Exploring the Relationship Between Burnout, Resilience, and Dropout Intention Among Nursing Students During Clinical Training in Saudi Arabia

Hanin A. Altharman, BSN[1] (iD)**, Rawan I. Alnaqi, BSN**[1]**,
Shmayil F. Buanz, BSN**[1]**, Abrar Y. Alsenayien, BSN**[1]
and Rayan A. Siraj, PhD[2] (iD)

Abstract

Background: The issue of burnout syndrome among health discipline students is gaining heightened attention due to its serious effects, which causes them to have the intention to quit. Despite this, limited studies are available on the extent of burnout and its association with resilience and intention to drop out among clinical-level nursing students.

Objective: To explore the relationship between burnout, resilience, and intention to quit among nursing students.

Methods: An online questionnaire was used to conduct a cross-sectional study, targeting nursing students at the clinical level through a nonprobability sample. The participants were required to provide their sociodemographic, Maslach Burnout Inventory, and Connor-Davidson Resilience Scale. Data was analyzed using descriptive, inferential, and correlation tests.

Results: The study included a group of 564 nursing students and interns, the majority of whom were female at a percentage of 78.9%. Among this group, 65% experienced a high level of burnout, with 42% experiencing emotional exhaustion, 54% experiencing depersonalization (DP), and 77% reporting low personal achievement. A total of 48% of clinical-level students were considering quitting the nursing program. Moreover, the students reported low scores of resilience, with negative correlations observed with DP ($r = -.12$, $p = .04$) and positive correlation with low personal achievement ($r = .43$, $p < .001$).

Conclusion: Nursing students and interns faced a significant amount of burnout and showed a desire to drop out nursing program. Their level of resilience was moderately low, and it correlated with burnout subscales DP and personal accomplishment. A collaborative intervention is needed to promote resiliency and alleviate burnout symptoms during clinical training.

Keywords

burnout, resilience, intention to quit, nursing student, clinical training

Introduction

The concept of burnout has gained widespread recognition due to the fast-paced and competitive working environment, which creates persistent stress that can be difficult to manage (World Health Organization, 2019). There are three aspects to burnout: emotional exhaustion (EE), where one feels over-exerted physically and mentally and lacks energy; depersonalization (DP), represented by cynicism toward colleagues and patients; and low personal accomplishment (PA), measured by one's perception of how well one performs worthwhile tasks (Schaufeli et al., 2009). In healthcare, the impacts of increased burnout are significant, leading to loss of empathy, increased medical errors (West et al., 2006), frequent absence, and most importantly having the intention to leave the profession (Maunz & Steyrer, 2001).

Review of Literature

Although burnout has been continuously reported among medical professionals (Siraj et al., 2023), current evidence shows that students pursuing medical careers, such as medical and dental (Bahlaq et al., 2023) and respiratory therapy students (Siraj et al., 2022) are also at increased risk of burnout.

[1]Department of Nursing, College of Applied Medical Sciences, King Faisal University, Al-Ahsa, Saudi Arabia
[2]Department of Respiratory Care, College of Applied Medical Sciences, King Faisal University, Al-Ahsa, Saudi Arabia

Corresponding Author:
Hanin A. Altharman, Department of Nursing, College of Applied Medical Sciences, King Faisal University, Al-Ahsa, Saudi Arabia.
Email: 219026413@student.kfu.edu.sa

Similarly, a study conducted in Belgium on 2,275 nursing and midwifery students revealed that 50% of the participants endured high levels of burnout (Baudewyns et al., 2022). According to the Ministry of Education (2019) statistics, there are 39 nursing colleges across the regions in Saudi Arabia with a total of 17,085 Bachelor of Science in Nursing students. Indeed, health discipline students, nursing, for instance, are exposed to several stressors while studying, such as handling an enormous amount of information over a brief period, having a lot of assignments and exams, and being pressured by their peers and family to attain good grades (Hwang & Kim, 2022). Moreover, during clinical training, students are also exposed to multiple stressors, such as making mistakes, taking care of critically ill patients, and observing patients die, all of which put them under much pressure and make them vulnerable to developing burnout (Alsaqri, 2017).

