

Research Article

Nurses' Burnout in the Emergency Department and the Intensive Care Unit During COVID-19: A Literature Review

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ORCIDIndah Dwi Pratiwi: <https://orcid.org/000-0002-9092-3321>**Abstract.**

The COVID-19 pandemic is a clinical threat to healthcare workers and the general population. Nurses maintain closer contact with patients than other members of the country. Therefore, nurses are at increased risk of infection, and their physical and mental burden has doubled. A comprehensive review is needed to examine nurses' burnout during the COVID-19 pandemic. Our research follows the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis. We conducted article searching through international databases such as PubMed and ProQuest from January to November 2020. Of the total 820 articles detected, five articles were reviewed. The results of data extraction and analysis found that the burnout feelings felt by nurses included emotional exhaustion, depersonalization, and lack of personal accomplishment. We concluded that nurses experienced high levels of burnout during the COVID-19 pandemic.

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1. INTRODUCTION

The COVID-19 outbreak has become a clinical threat to healthcare workers and the general population worldwide (1). Frontline healthcare workers can have conflicts between professional ethics, a sense of responsibility, and a fear of infection. Nurses maintain closer contact with patients; therefore, nurses are at increased risk of infection, and their physical and mental burden has doubled. The survey of nurses in Hubei Province was the first group of doctors to fight COVID-19, and they found that 92.68% of nurses faced psychological problems within two weeks (2).

Burnout is dangerous overwork condition that can lead to physical or mental illnesses, such as high blood pressure, tinnitus, or depression (3). About 59.1% of nurses have a certain degree of burnout; furthermore, its severity and incidence are related to many factors, such as social, environmental, and personal (4). When individuals feel tired, they

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tend to show avoidance behavior under stress, which intensifies the stress response and eventually produces negative emotions and irrational beliefs, such as dependence, avoiding problems, and helplessness (2,5). A study found that fatigue is directly related to cognitive and emotional symptoms, and emotional issues, especially anxiety and depression, are considered risk factors for fatigue (6). Nurse and healthcare workers are frequently prone to job burnout, with the highest levels reported among Nurses and healthcare workers working in emergency and intensive care units, where they are subjected to an overwhelming amount of job-related stress. Known factors contributing to the high risk of job burnout include intensive patient care, a high mortality rate, and poor job conditions in terms of a heavy workload combined with insufficient time to address the patient's needs adequately. As a result, the relevant nurses are subjected to stress levels that exceed their capabilities, potentially leading to job burnout (7). Therefore, this review aims to identify published articles illustrating nurses' burnout during the COVID-19 pandemic.

2. METHODS

This review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyzes (PRISMA) (8). There were three inclusion criteria for this review: (1) population: nurses or healthcare professionals working with COVID-19s patients or working in the COVID-19s ward, (2) type of study: primary research, and (3) publication available in the English language.

The electronic search strategy uses two steps to identify articles that meet the inclusion criteria: (1) through the electronic databases and (2) forward and backward. A comprehensive search was carried out through several databases and produced ten articles for review. The MeSH keywords for searching the databases were *COVID-19, nurse, fatigue, burnout, work stress, and pressure*. Boolean functions, including AND and OR, were also used in the search. The articles were published between 2019 to 2020, considering that the COVID-19 pandemic appeared at the end of 2019. In this review, only articles written in English were included; therefore, non-English language articles were excluded. There were no restrictions on the research methods in the reviewed article.

Thematic synthesis was used to analyze the outcomes from every diagnosis observed (9). This inductive approach identifies common data elements across numerous research (10). First, we coded line by line, permitting the researchers to translate ideas from one look to another. The topics identified with the aid of the authors and quotations from

the unique studies offered in the outcomes sections have been considered information. Second, these codes were classified into descriptive issues from which a tree structure emerged. Finally, the descriptive issues were translated into the last analytical issues, subthemes, and classes to reply to the study’s query. Supportive rates had been added to clarify every subtheme.

3. RESULTS

3.1. Study selection and Characteristics

Initially, databases searched identified 820 articles. Furthermore, the title and abstract have been screened and reviewed to select articles that fit the inclusion criteria (Figure 1). The characteristics of the five articles that match the inclusion criteria are summarized in Table 1. All articles included were primary studies that varied the focus of the research. The literature search yielded 820 publications, which were reviewed based on title, abstract, and full text. As a result, five studies were included in this review. The quality assessments’ summary results using JBI’s critical appraisal tool. Five included studies depicted a quality score between 87.5% and 90% (Table 1).

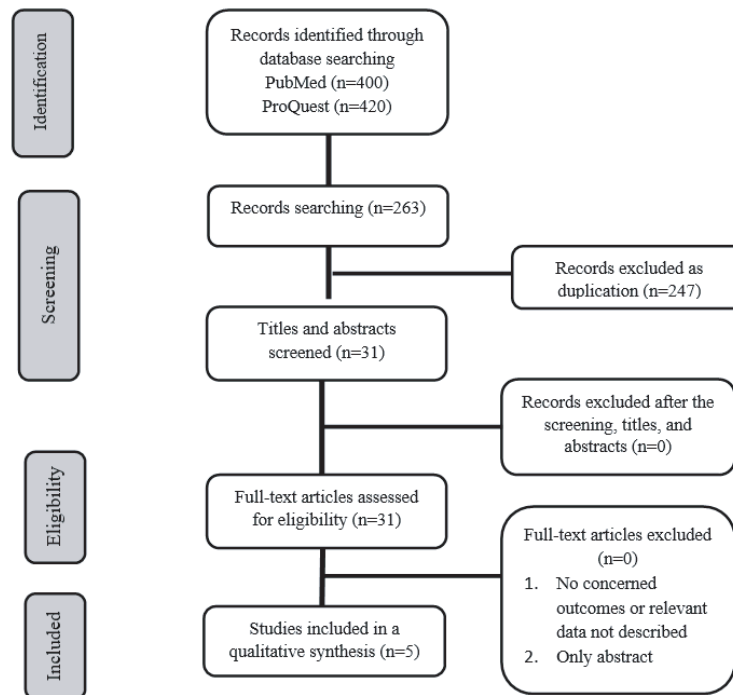


Figure 1: Flow chart study selection.

