Exploring the Multifaceted Nature of Occupational Stress Among Nurses: A Systematic Review

Bala Murali Sundram
Universiti Malaya, Kuala Lumpur, bala.murali@um.edu.my

Suriya Kumareswaran Vallasamy
Johor State Health Department, Johor Bahru, suriya_kumareswaran@hotmail.com

Umairah Muhadi
Johor State Health Department, Johor Bahru, aishaumairah@gmail.con

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Bala Murali Sundram[1], Suriya Kumareswaran[2], Siti Umairah Muhadi[3]

[1]Department of Social and Preventive Medicine, Faculty of Medicine, Universiti Malaya, Kuala Lumpur, Malaysia
[2]Occupational and Environment Health Unit, Johor State Health Department, Johor Bahru, Malaysia
[3]Vector Borne Disease Unit, Johor State Health Department, Johor Bahru, Malaysia

Abstract

This systematic review examined occupational stress among nurses, its multifaceted nature, and its significant impact on healthcare delivery and nurse well-being globally. This study identified various stressors, including intrinsic job factors, organizational structure, role expectations, interpersonal relationships, and career development. Using the Cooper and Marshall stress model, a thorough literature search was conducted across databases like ISI Web of Knowledge, PubMed, Scopus, Ovid Medline, and Google Scholar, focusing on publications from 2010 to 2023. This rigorous approach included diverse research methodologies, emphasizing studies measuring outcomes related to occupational stress and mental health among nurses. A total of 10 studies met the inclusion criteria, highlighting stressors such as workload, job demand, job insecurity, and less reward, categorized into five primary sources. The review revealed that occupational stress in nursing is a global issue, leading to adverse outcomes like burnout, decreased job satisfaction, and increased turnover. The discussion emphasized the need for a holistic approach to stress management, advocating for supportive work environments, adequate staffing, and professional development opportunities. In conclusion, strategic interventions are crucial for improving mental health, job satisfaction, and healthcare quality, necessitating collaborative efforts from healthcare leaders, policymakers, and practitioners.

Keywords: healthcare system, nurse well-being, occupational stress

Introduction

Occupational stress, which significantly affects nurses globally, presents substantial health and financial challenges, with its prevalence varying widely from 9.2% to 75%, as evidenced by studies showing a 68% prevalence in the UK and Nigeria and 75% in Ghana.[1] This issue has a substantial financial impact, costing an estimated $5.4 billion annually in lost productivity.[1] Nursing is notably stressful, impacting nurses' physical, emotional, and psychological health. Nurses play a crucial role in healthcare, delivering comprehensive care across diverse demographics and health conditions, with responsibilities that span from direct patient care to mentorship and counseling within the healthcare community.[2]

The Oxford Dictionary defines nurses as trained individuals responsible for caring for the sick and disabled, mainly in hospitals. Nurses face multiple stressors in their role, including physical labor, human suffering, shift work, staffing issues, and interpersonal relationships, all of which contribute to job stress, while they remain integral to healthcare teams, collaborating with doctors, social workers, and technicians.[3] Their role involves planning and delivering medical and nursing care to patients in various settings, including hospitals and homes, and providing support to doctors in managing patients' physical and mental health challenges.[4]

Occupational stress can arise from a mismatch between workplace demands and physiological needs. While some stress can motivate and improve performance, excessive stress can have detrimental effects on both mind and body. Stressors, or environmental triggers of stress, vary in their impact depending on individual reactions, with work-related stress negatively affecting both individuals and organizations. At the individual level, it leads to job dissatisfaction, lower motivation, insomnia, psychological distress, depression, anxiety, aggressiveness, loss of self-confidence, concentration

difficulties, cardiovascular diseases, high cholesterol, and high blood glucose levels.[4] At the organizational level, it results in increased costs, failure to meet goals, heightened healthcare expenses, reduced job satisfaction, and, importantly, increased absenteeism and turnover among staff, which in turn diminishes the quality of healthcare and client satisfaction. Workplace stress is a common phenomenon influenced by an individual's perception of the disparity between job demands and coping abilities. This stress may disrupt work-life balance and is considered a universal aspect of daily life. This aligns with the transactional theory, suggesting that any work-related situation could be perceived as a stressor based on individual evaluations and perspectives.[5]