As a coping mechanism against burnout, resilience has significant positive implications for psychological and physical health (Labrague et al., 2017). Students with higher levels of resilience tend to be more able to cope with issues that arise during clinical training. Previous studies have found that highly resilient nursing students are more academically effective and have lower levels of exhaustion and cynicism (Ríos-Risquez et al., 2016). Furthermore, evidence has shown that resilience is critical to reducing dropout intentions and increasing academic success (Van Hoek et al., 2019). Thus, it is crucial to foster resiliency in nursing students in order to mitigate the effects of burnout (Thomas & Revell, 2016).

Based on the aforementioned appraisal, it is evident that nursing students are susceptible to experiencing burnout at a significant rate. Nevertheless, there is insufficient information regarding the relationship between burnout, resilience, and quitting intention among clinical-level nursing students in Saudi Arabia. Hence, our study aimed to report on the prevalence of burnout syndrome and explore whether resilience is protective against burnout among nursing students during clinical training in Saudi Arabia.

Methods

Study Design and Settings

This study was carried out to examine the relationship between burnout, resilience, and dropout intention among nursing students and interns. The study employed a cross-sectional survey and gathered data from various nursing programs within the Kingdom of Saudi Arabia during the academic year between May and October 2022.

The nursing programs in Saudi Arabia are composed of five years of study, including 12 months of internship. In the first year, students are introduced to a science course that introduces them to scientific principles. The second, third, and fourth years are clinical-level years, where students study clinical courses that allow them to participate in patient care experiences on clinical days. The fifth (last) year is composed of 12 months of clinical training (internship) and is considered a focused compulsory training period that is required for students whose aim is to ensure that the theoretical knowledge that has been studied during the university period is applied ideally. Moreover, obtaining a license is deemed a necessary requirement to practice nursing in the Kingdom of Saudi Arabia.

Participants and Sampling Procedure

To gather clinical-level nursing students for our study, we utilized a nonprobability convenience sampling technique and specifically excluded students who were not involved in clinical training. In order to participate in the study, we approached various nursing programs across Saudi Arabia through their heads and requested that students fill out an online questionnaire using Google Forms. Afterward, we extended our reach by sharing the survey via different social media platforms, such as Twitter (X), WhatsApp, and Telegram. A clear description of the study's objective was provided on the questionnaire's cover page and participation was completely voluntary. Participants' consent was obtained prior to beginning the survey and we provided the principal investigator's contact information for any queries. After submitting the survey, participants' data was transferred to Excel for analysis. The survey took approximately 4 min to complete.

Data Collection Tool

The tool comprised the sociodemographic details of the participants, variables encompassed a wide range of aspects such as age, gender, marital status, region, living arrangements, academic level, current grade point average (GPA), length of clinical training (for interns only), current work shifts, and the intention to leave the nursing program. Also, the Maslach Burnout Inventory (MBI) and the Connor-Davidson Resilience Scale (CD-RISC).

Maslach and Jackson (1981) developed the MBI to report the prevalence of burnout syndrome and explore EE, DP, and PA assessment (Maslach et al., 2001). Certain statements in the MBI were revised to include "clinical training." The MBI is a widely used tool and its validity has been previously established, along with its internal consistency of components measured through Cronbach's coefficient alpha. Results revealed that EE had a Cronbach's alpha of 0.90, DP had 0.79, and PA had 0.71 (Maslach & Schaufeli, 2018). it could be concluded that the instrument effectively measures the burnout constructs as intended, and this finding has remained steady across various and comparable groups over time.

The MBI scale included a total of 22 items; nine of the items were used to calculate the EE score, five items were used to measure DP, and eight items were used to measure PA. On a seven-point Likert scale, the rating for each item varied between 0 (*never*) and 6 (*every day*). The scores

Table 1. The Maslach Burnout Inventory (MBI) Scoring.

Burnout aspects	Total score	Interpretation
Emotional exhaustion	0–30	A score of <17 is considered low burnout. A score of 18–29 is considered moderate burnout. A score of >30 is considered high burnout.
Depersonalization	0–12	A score of <5 is considered low burnout. A score of 6–12 is considered moderate burnout. A score of >12 is considered high burnout.
Personal accomplishment	0–40	A score of <33 is considered low burnout. A score of 34–39 is considered moderate burnout. A score of >40 is considered high burnout.

were calculated by combining the responses for each subscale, resulting in three scores for each participant representing the three aspects of burnout as detailed in Table 1.

