

**THE IMPACTS OF NURSING STUDENTS' BURNOUT ON STUDENTS'  
PSYCHOLOGICAL WELL-BEING AND ACADEMIC ACHIEVEMENT: A  
SYSTEMATIC LITERATURE REVIEW**

by

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## INTRODUCTION

Nursing burnout is an epidemic in healthcare, a phenomenon that also spread to nursing students. Burnout is defined as a state of emotional, mental, and physical exhaustion and a psychological syndrome in response to prolonged stress without proper relief over time (Maslach & Leiter, 2016). It is exemplified by three core dimensions – emotional exhaustion, detachment from work, and dissatisfaction with personal achievement (Maslach & Leiter, 2016). Emotional exhaustion refers to the negative physical manifestations of efforts expended to cope with stressors; feelings of cynicism is the detachment from one's work; and dissatisfaction with personal achievement reflects behavioral tactics used to avoid stressors that are believed to be futile. The incidence of burnout is exponentially higher in healthcare-related professions like nursing. Burnout results in serious consequences, including psychosomatic disorders, domestic conflicts, substance abuse, insomnia, and depression. All of which negatively impact a nurses' perceptions of self and impact their professional performance. As a result of these consequences, nurses may feel unable to fulfill their job requirements, which may contribute to high rates of turnover and workforce loss (Ayaz-Alkaya, Yaman-Sözbir, & Bayrak-Kahraman, 2018).

Nursing students face stress from various perspectives. They face classroom-related pressure and healthcare professionals' responsibilities (Olvera Alvarez et al., 2019). If burnout is not appropriately addressed in nursing programs, students may experience burnout before stepping into work environments or become vulnerable to work-related stress that leads to professional burnout (Njim et al., 2018; Olvera Alvarez et al., 2019; Pérez-Fuentes, Molero-Jurado, Gázquez-Linares, & Simón-Márquez, 2019).

Nursing education is a platform that fosters the future nursing workforce. Investigators noted that students who experienced burnout during their nursing education felt less prepared to

enter the nursing profession, reported lower levels of mastery in occupational tasks, and had less interest in healthcare quality (Frögéli, Djordjevic, Rudman, Livheim, & Gustavsson, 2016). The effects of burnout in nursing school mirror those experienced in nursing practice, and if left unaddressed, they can be carried over from the educational setting into workplaces. Research has been done investigating nursing students' burnout; however, there is a lack of synthesis of the current literature related to the phenomenon. This knowledge is important to invoke the proper interventions within educational institutions. Reduction of nursing students' burnout could set new nurses up for psychological success in their careers and produce optimal healthcare delivery (Njim et al., 2018). It is important to analyze the current literature to understand how students experience burnout and what nursing programs can do to mitigate students' burnout. Therefore, the purpose of this literature review is to synthesize the findings of the effects of burnout on nursing students' academic performance and the effects of nursing program interventions on students' burnout.

## **METHODS**

### **Design**

This is a systematic literature review. The literature search process was conducted based on the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA; Moher et al., 2009).

### **Search process**

The search strategies were developed by the first author and a university research librarian. The databases searched included MEDLINE via PubMed, CINAHL, PsycINFO, and Scopus with the following search terms and keywords: "nursing students", "burnout syndrome", "academic burnout", "nursing" or "nursing students", "resilience", "education", "stress",

“education”, “degree programs”, “university”, “undergraduate”, “baccalaureate”, “graduate”, and “college”. These terms were entered in different combinations to ensure a comprehensive search was conducted. In PubMed, the following MeSH headings were used to conduct the search: ("Burnout, Psychological"[Mesh] OR "Burnout, Professional"[Mesh] OR "Burnout"[tiab] OR "Burn-out"[tiab] OR "Burn out"[tiab] OR ((Burnout[tiab] OR "Burn-out"[tiab] OR "Burn out"[tiab]) AND (psychological[tiab] OR syndrome[tiab] OR school[tiab] OR professional[tiab] OR career[tiab] OR occupational[tiab])) OR ((Exhaustion[tiab] OR Fatigue[tiab]) AND (Psychological[tiab] OR Emotional[tiab] OR Mental[tiab])). The keywords and terms were entered into the databases in various combinations to ensure an exhaustive search, with no time limit applied. The inclusion criteria were that the articles were published between January 2015 and January 2020, in English, and peer-reviewed journals. The latest search was conducted on January 9<sup>th</sup>, 2020. The process of elimination is displayed in a PRISMA Flow Chart (Figure 1).