Several studies have examined the impact of stress on nursing professionals. Tesfaye pinpointed role conflicts and minimal support from patients and their families as key sources of job stress for nurses.[6] Furthermore, workplace violence, inadequate salaries, and limited involvement in decision-making processes were identified as common stress factors in the profession.[7] High stress levels in nurses may adversely affect the quality of care they provide, as symptoms like fatigue, reduced focus, and emotional burnout can diminish their ability to deliver safe and effective treatment, increasing the risk of medical errors and negative patient outcomes.

Additionally, many hospitals face financial constraints and staffing shortages. This situation is corroborated by a study from China, finding that most nurses reported high stress due to insufficient staff, excessive workload, and subpar working conditions.[8] A study in Africa investigated the stress and coping mechanisms among nurses.[9] The findings indicated that the primary sources of stress were insufficient motivation, inadequate staffing, managing numerous patients single-handedly, absence of breaks during shifts, and caring for challenging patients.[9] Besides, another study in Ethiopia revealed that 41% of hospital nurses were dissatisfied with their jobs, and 22% intended to leave their roles within a year, attributing their decision to workplace stress.[10]

Several work-related stressors are associated with increased risks of adverse stress outcomes. The original model by Cooper and Marshall (1976) outlined five primary sources of workplace stress.[11] According to the Cooper and Marshall model, stressors can be divided into several key categories. Job-related stressors include factors such as time management, workload, working environment and resources, job demands, insufficient job control, and role conflicts. In the area of organizational structure and climate, stressors encompass job insecurity, organizational systems, and lack of recognition or rewards. Role-related stressors in the organization involve issues such as nurse compensation, work schedules, interactions with patients and caregivers, verbal abuse, and coworker relationships. Stressors related to workplace relationships include employment status, turnover rates, health status, sleep disturbances, work-family conflicts, and fear of COVID-19. Lastly, career development stressors pertain to nurses' educational backgrounds, work experience, job positions, and professional commitment.

Despite extensive research into the stressors affecting nurses, a notable gap exists in understanding the interplay between these stressors and the broader healthcare system. Specifically, existing literature often fails to fully explore how systemic issues in healthcare policy and administration exacerbate individual stress factors. This gap is particularly significant considering ongoing global health crises, which have intensified the challenges faced by nurses. Moreover, there is a lack of comprehensive, cross-cultural studies considering diverse healthcare systems and the unique stressors encountered in different regions. This systematic review sought to fill these gaps by providing a global perspective and considering the impact of systemic issues on nursing stress.

Method

To conduct this review, relevant articles published in 2010-2023 were comprehensively searched. The search encompassed five primary databases: ISI Web of Knowledge, PubMed, Scopus, Ovid Medline, and Google Scholar. To refine the search for relevant literature, this study employed a Boolean operator to combine a set of carefully selected keywords. Articles mentioning either "occupational stress," "job stress," "work stress," or "burnout" in conjunction with terms like "nurse," "nursing," or "healthcare workers" were searched. The inclusion criteria were designed to focus specifically on cross-sectional studies. The study specifically targeted articles involving registered nurses and nursing staff working in various healthcare settings, such as hospitals, clinics, and nursing homes. The studies had to measure outcomes related to occupational stress, burnout, job satisfaction, emotional exhaustion, or any related mental health outcomes among nurses.

Conversely, the exclusion criteria aimed to narrow down the scope by eliminating non-empirical studies such as opinion pieces, editorials, commentaries, and reviews lacking original data. The initial screening of article titles was based on these eligibility criteria. The process began with the identification of 1,062 records through database screening.