This study utilized the CD-RISC, which is a resilience measurement tool created by Connor and Davidson in 2003, to assess the level of resilience. Participants responded to 10 items on a 5-point Likert scale ranging from "not true at all" to "nearly true all the time." The CD-RISC-10 scores were categorized into two groups: scores above 25.5 indicating high resilience and scores below 25.5 indicating low resilience (Campbell-Sills & Stein, 2007). The Cronbach's alpha coefficient was utilized to determine the reliability of the CD-RISC-10 scale, and the results indicated a score of 0.96 (Elkudssiah Ismail et al., 2022).

Statistical Analysis

The statistical software Stata (version 16) was utilized to manage and analyze the data. Categorical and continuous variables were presented as numbers (%) or arithmetic mean (*SD*) using descriptive statistics. An inferential test was used to compare burnout prevalence between demographic variables. Pearson's correlation coefficient was applied to determine the relationship between resilience and burnout subscales (EE, DP, and PA). Moreover, the chi-square test was used to identify the relationship between burnout and the intention to quit the nursing program.

Results

As shown in Figure 1. Initially, 627 participants consented to take part in the study. Subsequently, 63 participants were not involved in the analysis as a result of being first-year nursing students (who were not enrolled in clinical training).

The analyses involved 564 participants, of whom 79% were females. Most of the participants, 92.9%, were single, and 89.7% lived with their families. In regard to academic levels, slightly more than half of the sample were fourth-year and third-year nursing students (57.7%). Interestingly, almost half of the participants thought about leaving (quitting) the
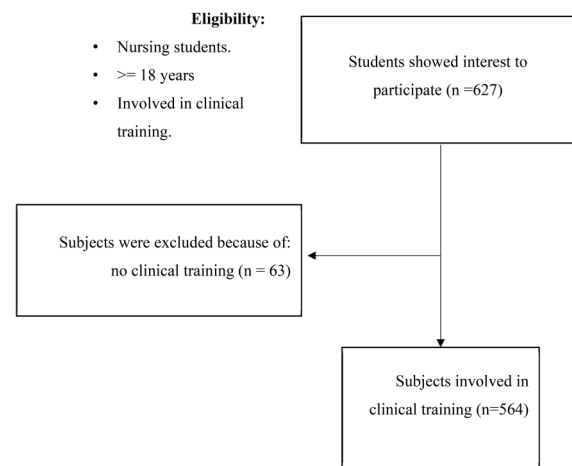
Figure 1. Flow to the study.

nursing program (47.6%). Table 2 gives further information about the participants.

Prevalence of Burnout and its Associations with Resilience

A significant proportion of nursing students and interns are suffering from considerable levels of burnout, reaching moderate to high levels of 88%. When examining the different aspects of burnout, 42% of nursing students and interns reported experiencing emotional burnout, while 54% reported a heightened level of DP. Additionally, the majority of participants had a low level of PA, with a percentage of 77%. The subscales of burnout revealed a mean (*SD*) score of 23.4 (11.6) for EE, 10.6 (6.3) for DP, and 26.5 (8.6) for PA (Table 3).

The resilience mean (*SD*) score among nursing students and interns during clinical training was 23.1 (7.1), demonstrating a low level of resilience. Our findings revealed correlations suggesting that resilience had a negative association with EE ($r = -.11$, $p = .079$) and DP ($r = -.12$, $p = .04$). Additionally, there was a positive correlation observed between resilience and low PA ($r = 0.43$, $p < .001$).

Table 2. Demographic Data of Study Participants ($n = 564$).

Variable	Number (%)
Age, years (Mean (SD))	21.41 (7.31)
Gender	
Male	119 (21.1%)
Female	446 (78.9%)
Marital status	
Single	525 (92.9%)
Married	36 (6.4%)
Separated	3 (0.5%)
Widowed/divorced	1 (0.2%)
Region	
Eastern Region	192 (34.0 %)
Central Region	131 (23.2%)
Western Region	154 (27.3%)
Southern Region	36 (6.4%)
Northern Region	52 (9.2%)
Living arrangements	
Living alone	38 (6.7%)
Living with family	507 (89.7 %)
Living with roommate(s)	20 (3.5%)
Academic year	
2nd year	106 (18.8%)
3rd year	161 (28.5%)
4th year	165 (29.2%)
Intern	133 (23.5%)
length of clinical training (for intern only n= 175)	
< 3 months	80 (45.7 %)
3 - 7months	31 (17.7 %)
7 - 9 months	18 (10.3 %)
> 9 months	46 (26.3 %)
Clinical hours/week	
< 8	258 (45.7%)
8 – 36	214 (37.9%)
> 36	93 (16.5%)
Current GPA	
< 3.0	27 (4.8%)
3.0 – 3.50	78 (13.8 %)
3.51 – 4.50	255 (45.1%)
4.51 – 5.0	205 (36.3%)
Intention to quit the nursing program	
Yes	272 (47.6%)
No	292 (51.8%)