### **Data analysis**

We conducted the data analysis following the processes of extracting, compiling, and summarizing data recommended by (Garrard, 2017). The following information was extracted from the studies: the purpose, country where the study was conducted, sample, measures, and major findings regarding nursing students’ burnout. Two authors (AD and HH) independently conducted data extraction and cross-checked one another’s extractions. Disagreements were resolved by re-reading and discussing the original studies. Data were analyzed and synthesized based on constant comparisons across the article findings (Table 1) and categorized according to the major themes of the findings.

### **Quality Assessment**

We appraised the quality of the studies using the following five criteria – 1) the relevance of the sampling strategy to address the research question, 2) the representation of the sample on the target population, 3) the appropriateness of the measurements, 4) the risk of nonresponse bias, and 5) the suitability of the statistical analysis to answer the research question (Hong, Gonzalez-Reyes, & Pluye, 2018). The assessment is reported in Table 2.

## **RESULTS**

After a thorough search, seventeen articles met the inclusion criteria and were included in this review. As shown in the PRISMA chart (Diagram 1), the initial search generated 161 studies, with 115 articles left when duplicates were removed. After titles and abstracts were screened, 23 articles remained for full-text review, after which seventeen articles met the inclusion criteria and were selected for the review. These studies were conducted in different countries, including Brazil (n = 2), China (n = 1), Iran (n = 1), Italy (n = 1), Slovak Republic (n = 3), South Africa (n = 1), Spain (n = 5), Sweden (n = 1), Turkey (n = 1), and USA (n = 1). Four major themes were inductively derived. These themes included 1) a negative relationship between burnout and student's self-concept; 2) a direct relationship between levels of burnout and students' engagement; 3) resilience to combat burnout; and 4) interventions to reduce students' burnout.

### **A Negative Relationship between Burnout and Student's Self-Concept**

Nine of the seventeen (53%) studies represented students' experiencing burnout suffered from consequences that negatively impacted aspects of their self-concept. Self-concept can be broken down into two major elements, self-esteem and self-efficacy. Self-esteem refers to one's sense of self-value and worth, whereas self-efficacy is the belief in one's ability to accomplish the desired task. Students with academic burnout reported high levels of exhaustion, cynicism,

reluctance to do schoolwork, anxiety, aggression, depression, despair, and frustration (Naderi, Bakhtiari, Momennasab, Abootalebi, & Mirzaei, 2018). These adverse effects of academic burnout had negative effects on nursing students' self-concept, as they directly impact students' self-esteem and efficacy. Students suffering from academic burnout were less confident in their ability to perform academically and in a clinical setting.

Professional self-concept is an important variable in determining and identifying academic burnout among nursing students. Academic burnout was negatively impacted by professional self-concept, as evidenced by low scores in the Nurses' Self-Concept Instrument (NCSI) from a sample of 1139 nursing students (Wang, Guan, Li, Xing, & Rui, 2019). The pressure to succeed academically was one of the most prevalent factors in determining burnout in students, which contributed to nursing students' perceptions of themselves (Ayaz-Alkaya et al., 2018). Higher levels of self-esteem and a sense of coherence were associated with lower burnout syndrome levels among students (Majerníková & Obročníková, 2017). These findings suggested the existence of an inverse relationship between students' self-concept and levels of academic burnout. Improving students' stress-coping skills was beneficial in preventing the subsequent occurrence of burnout in the profession of a nurse (Majerníková & Obročníková, 2017). Students' self-efficacy was a significant predictor determining their academic burnout and had a significant positive relationship with students' cognition and academic performance (Naderi et al., 2018).