After duplicates were removed, 502 records remained. All abstracts from these records were screened, which led to the exclusion of 469 articles. The remaining 33 full-text articles were assessed for eligibility, resulting in the exclusion of 23 articles, primarily because they did not meet predefined inclusion criteria or present empirical data. Ultimately, 10 studies met all the necessary conditions and were included in the review (Figure 1).
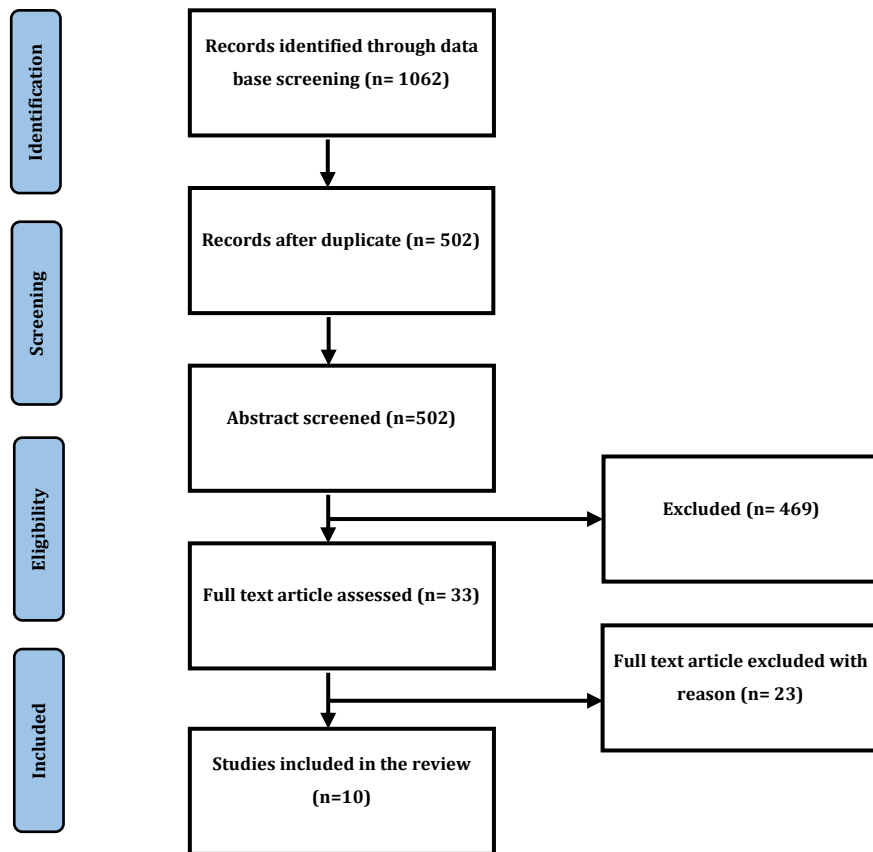

Figure 1. Process of the Article Selection

Results

The characteristics of the 10 studies that met the inclusion criteria after a rigorous selection process are depicted in Table 1. These studies, spanning from 2010 to 2023, investigated various stressors impacting nurses across a diverse range of geographical locations, including China, South Korea, Japan, Canada, Ethiopia, and Iran. This global perspective highlighted the universal nature of occupational stress within nursing, underscoring both commonalities and regional specificities in stress factors. Each study focused on different populations of nurses, ranging from frontline nurses dealing with COVID-19 in China to operating room nurses in South Korea, emphasizing the wide scope of the nursing roles examined. The sample sizes vary significantly, from 193 to 831 participants, reflecting a broad spectrum of research scales and potentially affecting the generalizability of findings across different healthcare settings.