Results are reported as frequency and percentage unless stated otherwise.
Abbreviation: GPA, Grade point Average.

Factors Associated With Burnout Among Nursing Students During Clinical Training

In this study, the different factors that contributed to burnout and its subscales (EE, DP, and PA) were analyzed. It was found that nursing students with higher GPAs (4.51–5.0) had noticeably higher burnout levels (128 out of 209; 61%) compared to those with lower GPAs. This difference was statistically significant ($p = .037$). On the other hand, no significant differences were found in the prevalence of burnout

Table 3. Prevalence of Burnout Among Nursing Students During Clinical Training ($n = 564$).

Burnout	Number (%)
High	367 (65)
Moderate	131 (23)
Low	66 (12)
Burnout subscale	
Emotional exhaustion	
High	234 (42)
Moderate	125 (22)
Low	205 (36)
Depersonalization	
High	305 (54)
Moderate	122 (22)
Low	137 (24)
Personal accomplishment	
Low	435 (77)
Moderate	101 (18)
High	28 (5)

among genders, academic years, or lengths and hours of clinical training.

Associations Between Burnout and Intention to Quit Nursing Program

A significant association between burnout and the intention to leave the nursing program was observed; those experiencing high to moderate burnout have a higher intention to quit the nursing program (247 out of 272; 91%) compared with those who have lower burnout levels ($p = .002$; Figure 2).

Discussion

The study aimed to report the prevalence of burnout and explore the relationship between burnout, resilience, and intention to quit among nursing students during clinical training in Saudi Arabia. The outcomes of this study highlight that a significant proportion of nursing students and interns experience burnout. Within nursing students and interns, resilience was only demonstrated in a small proportion. Further, the findings revealed that resilience was positively correlated with low PA but negatively related to DP and EE. Accordingly, nursing students and interns were seriously considering leaving the nursing program.

Burnout syndrome is considered a significant public health issue among students pursuing healthcare careers. It is highly prevalent among all health disciplines, including medical and dental (Bahlaq et al., 2023) and RT students (Siraj et al., 2022). According to the current study, moderate to high burnout levels were noted in 88% of nursing students and interns during their clinical training, in concordant with the current literature (Baudewyns et al., 2022). These findings can be anticipated due to the challenging nature and requirements of the nursing program along with personal stressors such as a
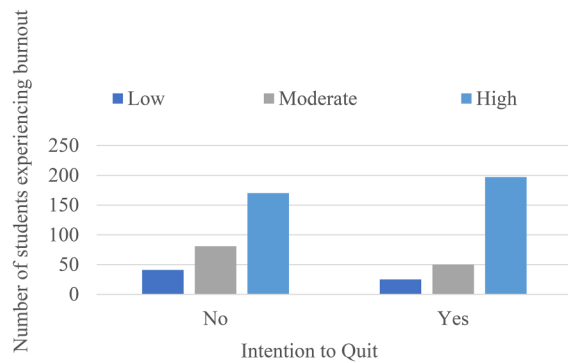
Figure 2. The relationship between burnout and intention to quit.

relatively inflexible curriculum, a competitive environment with peers, and a feeling of being unqualified, all of which ultimately contribute to burnout. As a result, students start to contemplate quitting the nursing program due to the mental and physical issues that arise as a consequence of burnout.