Self-concept was a major factor in promoting students' competence and mitigating their burnout. In a cross-sectional study of 126 nursing students, while the researchers did not find significant evidence of academic burnout, they identified some common stressors among nursing students, with the most significant stressor being lack of self-competence in clinical and

academic settings (Valero-Chillerón et al., 2019). The fear of incompetence was reported the most by the fourth-year students, which may be attributed to the imminent shift in perspective from nursing students to healthcare providers. The investigators indicated important correlations between positive students' self-concept, competence, and reduced burnout (Valero-Chillerón et al., 2019) and between students' psychological wellbeing and decreased burnout, finding that students' emotional exhaustion influenced their academic efficacy (Ríos-Risquez, García-Izquierdo, Sabuco-Tebar, Emiliana de los Ángeles, Carrillo-García, & Solano-Ruiz, 2018). Nursing students' perceptions of their professional self-concept can positively or negatively affect their levels of academic burnout (Wang et al., 2019).

### **A Direct Relationship between Levels of Burnout and Students' Engagement**

Eight studies focused on the relationship between students' engagement and burnout levels. Students' engagement referred to the degree of attention and interest that students showed in the subject matter. Engagement levels were used to gauge students' motivation, which ultimately determined their performance in clinical settings. Research showed that low levels of students' engagement were significantly correlated with students' burnout, and vice versa, students with high levels of stress and burnout reported a lack of motivation and engagement (Frögéli et al., 2016). This was further evidenced by (Mathias & Wentzel, 2017) research, indicating that high levels of disengagement among nursing students might cause students to leave the profession altogether. In a study of burnout syndrome among undergraduates in a nursing course, 36.8% of students had considered giving up the course, and among the 63.2% of students who had not considered withdrawing from the course, the authors found that it was the strategies that influenced student engagement (Sanches et al., 2017). Therefore, promoting

students' engagement may positively influence students' learning experience and, thus, reduce burnout syndrome.

Methods for gauging levels of engagement varied among the different articles. For example, a study (Liébana-Presa, Fernández-Martínez, Vázquez-Casares, López-Alonso, & Rodríguez-Borrego, 2018) used the Utrecht Work engagement Student Survey (UWES-S) to measure engagement among university students and found that the dimensions of burnout and engagement correlated with each other. The higher the score of academic engagement, the lower the scores of exhaustion and cynicism. Similarly, Skodova (Škodová, Bánovčinová, & Lajčiaková, 2017) used a shortened version of the UWES scale to measure students' engagement and found that as engagement rose, the levels of burnout decreased, demonstrating a significant inverse relationship between the two.

Literature showed that students' burnout could reduce their engagement academically and professionally. Studies found that the factors leading to lowered students' engagement were related to dissatisfaction with the study topic, low perceptions of social support, lack of leisure opportunities with peers (Galdino, Martins, Do Carmo Fernandez Lourenço Haddad, Maria, Do Carmo Cruz Robazzi, Maria Lucia, & Birolim, 2016). Disengagement from peers has the potential to make students feel isolated, which could be extremely detrimental to nursing students, as learning to communicate effectively and work as part of a team was a key element to one's psychological well-being and professional nursing development (Carvalho, Guerrero, & Chambel, 2018). Self-engagement could be hindered by a high workload, lack of control, low participation in decision-making, and lack of support, all of which were risk factors of burnout development (Skodova, Lajciakova, & Banovcinova, 2017). If students perceived themselves to be high in exhaustion and cynicism, they were more likely to have lower academic efficacy



(Liébana-Presa et al., 2018). Students with a great sense of self-efficacy and positive personal goals had better academic performance (Naderi et al., 2018) and were more likely to have higher academic engagement (Liébana-Presa et al., 2018). These findings suggested that it was important to identify factors impacting students' engagement and thus target and resolve the issues before they led to students' burnout.

