raosoft sample size calculator, and the recommended sample was 320 participant. All students within the baccalaureate nursing program from the mentioned nursing universities were given the opportunity to participate in the study.

Instruments and Data Collection

Three instruments were used in this study: The Connor and Davidson Resilience Scale (CD-RISC 10) was used to measure resilience, The Burnout Scale was taken from the Professional Quality of Life Scale Version 5 (ProQoI5) to measure burnout, and a demographic data sheet developed by the primary researcher was used to gather demographic data. High reliability, stability, and construct validity of the three measures have been confirmed in different studies. The Arabic versions of the three instruments were chosen because the study participants were proficient in Arabic and the measures were validated in the Arabic language.

Institutional Review Board approval was obtained from An-najah National University prior to data collection. A pilot study was conducted on 5% of the sample size (n=16) of undergraduate nursing students to determine the clarity of the questionnaire, and to estimate the time needed. Furthermore, the internal consistency for the scales was measured using the Cronbach's alpha. The scale analysis revealed a Cronbach's alpha 0.937 for resilience, and 0.759 for the burnout measure. Overall, the final survey appeared to be well-designed, easy to score, easy to interpret, and require less than 10 minutes to be filled. Due to the COVID-19 pandemic and the transition to online learning, it was difficult to reach all nursing students manually. Therefore, in order to give an equal opportunity to all nursing students to participate in the study, the researcher e-mailed the three universities to participate in the study after explaining the necessary details, and after the universities agreed to participate in the study, the researcher mailed the link of the electronic survey to the universities, and they distribute the questionnaire electronically through university portals, and the data was collected from 31st May-29th June 2021.

Data Analysis

After completed surveys were reviewed for missing data, the data were analyzed using the IBM SPSS Statistics version 28. Descriptive and inferential statistics such as Pearson correlation test was used to determine relationship between the two variables resilience, and burnout. Independent samples t-test, analysis of variance (ANOVA), and post hoc analysis were used to determine the relationship between the demographic variables and main variables of the study.

Results

Sociodemographic characteristics

A total of 409 nursing student completed the study survey. The socio-demographic profile of the participants is shown in Table 1. The majority of the participants were female students 68.2%. 46.9% reported they did not want to study nursing when they joined the university, and 50.9% reported they not view themselves working in nursing in the future and intend to leave nursing profession at a point of their lives.

Table 1: Participants' Demographics

Independent Variables	The type of Answer	Frequency (%)
The university that the student is enrolled at	An-Najah National University	220 (53.8%)
	Birzeit University	133 (32.5%)
	Bethlehem University	56 (13.7%)
	Total	409 (100%)
Academic Year	First	131 (32%)
	Second	98 (24%)
	Third	89 (21.8%)
	Fourth	91 (22.2%)
Gender	Male	127 (31.1%)
	Female	279 (68.2%)
	Prefer not to answer	3 (0.7%)
GPA (Grade Point Average)	A (88-100)	44 (10.8%)
	B (80-87.9)	116 (28.4%)
	B- (76-79.9)	110 (26.9%)
	C (70-75.9)	83 (20.3%)
	C- (65-69.9)	48 (11.7%)
	Less than C-	8 (2%)
Wanted to study nursing when I joined the study (satisfied)	Yes	217 (53.1%)
	No	192 (46.9%)
I see/ view myself working in the nursing profession all my life	Yes	201 (49.1%)
	No	208 (50.9%)
Smoking cigarettes or hookah	Yes	123 (30.1%)
	No	286 (69.9%)
Doing Sports/ Exercise	Yes	204 (49.9%)
	No	205 (50.1%)
Working while studying	Yes	128 (31.3%)
	No	281 (68.7%)
Living in Campus/ Dorm	Yes	83 (20.3%)
	No	326 (79.7%)
Receiving support from family and friends	Yes	307 (75.1%)
	No	102 (24.9%)
Average daily study hours	An hour or less	119 (29.1%)
	2-3 Hours	138 (33.7%)
	4 Hours	75 (18.3%)
	More than 4 Hours	77 (18.8%)
The method usually used to prepare for an exam	Start Studying a week or more before the exam	66 (16.1%)
	Start Studying days before the exam	223 (54.5%)
	Start Studying a day or less before the exam	120 (29.3%)