The tools used to measure stress and its predictors were notably diverse, including the Nurse Job Stressors Scale, Perceived Social Support Scale, Kessler Psychological Distress Scale, Fatigue Severity Scale, Quality of Nursing Work Life, and the Maslach Burnout Inventory, among others. This variety in measurement instruments points to the multifaceted nature of occupational stress and its different dimensions, from workload and job demand to interpersonal relations and organizational structure. The stressors identified as predictors of occupational stress or burnout varied similarly. They included time allocation, workload, job demand, organizational system, job insecurity, lack of reward, sleep disturbance, verbal abuse, work-family conflict, and fear of COVID-19. These stressors were categorized according to the Cooper and Marshall model, offering a structured framework for understanding the sources of stress among nurses. The outcomes of the studies were primarily focused on stress, fatigue, quality of life, and burnout, indicating the significant impact of identified stressors on nurses' mental health and job satisfaction. Several studies also noted the relationship between stress and turnover, suggesting that occupational stress not only affects individual health outcomes but also has broader implications for healthcare systems through its impact on staff retention and the quality of patient care.

Table 1. Characteristics of Included Studies

Author	Sample Size	Population	Country	Tool	Stressors as Predictor	Stress Category (Cooper and Marshall)	Outcome
Hu S *et al.*[12]	723	Frontline nurses exposed to COVID-19	China	• Nurse Job Stressors Scale • Perceived Social Support Scale, • Kessler Psychological Distress Scale	• Time allocation • Workload • Job demand • Organizational system	• Intrinsic to the job • Organizational structure/climate'	Stress
Lee H *et al.*[13]	234	Nurses from multiple hospitals	South Korea	• Fatigue Severity Scale • Short Depression Scale, • Korean Occupational Stress Scale, • Insomnia Severity Index, • Epworth Sleepiness Scale	• Job demand, • Insufficient job control • Role conflict, • Job insecurity, • organizational system, • Lack of reward, • Sleep disturbance.	• Intrinsic to the job • Organizational structure/climate • Relationship with word	Fatigue and stress
Hwang E[14]	207	Female nurses working in tertiary general hospitals	Japan	• Quality of Nursing Work Life	• Nursing work, • Role conflict, • Educational status • Verbal abuse • Work family conflict. • Work schedule. • Patients and caregivers	• Intrinsic to the job • Role in the organization • Structure and climate of organization. • Relationship at work • Career development	Quality of life
Maddigan J *et al.*[15]	661	Registered Nurses in an Eastern Canadian Province	Canada	• Professional Quality of Life Scale	• Work schedule. • Turnover • Employment status	• Relationship with Work • Role in the organization	Stress and burnout
Tadesse B *et al.*[16]	393	Nurses working in West Shoa Zone public hospitals	Ethiopia	• Perceived Stress Scale	• Educational status • Working experience • Work position. • Professional commitment • Organizational system, • Job satisfaction	• Career development • Organizational structure/climate	Stress
Park SK *et al.*[17]	200	Clinical nurses at three general hospitals	South Korea	• Perceived Stress Scale • Insomnia Severity Index • Eating Behaviour Questionnaire • WHOQoL-BREF questionnaire	• Health status • Sleep disturbance. • Workload • Job demand • Fear of COVID-19	• Relationship with Work • Intrinsic to job	Quality of life
Belji Kangarlou M *et al.*[18]	831	Hospital nurses General Hospital	Iran	• Maslach Burnout Inventory • NASA Task Load Index Perceived threat of COVID-19 scale	• Workload, • Fear of COVID-19 • Workload • Job demand	• Relationships at Work • Stressors Intrinsic to job	Burnout
Gu M *et al.*[19]	193	Operating room nurses	South Korea	• Verbal Abuse Experience Scale, • Job Stress Scale	• Verbal abuse, • Nurse compensation	• Relationships at Work • Role in the Organization	Turnover and stress
Mousavi SM *et al.*[20]	300	Nurses in Khuzestan Province,	Iran	• Mental Workload scale • Job Stress scale	• Workload • Work-family conflict. • Fear of COVID-19 • Workload • Coworker	• Relationships at Work • Role in the Organization	Turnover and burnout
Zhou L *et al.*[21]	654	Nurses in hospitals in Jiangsu Province,	China	• Perceived Stress Scale • Turnover Intention Scale	• Patients and caregivers • Workload • Coworkers • working experience • Educational status	• Career development • Intrinsic to job • Role in the organization	Stress