### **Resilience to Combat Burnout**

Ten studies reiterated that burnout was a three-dimensional concept, including emotional exhaustion, depersonalization or psychosocial cynicism, and lack of self-efficacy (Galdino et al., 2016; García-Izquierdo, Ríos-Risquez, Carrillo-García, & Sabuco-Tebar, Emiliana de los Ángeles, 2018; Majerníková & Obročníková, 2017; McKee-Lopez, Robbins, Provencio-Vasquez, & Olvera, 2019; Naderi et al., 2018; Ríos-Risquez et al., 2018; Sanches et al., 2017; Skodova et al., 2017; Valero-Chillerón et al., 2019). Personality factors and experiences had strong effects on burnout development (Majerníková & Obročníková, 2017; McKee-Lopez et al., 2019; Sanches et al., 2017; Skodova et al., 2017). Resiliency may promote students' capacity to adapt and overcome misfortune and stress and improve their psychological well-being (García-Izquierdo et al., 2018; Ríos-Risquez et al., 2018).

Many negative stressors were applied to students through their personal experiences, demographics, and psychological well-being, influencing their burnout levels. Emotional exhaustion was the first phase of the development of burnout because it was influenced by a higher workload and a greater demand for emotional resources (García-Izquierdo et al., 2018; Sanches et al., 2017). This exhaustion could, in turn, cause a lack of professional maturity, leading to work absences, aggression, loneliness, mood swings, irritability, depression, anxiety, low self-esteem, and physical symptoms (García-Izquierdo et al., 2018; Sanches et al., 2017).

Anxiety, the fear of not achieving individual academic expectations, may trigger students' stress and exacerbate when they were placed in a work environment (Galdino et al., 2016; Sanches et al., 2017). Anxiety symptoms reduced self-esteem, becoming a risk factor for depression and poor academic outcomes (Majerníková & Obročníková, 2017).

Certain personality and demographic factors led to the symptoms of burnout. For example, students requiring financial help through employment were burdened with the stressors of schoolwork and the job responsibilities, or they were faced with financial strain if they chose not to be employed (Galdino et al., 2016; Sanches et al., 2017). Students who faced the reality of adverse childhood experience—stress-inducing events caused by poverty, abuse, addiction, or violence—were more vulnerable to stress encountered in nursing education (McKee-Lopez et al., 2019). These students could have low perceptions of professional achievements and feelings of incompetence even before enduring the stressors in clinical environments (McKee-Lopez et al., 2019). Negative affectivity—dimension of a type D personality—was a significant personality predictor of burnout (Skodova et al., 2017). This was why satisfaction with the course of study, a strong social community, and involvement in leisure activities were so vital upon entry into the academics (Galdino et al., 2016).

Burnout could be caused by various factors, even from early childhood risk factors (Skodova et al., 2017). Personal characteristics, such as self-esteem, a sense of coherence, and resiliency, were important factors in managing burnout symptoms because they could positively affect students' psychological well-being (Majerníková & Obročníková, 2017; Ríos-Risquez et al., 2018; Skodova et al., 2017). Emotional intelligence, specifically self-emotional appraisal, could significantly decrease burnout and increase personal satisfaction (Carvalho et al., 2018). Resiliency produced lower levels of emotional exhaustion and higher academic efficacy, leading

to a better perception of well-being (García-Izquierdo et al., 2018). It functioned to reduce distress relating to emotional exhaustion, create beneficial results in the exposure of stress, and cause the person to respond with greater control (García-Izquierdo et al., 2018). Ultimately, resilience may lead to students' greater sense of well-being, and in contrast, burnout, including emotional exhaustion and cynicism, could worsen students' sense of well-being (Ríos-Risquez et al., 2018).

Engaging faculty in the development of students' resilience demonstrated promising results (García-Izquierdo et al., 2018; Ríos-Risquez et al., 2018). The development of good relationships with academic advisors, implementation of socio-psychological training for students, and offering extracurricular activities for nursing students may greatly reduce the symptoms and further progression of burnout (Carvalho et al., 2018; Galdino et al., 2016; Majerníková & Obročníková, 2017). Faculty could promote resilience by observing students' needs and engaging them in curricula to reduce their stress levels (García-Izquierdo et al., 2018; McKee-Lopez et al., 2019; Sanches et al., 2017). Diversifying student experiences and implementing resilience training could provide students the tools for success in their academic and professional future (Ríos-Risquez et al., 2018; Sanches et al., 2017).