A separate analysis of burnout's three dimensions revealed that 42% of the students suffered from high EE. A previous mixed-methods study done in Brazil on nursing students reported that (76.3%) of the participants exhibited high EE, indicating depletion of mental resources and hindering their focus and ability to acquire knowledge (Quina Galdino et al., 2020). In our study, a high level of DP was noted in more than half of the participants (54%), which is exemplified by detachment from work and interacting with patients and colleagues in an impersonal manner (Cañadas-De la Fuente et al., 2015). In addition, a significant percentage of students (77%) demonstrated low PA, which is seen as a feeling of incompetency in the clinical training environment, and inefficiency in performing daily work (Lopez-Nuñez, 2020). The PA was intended to counteract EE and DP by promoting high self-confidence and a positive perspective toward the work environment. These findings were demonstrated among 570 nursing students in three Brazilian universities who displayed considerable levels of EE and DP alongside low levels of personal achievement (da Silva et al., 2014).

In light of the factors associated with burnout, we found that the prevalence of burnout increases as the GPA of the nursing students and interns increases, which implies the academic performance of the students in a course study. These findings agree with a study done on respiratory therapy (RT) students (Siraj et al., 2022). A possible explanation for this observation is that those individuals with higher GPAs might be pressured by their parents to prepare for the national nursing license exam and have concerns about getting a job and scholarships. This stress could lead to burnout and contribute to the observed pattern.

Resilience is a protective mechanism that improves psychological health and well-being in nursing students by enabling them to deal with stressors in the clinical setting more effectively (Yılmaz, 2017). However, this was not evident in the current study since we found that the mean score for resiliency

was relatively low, which is not surprising considering the high incidence of burnout amongst nursing students. Furthermore, resilience is negatively associated with burnout and its subscales (EE and DP). According to a related study done on 1,538 nursing students in China, resilience increased along with reported burnout levels (Smith & Yang, 2017).

Unfortunately, the study's results showed that nearly half of the students who had higher levels of burnout had higher intentions of leaving the nursing program. Evidence also suggests that nursing students' intention to leave and desire to drop out are significantly influenced by high levels of burnout (Van Hoek et al., 2019). In addition, a study on 1,020 nursing students in China found that 42.5% of the participants had second thoughts about pursuing nursing in the future (Lin et al., 2021). In contrast to the global trend of increasing the attractiveness of the nursing profession to reduce nursing shortage and declining enrollments, especially in Saudi Arabia to meet the Kingdom's demand for nurses, the alarming rate of burnout and the intention to leave the profession among nursing students worldwide. Creating strategies to improve student retention is crucial since nursing students will be in the nursing workforce in the future.

The Implication of the Study

High burnout levels and reduced resilience were predictors of intentions to quit. Thus, it is crucial to prioritize reducing burnout and cultivating resilience in order to ensure a successful transition into the nursing profession (Eaves & Payne, 2019). This highlights the need for offering access to mental health resources such as counseling services or referrals to mental health professionals to help students manage their stress to prevent burnout. In addition, create a supportive environment that includes faculty, peers, and healthcare professionals to provide guidance, collaborative learning, shared experiences, and a sense of belonging to nursing students as they navigate the challenges of the nursing program. Moreover, incorporating a deliberate emphasis on resilience within the nursing curriculum can help in the transition of nursing students into clinical practice. Further, encourage nursing students to maintain a healthy work–life balance by finding activities outside of nursing that brings them joy and satisfaction, such as pursuing hobbies, spending time with friends and family, or volunteering in their community.

Strengths and Limitations

A significant strength of this study is that it is the first in Saudi Arabia that explores the relationship between three variables burnout, resilience, and intention to quit the nursing program. In addition, its external validity is high due to the participation of students from various universities across the country. However, a few limitations were noted in this study. First, the causal relationships cannot be established using the cross-sectional design. Second, the

convenience sample recruitment in this study might limit the generality.

Conclusion

Burnout is highly prevalent among nursing students and interns leading them to have the intention to quit nursing programs. However, students' resilience was relatively low. Therefore, we recommend implementing collaborative interventions to promote resiliency and alleviate burnout symptoms during clinical training. Moreover, it is vital to implement structural changes in clinical settings and facilitate a supportive learning environment. These changes play a crucial role in promoting nurse students' self-care and preventing burnout.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical Approval

Before data collection, ethical approval was obtained from the Research Ethics Committee at King Faisal University, Saudi Arabia (KFU-REC-2022-MAR-EA000517).

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

ORCID iDs

Hanin A. Altharman https://orcid.org/0000-0001-5655-9020
Rayan A. Siraj https://orcid.org/0000-0002-4238-9419

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