Discussion

Based on the systematic review utilizing the Cooper and Marshall stress model, this discussion delved into the complexities of occupational stress within nursing. It scrutinized elements like intrinsic job components, the framework

of the organization, roles nurses occupy, their relationships at work, and paths for career growth, pinpointing pivotal stress inducers such as excessive workload, high job demands, conflicts in roles, and insecurity in employment, all of which profoundly affect the well-being of nurses.

Stressors Intrinsic to the Job

Stressors intrinsic to the job refer to those aspects of a job that inherently have the potential to induce stress. These are typically the fundamental elements or conditions of the work environment and role itself. Six studies[12-14,17-18,21] in this review highlight the impact of specific job stressors on nurses, contributing to a few factors, including workload, working environment and resources, job demand, insufficient job control, and role conflict. Work overload, a primary stressor, emerges when employees face work demands exceeding their capacity and available resources, leading to difficulties in completing tasks within set timeframes.[22] While job demands themselves are not inherently negative, they can become stressors when fulfilling them requires substantial effort and results in adverse reactions like depression, anxiety, or burnout. Role conflict, defined as the simultaneous occurrence of two or more conflicting pressures in a worker's role, is another significant occupational stressor. This stressor arises from incongruities or incompatibilities in role expectations.[23]

Additionally, job control, previously known as decision latitude, is an influential factor in nursing turnover rates. A lack of perceived control often leads to job stress and is a critical yet frequently overlooked factor contributing to the voluntary departure of highly employable nurses from the profession.[24] Additionally, time allocation plays a critical role, as it allows nurses to prioritize care and perform crucial interventions first. Frontline healthcare professionals have endured intense physical and psychological pressure. Under such conditions, nurses operate in high-stress settings for prolonged durations, often resulting in burnout.[25]

Organizational Structure/Climate

Organizational climate, perceived by employees as a series of characteristics within their work environment, significantly influences their behaviors. Three studies[12,13,16] underscored the impact of organizational climate on nurses, focusing on aspects like job insecurity, the organizational system, and the lack of reward. The global health sector heavily relies on nurses, and enhancing their quality of life is beneficial for society at large.[26] Job insecurity in nursing is linked to migration for better pay and quality of life, and it correlates with declining health, increasing burnout, stress, and vulnerability, and lower job satisfaction.[27]

Regarding organizational systems, frequent changes lead to change saturation, overwhelming the organization's capacity to adapt. Around 54% of change initiatives fail due to the high frequency and volume of changes, necessitating staff to prioritize which changes to adopt.[28] This often results in stress, cynicism towards the organization, and a decrease in commitment, job satisfaction, trust, and motivation.[29] Recognizing and rewarding staff effectively, including nurses, is crucial. Such recognition, whether symbolic, emotional, or financial, should acknowledge both exceptional and regular performances and be rooted in professional relationships characterized by respect, support, and feedback.

Role in the Organization

The role of nurses within an organization encompasses various competing values, including efficiency, quality, and staff well-being, with the organization itself seen as a system of roles, each with its expected behaviors. Five studies[14,15,19-21] focused on the role of nurses in the organization, examining factors like compensation, work schedule, patient and caregiver interactions, and issues of abuse and coworker relationships. Compensation, particularly basic pay, is crucial as it directly impacts job performance, with satisfaction in pay correlating with higher performance levels. Efficient management of schedules, essential for ensuring nurses' competencies, number, flexibility, equality, and skill mix, is a process that ranges from planning to controlling work shifts, intending to ensure patient safety and effective nursing service.[30]