### **Interventions to Reduce Students' Compassion Fatigue and Burnout**

Seven studies identified the need for interventions to build resiliency among nursing students. A significant relationship was found between resilience and burnout, such as emotional exhaustion and self-efficacy (García-Izquierdo et al., 2018). Studies called for faculty's attention to be aware of the prevalence of students' burnout and depression and help students increase their self-efficacy and feelings of competence, especially among incoming nursing students (McKee-Lopez et al., 2019). A major trend of interventions was based on a mindfulness practice.

The use of non-clinical interventions, such as acceptance and commitment training (ACT) and a Mindfulness-Based Education Program (MBEP), had been implemented in nursing education to decrease current and future burnout (Cheli, De Bartolo, & Agostini, 2020; Frögéli et al., 2016).

The MBEP was designed to be incorporated into the nursing curriculum to increase mindfulness practice and decrease burnout. When comparing students' data before and after the MBEP, researchers found significant decreases in students' burnout (Cheli et al., 2020).

However, due to the small sample size, the researchers recommended that further research be conducted before any conclusions can be drawn on the relationship between MBEP and student self-image and resiliency (Cheli et al., 2020). Another intervention was using non-clinical interventions, such as ACT techniques, to improve present awareness and promote mindful thinking (Frögéli et al., 2016). With an increased mindfulness awareness, students were strengthened in emotional health and became more effective problem-solvers (Frögéli et al., 2016). The integration of mindfulness into nursing education can be an effective measure toward preventing compassion fatigue and subsequently decrease burnout (Cheli et al., 2020; Frögéli et al., 2016). Compassion fatigue was described as being preoccupied with patients' traumatic experiences and having decreased capability to care for others, which may lead to feelings of ineffectiveness and burnout (Mathias & Wentzel, 2017). These feelings, accompanied by stress, can begin in nursing schools and expand throughout a nursing career (Ayaz-Alkaya et al., 2018; Frögéli et al., 2016; Mathias & Wentzel, 2017).

## **DISCUSSION**

This review intended to provide a synthesis of the known effects of burnout on students' academic successes and the strategies to mitigate those effects. Through the systematic review of the current literature, four major themes were identified: the impact of self-concept on academic

burnout, relationships between students' engagement and burnout, promoting resilience to decrease burnout, and interventions to reduce students' burnout. The research reviewed indicates that the promotion of students' engagement, positive self-image, and resilience can significantly decrease the incidence of academic burnout. The current literature shows a general trend that students experiencing higher levels of burnout may have a lower sense of psychological well-being and academic achievements. Reducing the incidence of nursing students' burnout may improve their academic performance and ultimately carry over into their professional lives.

The evidence presented in this review supports that there is a significant negative relationship between students' academic burnout and self-image and competence. The academic burnout is lower among students who have the means to cultivate a positive self-image, esteem and confidence. Research indicates that students' confidence can be fostered in nursing programs and faculty caring behaviors. Wei et al. (Wei, Henderson, Peery, & Andrews, 2020) found that among many factors, including students' demographic factors and satisfaction about the programs, faculty's caring behaviors are the only factor that can predict students' confidence and caring behaviors. This finding suggests the importance of student-centered teaching approaches. A literature review also shows that students can gain confidence by learning in a caring and positive environment, in which faculty plays a crucial role.

Throughout the course of their education, nursing students are vulnerable to many stressors that may negatively impact their self-image and engagement. One of the most common is adverse experiences in a clinical setting. Students who transformed a 'dreadful day' into a developmental experience had higher resilience levels (Amsrud, Lyberg, & Severinsson, 2019). Helping students stay focused on what they did right in an unpleasant situation can change their self-image from feeling incompetent to enjoying successes. If students can be taught to

acknowledge and grow through negative experiences, they are less likely to experience academic burnout and will, therefore, be more resilient. Nursing education is both science and art. It is not only the materials to be delivered but also how the materials are delivered can foster students' confidence and promote their engagement (Wei et al., 2020). This review finds that faculty's teaching approaches are a significant factor in combating students' burnout. Future studies should make a discerning effort to identify more successful strategies for developing and fostering positive self-image among nursing student populations.