Note. This table reviews the participants' demographics (Frequencies and Percentages); university, academic year, gender, GPA, wanted to study nursing, viewing self-working in nursing lifelong, smoking, exercise, working, residence, receiving support, daily study hours, and method used to prepare for an exam

Levels of and Correlation Between Resilience and Burnout

The mean of resilience was (28.51), and the standard deviation was (6.72). 202 (49.4%) had average levels, 39 (9.5%) had low levels, whereas 168 (41.1%) had high resilience levels. The mean of burnout was (25.32), and the standard deviation was (6.92). 209 (51.1%) had average levels, 113 (27.6%) had low levels, whereas 87 (21.3%) had high levels of burnout.

The Person Correlation analysis revealed an inverse correlation between burnout and resilience ($r = -0.35$).

Significant Differences in Resilience and Burnout

The results showed that being a male ($p = 0.040$), wanted to study nursing when joined the university ($p = 0.008$), intend to stay in the nursing profession in future ($p = 0.001$), playing exercise ($p = 0.001$), working ($p = 0.005$), living in campus ($p = 0.024$), receiving support from friends and family ($p = 0.001$), and start studying a week or more of the exam ($p = 0.001$) were associated with higher resilience with significant differences.

Regarding the burnout measure, the results showed that students who play exercise ($p = 0.001$) and receive support from their friends and family ($p = 0.001$) had lower burnout with significant differences. In comparison, students who were males ($p = 0.003$), smokers ($p = 0.001$), students intend to leave nursing profession in future ($p = 0.001$), higher academic year (third- and fourth-year students) ($p = 0.015$), low GPA ($p = 0.027$), study an hour or less on a daily basis ($p = 0.007$), and start studying a day or less of the exam ($p = 0.001$) were associated with higher burnout with significant differences.

Discussion

The results showed that most of the participants had an average resilience scores. The mean of resilience in this study was similar to the mean of resilience in 194 Indian students, which was 26.31 ± 6.28 [26]. However, the mean of resilience in this study was low compared to other studies that used the same measure. For example, the mean of 240 nursing students from Australia was (37 ± 7) [27], the mean of 439 nursing students from Saudi Arabia was (32.26 ± 5) [28], and over 81% of nursing students sample in Egypt were highly resilient [29]. As a result, the findings of this study may be attributed to the stressful academic and clinical environment in Palestine, especially since the data was collected during the COVID-19 pandemic.

This study revealed that the participants had average level of burnout, whereas 21.3% of the sample had high level of burnout. The high level of burnout in this study is concerning compared with the findings in other studies. Abram & Jacobowitz [30] found that the mean of burnout using the same measure was 23 in 119 nursing students from the US. Lopes & Nihei [31] found that 6% of 284 nursing students from Brazil presented high burnout. Quina Galdino et al., [32] found that 10.5% of 114 nursing students from Brazil had indicative of burnout syndrome. The burnout in this study was considered high compared with burnout in registered nurses working in Arabic and surrounding countries. Alshawish & Nairat [33] found that the prevalence of burnout was 10.6% among 207 nurses and midwives working in the Palestinian governmental primary health care centers in the north of the West Bank. In addition, Al Barmawi et al., [34] found in their study in Jordan that most nurses had low burnout. However, higher burnout compared to those in our study was found in a longitudinal survey by Rudman & Gustavsson [35] who revealed high burnout in Swedish nursing students (from 30–41%) across three years in higher education. An increase in depressive mood and less fulfillment with life, arising stress in academic, clinical, and personal life, online learning, and the consequences of the Covid-19 pandemic can be attributed to the high level of burnout.

The findings in this study revealed an inverse correlation between burnout and resilience ($r = -.35$). This finding is congruent with the findings in previous literature in which burnout negatively correlated to resilience ($r = -0.55, p < .01$) (Rios-Risquez et al. 2016), ($r = -0.472, P < 0.001$) [27], ($r = -.486, p < .01$) [36].