TABLE 1: Characteristics of included studies.

Author	Research design	Sample size (n)	Findings	Quality score
Hu et al (2020)	A cross-sectional, descriptive, correlational study	2014	Burnout and fear were two mental health challenges that the frontline nurses experienced during the COVID-19 pandemic.	7/8
Zhang et al (2020)	Cross-sectional survey	109	The actual shift length exceeded nurses' preferred work hours. Five key themes were identified: (1) circumstances; (2) personal protective equipment; (3) the nurses' physical and emotional needs; (4) the nurses' safety needs, and (5) work intensity	7/8
Mo et al (2020)	Cross-sectional survey	180	Stress load was positively correlated with self-anxiety among nurses. The main factors affecting nurses' stress were only children, weekly working hours, and anxiety.	7/8
Wu et al (2020)	Survey	190	Medical staff working on the frontline had a lower frequency of burnout compared to that in usual wards.	7/8
Zhang et al (2020)	Qualitative descriptive study	23	The psychological characteristics of each period were ambivalence, emotional exhaustion, and energy renewal, respectively.	9/10

3.2. Results of the Synthesis

Across the five studies, the analysis revealed three themes related to nurses' burnout during the COVID-19 pandemic: emotional exhaustion, depersonalization, and lack of personal accomplishment.

Emotional exhaustion

The psychological changes of the nurses who worked in the epicenter might go through the middle stage, which is emotional exhaustion. All five studies stated that most nurses and other health care professionals who work in the COVID-19 center experience emotional exhaustion. The middle level became the time when nurses were placed in an isolation ward for 1-2 weeks. At this level, the nurses' negative psychological experience was most pronounced because they began to face challenges from various sources, including unexpected operating surroundings and colleagues, bulky personal protective equipment (PPE), isolated loneliness, and the risk of infection. To this degree, nurses' most common psychological traits were tension, melancholy, somatization, compulsiveness, worry, and irritation. They had to become acquainted with a new operating environment and complex work techniques.

Depersonalization

The most important factor influencing the quality of interpersonal interactions is depersonalization. Burnout and depersonalization have been linked to poor patient care. The core interpersonal dimension of burnout, depersonalization, is associated with difficulty recognizing all negative emotions, a potentiated ability to recognize positive emotions accurately, and a tendency to misread negative emotions as positive emotions. Thus, compared to global burnout, depersonalization difficulties extend to sadness expressions, a social cue that may elicit caring behavior. Furthermore, people with much depersonalization have high basal cortisol levels (11).

Lack of personal accomplishment

Reduced personal accomplishment is interpreted as a negative self-evaluation and a sense of failure at work. Personal accomplishment is distinct from emotional exhaustion and depersonalization and thus represents a sense of professional efficacy. Personal accomplishment would reflect the workers' characteristics rather than their reactions to stressful situations, so it could be considered a unique resource rather than a burnout dimension that develops largely independently of emotional exhaustion and depersonalization.

4. DISCUSSION

This review identified three themes in the included study that describe nurses' burnout during the COVID-19 pandemic. We found that nurses and health care professionals are prone to emotional exhaustion (12,13). When nurses face public health emergencies, they experience psychological stress due to uncertainty and potential harm. The emergence of negative psychological emotions can cause tension or fragility in the body's various organs and systems. In addition to adjusting to the job's demands and the environment, nurses reported that the heavy PPE garment made breathing difficult and caused chest discomfort (14). These physical discomforts exacerbated the nurses' psychological stress. However, due to their apprehension, they wanted to ensure that they wore the PPE correctly. They were terrified of becoming infected with COVID-19. Aside from their challenges and fears, nurses faced enormous challenges from patients' negative emotions, such as irritability, noncompliance with treatment, and even aggressive behavior (5,15).

In these situations, nurses could not seek support or embrace their colleagues directly because a close personal distance could cause cross infection. Nurses, particularly younger ones, began to feel emotionally depleted. Some younger nurses began to exhibit overexcitement and a more aggressive reaction to various work situations. As a

result of this constant state of excitement, nurses experienced a rapid loss of physical energy, and they began to experience physical signs and symptoms such as insomnia, sore throats, and fatigue (3,7).

High-depersonalization symptoms were associated with higher cortisol levels and a tendency to mistake negative emotions for positive emotions. Only symptoms of depersonalization, not overall burnout, were associated with significant cortisol changes, whereas impaired emotion recognition was present in both categories, implying that cortisol may not be involved in such impairments (16).

Psychological capital and personal accomplishment dimension have a solid direction and positive relationship. Psychological capital is a protective factor against burnout, contributing to employee health and well-being. On the other hand, personal achievement does not fulfill the crucial role of burnout, but it is a vital personal resource for coping with it (11). Personal accomplishment is more of a dimension of personal resources, which opens up new avenues for intervention on these factors because we can act not only on situational variables that predict burnout but also on personal variables, resulting in more effective interventions to prevent burnout, promote well-being, and sustainable working conditions and organizations (17).

5. CONCLUSION

Our findings highlight how COVID-19 pandemics have influenced nurses and other health care professionals regarding their psychological traits, which may affect their performance in delivering patient care. Therefore, to achieve high quality of patient care, future research should focus on how best to support both physical and psychological states among nurses and health care professionals during COVID-19 pandemics or other disaster situations.

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