Nursing students have to overcome many obstacles during their study journey. Resiliency—the ability to recover from adversity—is what allows this growth to occur (Watson, Monson, & Marshall, 2019). Resilient people make sound decisions, are more flexible, and are less likely to leave their jobs (Watson et al., 2019). However, adversity shows up in many different forms throughout a lifetime, such as childhood, financial burdens, personality type, and low levels of support (Galdino et al., 2016; Sanches et al., 2017; Skodova et al., 2017). While adversity cannot be removed, resiliency can be cultivated and facilitated in students by nursing programs and educators (Thomas & Asselin, 2018). Resiliency is not only a trait but also a dynamic process of growth (Thomas & Asselin, 2018). This process can be completed through supportive relationships, supportive environments, optimism, trustworthiness, and empowerment (Amsrud et al., 2019; Froneman, Du Plessis, & Koen, 2016; Thomas & Asselin, 2018; Watson et al., 2019). Supportive faculty and learning environments are portrayed through the development of caring and secure relationships between faculty and students (Froneman et al., 2016; Henderson, Sewell, & Wei, 2020). It is beneficial for faculty to provide the trust with the student and for the student to be ready to learn. This creates a support system that encourages students to

persevere toward growth, change, and acceptance (Amsrud et al., 2019; Froneman et al., 2016; Wei et al., 2020).

Encouraging students to remain in the nursing program, with the necessary supports, may help build resilience (Thomas & Asselin, 2018). Guiding students through reframing past adverse experiences may make way for breakthroughs (Amsrud et al., 2019; Watson et al., 2019). Having faculty mentoring and using their position to be positive role models of resiliency in nursing is one of the most important interventions faculty can implement (Froneman et al., 2016; Thomas & Asselin, 2018; Watson et al., 2019). Ensuring the nursing student is surrounded by support to encourage their resilience is a great preventative measure to decrease nursing burnout.

This review finds that mindfulness practice is a major trend in promoting students' resilience and reducing burnout. A mindful thought process helps students rearrange their negative thoughts into more positive ones so that the result of circumstances is not of stress but self-awareness of the present moment (Cheli et al., 2020; Stinson et al., 2020). A major drawback to nursing is the potential for professional burnout and compassion fatigue, the effects of which can lead to the increased nursing shortage and decreased quality of care (Wei, Sewell, Woody, & Rose, 2018; Wei, Kifner, Dawes, Wei, & Boyd, 2020). Mindfulness practice encourages students to shift their thoughts and focus on what they can control, which may bring peace and calmness inside and decrease the likelihood of emotional exhaustion (Green, 2018).

This review finds that applying these techniques into educational curricula may have challenges but show promising outcomes in reducing students' burnout. Implementing mindful mediation as a holistic practice in nursing education may encourage students to continue to reap the positive benefits in their nursing careers, specifically, with burnout, compassion fatigue, and

moral distress (Stinson et al., 2020). Implementing mindfulness practices into nursing education through additional courses or integrated into current curricula may positively help students handle their emotional stress. However, the effectiveness of these interventions is dependent upon a traditional in-classroom curriculum. New research needs to be conducted to determine how to increase nursing school engagement in an online setting.

### **Limitations**

The studies presented in the review are heterogeneous, which may affect the synthesis of the findings. The heterogeneity includes different origins of the studies (various countries), study designs, measures used to evaluate students' burnout, and cultural differences among nursing programs. Because of the above varieties, students may have different experiences with their nursing education programs and professors, depending on where they live and available resources. Another area to clarify is that while we meant to include both graduate and undergraduate nursing programs when we searched the literature, the studies' samples were mainly undergraduate students.

### **CONCLUSIONS**

Burnout for nurses can begin during the educational years and may have lasting effects on students' well-being and professional development. Interventions should be considered early in a nursing career, such as nursing education. Nurse educators can equip students with the tools to protect themselves from burnout. This review has synthesized information on students' burnout and strategies to reduce burnout. Interventions involving students' self-concept, engagement, mindfulness, and resilience are necessary for continued nursing students' academic success. Further research is needed to explore the extent of these problems and identify potential solutions to combat students' burnout effectively.



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