The unfortunate findings in this study revealed that almost half of the students were not satisfied when they joined the nursing program, and half of the students intend to leave nursing profession in the future. On the other hand, students who intend to stay in the nursing profession had higher resilience and lower burnout. According to Flinkman et al., [37] literature review, nurses' intention to leave the profession varied from 4–54% across international studies. A study conducted in South Korea by Kim et al., [17] revealed that 17.6% of 3rd and 4th nursing students had turnover intention within two years of career. Additional study in China revealed that half of the participants (49.1%) reported they would not choose to be on a nursing course if given a choice, 45.4% thought of not going into the nursing profession in the future, and 23.7% considered entering a healthcare industry that has zero contact with patients [38]. Ulupinar & Aydogan [39] found that 42.5% ($n = 428$) of new graduate nurses in the first years of their career had considered leaving nursing. In Sweden, 10–20% of fresh graduates have considered leaving the profession [15]. In the Arabic counties, no studies were found regarding the intention to leave among undergraduates. The findings of this study are unfortunate, students reported a higher percentage of not viewing nursing as a lifelong career before actually starting to practice nursing than those in previous studies who intended to leave after being employed. Students are expected to have the desire to pursue their dream and study their major based on their preferences. Academic and clinical stress, poor academic performance [40], low satisfaction about their field of study [41], changes in health [42], low resilience [43], online learning [44], unrealistic job expectations, poor work conditions, demands exceeding resources, increased work hazards, insufficient autonomy, and control over practice [45, 46, 47, 48]. These all considered reasons behind nursing students' intention to leave nursing profession in Palestine.

The results also showed that male nursing students have higher resilience compared to females. The survey findings are in tandem with findings of previous research [24, 49]. Boardman et al., [50] found that the heritability of resilience is higher among men than women. This implies that genetic factors play an essential role in heritable resilience to environmental stressors, as mediated by more proximate measures of psychological functioning. This study demonstrates that gender differences in resilience factors are influenced by the idea that men and women have unique personality traits that influence how they cope with adversity. For instance, in Arabic countries, men tend to communicate less and are taught to suppress their emotions during adversity as they receive less help and empathy than women who express more and earn more empathy and other forms of support. In addition, women are more likely to rely on familial and community protective factors, while men depend more on individual protective factors [51].

In this study, students who were working parallel to their nursing studies had higher resilience. Discussion on workers' work-life balance has been ongoing since the 1980s. Maintaining a good work and life balance is one of the progressing issues academics face in higher education institutions [52]. Ching & Cheung [53] found that having a paid job predicted resilience. Working aids in developing resilience by fostering competence in the face of, and professional growth following, workplace adversity [54]. In addition, students who exercise/ play sports had higher resilience, and lower burnout than those who do not exercise/play sports. Many studies have found that physical activity/exercise is one frequently mentioned factor for promoting resilience [55, 56]. The healthy weight of physical activity on resilience can be attributed to that it can induce positive physiological and psychological improvements, guard against the effects of stressful events, and minimize several neurological diseases [57]. Students who live on campus had higher resilience; this finding was consistent with the study by Dawson & Pooley [58], which revealed that perceived parental autonomy support in first-year university students was associated with higher resilience. Perceived parental autonomy support enables students to rely on themselves, make their own decisions, encouraging them to explore, find, and decide based on their interests, values, and goals, which develops resilience.

The results also revealed that students who did not receive support from family and friends had higher burnout. Studies have shown that individuals can redefine a problematic situation as less threatening when they perceive a high level of support from their social network and regulate emotions like mistrust, anxiety, and fear more effectively [59]. A meta-analysis of 19 studies and 95,434 participants established that social support was negatively correlated with student burnout [60]. Therefore, receiving support from society is crucial for university students as it affects their motivation towards study.