Nurses frequently interact with families and are pivotal in facilitating end-of-life discussions, often leading to stress and emotional burdens. They are also more exposed to verbal and physical abuse due to their frontline role in hospitals, acting as intermediaries between patients, desk staff, technicians, and doctors.[31] Coworker incivility, characterized by disregard for others' feelings and impertinent remarks, further contributes to burnout and psychological problems. This aspect is often analyzed through the lens of Conservation of Resources (COR) theory, which helps understand the emotional exhaustion resulting from such workplace dynamics.[32]

Relationship with Work

Work relationships significantly influence the workplace, affecting employees' feelings, energy, and performance. As Bella highlights, mood levels are crucial in determining work performance.[33] Six studies[13,15,17,18-20] emphasize the impact of work relationships on factors like turnover, health status, sleep disturbance, work-family conflict, and fear of COVID-19. Nurse turnover is a pressing global issue in health care, with rates ranging from 13% to 37%, affecting patient care, especially when experienced staff leave and less-experienced nurses dominate units, impacting care continuity and quality. Turnover often increases with dissatisfaction with benefits, professional opportunities, and work conditions.[34]

Nurses' health status is also a concern, with many experiencing poor health due to shift work, affecting mental, physical, and social adaptability. Poor sleep quality and sleeplessness, prevalent among shift workers, are linked to health issues like metabolic syndrome and endocrine and immune system disturbances, leading to various psychophysiological problems, with one study reporting that 29.7% of rotating day shift health staff frequently experienced sleep disruption.[35] Work-family conflict arises when individuals struggle to balance responsibilities at work and home, leading to stress due to arguments, insufficient home time, and increased work responsibilities. Nurses face a high personal fear of COVID-19, more so than other healthcare workers and the general population. A study noted that fear of infection or uncertainty is a significant challenge, especially among nurses on the front lines.[36]

Career Development

In the realm of nursing, career development is a crucial aspect of progression through an individual's professional life, and it involves selecting roles that align with one's professional aspirations. This development is a lifelong journey of actions and decisions, gaining significance in contemporary times due to the heightened focus on work-life quality and the necessity of educational advancement. Factors such as nurses' educational status, working experience, position, and professional commitment are crucial to this development, which is included in three studies.[14,16,21] Nursing education, demanding and rigorous, imposes substantial challenges, paralleling the academic and clinical rigor faced by undergraduate nurses.

Exacerbating this stress is the working experience, where insufficient staffing, as highlighted by Hegney, leads to nurses' frustration over unmet patient needs and their professional dissatisfaction.[37] Cheng also identified a link between clinical competence and the inclination of nurses to leave the profession, a concern, especially for newly recruited nurses transitioning from student to staff roles.[38] Mlambo suggests that this challenge in adapting and improving professional skills could drive nurses away from the profession.[39] Professional commitment is the alignment of an individual's beliefs with their professional goals, influenced by factors like working conditions, work-family conflict, and sociodemographic characteristics. The pandemic has notably altered these aspects, reduced healthcare professionals' well-being and diminishing professional commitment when organizational obstruction increases, subsequently elevating stress levels.

Conclusion

This systematic review has critically examined the prevalence of occupational stress among nurses, revealing a wide range of stressors and their significant impact on nurses' well-being and healthcare delivery. Occupational stress in nursing is influenced by various factors, including job demands, organizational structure, role expectations, interpersonal relationships, and career development challenges. These stressors lead to negative outcomes like burnout, decreased job satisfaction, emotional exhaustion, and increased turnover, highlighting the need for targeted interventions. This study advocates for a holistic approach to stress management, emphasizing supportive work environments, better communication, adequate staffing, and opportunities for professional growth. Addressing these issues is crucial for improving nurses' mental health and job satisfaction, as well as ensuring high-quality patient care and healthcare system efficiency.

Abbreviations

Not applicable.

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