Students who smoke had higher burnout compared to those who did not. Similarly, Kinnunen et al., [61] in their study found that daily smoking was most common among those who had a high level of school burnout, and the stress and coping model of substance use proposes that people with more stress, feelings of distress, and a lack of other coping resources (e.g., social support) may smoke cigarettes to cope with stress [62].

The study's findings revealed that students at higher academic levels (3rd and 4th year) have higher burnout than those in their first and second years. The results were in harmony with the longitudinal study by Rudman & Gustavsson, [35] which found an increase in study burnout (from 30–41%) across three years in higher education, and levels of both exhaustion and disengagement increased significantly across the years in education ($p < 0.001$). Similarly, Quina Galdino et al. [32] found that the more advanced the school year, the higher the exhaustion ($p = 0.003$), depersonalization ($p < 0.001$), and low academic effectiveness ($p = 0.012$) scores. This finding may be correlated to the fact that students at higher educational levels have advanced subjects, higher practical workload, and are challenged to experience activities as nurses in training in the internship field. Besides, the proximity to the completion of the course brings uncertainties, doubts, and concerns regarding insertion in the labor market, approval in selective processes, and expectations regarding professional success.

The results revealed that students with lower GPAs, studying an hour or less daily, and studying a day or less before the exam, have higher burnout. In comparison, students who study a week or more before the exam have higher resilience. Rahmatpour et al., [63] similarly revealed in his study on 303 students at the Guilan University of Medical Sciences that lower GPA ($\beta = -1.17$, $P = 0.002$), Students with less interest in their field of study ($\beta = -0.42$, $P = 0.000$), Students who postponed their studies to latter days of semester which are close to examinations ($\beta = 0.22$, $P = 0.000$) were associated with higher academic burnout. In addition, Lee et al., [64] study showed that students with higher GPAs have more self-confidence and experience less academic burnout. Furthermore, postponing studying to the exam day can cause the student to become more stressed and more academic burnout.

Conclusion

It's widely acknowledged that a growing nursing shortage is on the horizon. The alarming rate of burnout among nurses around the world is contributing to this shortage. The rigor of nursing education has contributed to a significant problem in student attrition and burnout. Internationally little research was done to examine resilience and burnout in nursing students, and no studies examined these variables in nursing students in Arabic counties were found.

In this study, the participants had moderate levels of resilience and burnout. The result of the analysis revealed a negative correlation between resilience and burnout. The study found that almost half of the students were not satisfied when they joined the nursing program, and half of the students intend to leave nursing profession in future. In this study, higher resilience was associated with male gender, wanted to study nursing, playing exercise/sports, working, living on campus/ dorm, receiving support from friends and family, intend to stay in nursing profession, and studying before a week or more of the exam. Whereas, not receiving support from family & friends, not exercising, smoking, intention to leave nursing profession in future, higher academic year, lower GPAs, studying an hour or less on a daily basis, and studying a day or less of the exam were all associated with higher burnout.

Without any questions, previous research indicated that resilience is important attribute for nurses and nursing students alike. Based on this research, resilience in baccalaureate nursing students might play an important role in decreasing nursing shortage by enhancing overall success and decreasing future burnout and intention to leave.

Abbreviations

CD-RISC 10

The Connor-Davidson Resilience Scale.

ProQoI5

The Professional Quality of Life Scale Version 5.

GPA

Grade Point Average.

Declarations

Authors' contributions

ZS contributed to the design of the study, data collection, conduct and analyses of the research, data interpretation, and drafted the manuscript. AS contributed to the data interpretation and critically revised the manuscript. Both authors read and approved the final manuscript.

Ethics approval and consent to participate

Institutional Review Board approvals were obtained from An-najah National University prior to data collection. No foreseeable risks were associated with this research project. Completion of the survey constituted as informed consent, and no identifiable information was included in the survey (Anonymity). The data was kept anonymous and confidential during all stages of the data processing and write up.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

Not applicable.

Funding

Not applicable.

Authors' contributions

ZS conducted the study, collected the data, analyzed and interpreted the findings and drafted this manuscript. AS supervised the study analysis, interpretation of findings, and made substantive intellectual contributions to the manuscript. All authors read and approved the final manuscript.

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