



Navigating the Triple Challenge: Stress, Sleep Disorders, and Workload in Nursing Professionals

Kholoud Ayied Alhazri, Ayat Abdollah Mohamad Al-Mohsin, Sukainah Hussain Aldubais, Khulud Hamoud Albaqami, Abeer Hamoud Albaqami, Hessah Motlag Mobarak Alharthy, Arwa Ahmed Hussain Alahmed, Marwa Ahmed H Alahmed, Musilm Mohd Taher Alabdi, Zahra Ahmed Asaeed, Dawood Salman Aluthman, Hussain Ali Alsayafi, Zahrah Ahmed Alahmed, Mariam Ali Al-Fajri, Hani Ali Al-Hasan,

1. Senior Specialist Nursing General Directorate Of Health Affairs _ Riyadh Region
2. Nurse Qatif Health Network
3. Staff Nurse Almohammadiyah Phc
4. Nurse Technician King Abdulaziz Hospital
5. Nurse Technician King Abdulaziz Hospital
6. Nurse Technician King Abdulaziz Hospital
7. Nursing Technician Almuhammadiya Health Center
8. Nurse Al Faisaliah Health Center
9. Nurse Qatif Central Hospital
10. Technician Nursing Ras Tanura General Hospita
11. Nurse King Fahad Hospital In Hufof
12. Nurse Hospital : King Fahad Hospital Hufof
13. Nurse Hospital : King Fahad Hospital Hufof
14. Nurse Hospital : King Fahad Hospital Hufof
15. Nursing Hospital : King Fahad Hospital Hofuf

Received: 10 october 2023 **Revised:** 24 November 2023 **Accepted:** 08 December 2023

Chapter 1: Introduction to the Challenges in Nursing

The nursing profession is one of the most demanding in healthcare, requiring a unique combination of physical, emotional, and cognitive skills (Roca et al., 2021). Nurses often work long shifts, frequently in high-pressure environments such as emergency rooms or intensive care units, where decisions can have life-or-death consequences. Beyond direct patient care, they manage administrative tasks, coordinate with multidisciplinary teams, and provide emotional support to patients and families. This multifaceted role leaves little room for recovery, making nursing a profession with significant mental and physical challenges. Moreover, societal expectations of compassion and perfection in care delivery add to the burden. These demands create a high-stakes environment where stress, burnout, and fatigue are common, underlining the need to better understand and address these challenges (Hochwarter et al., 2022).

As healthcare systems face increasing patient loads due to aging populations and chronic diseases, the burden on nurses has grown exponentially. This is compounded by global nursing shortages, leaving existing staff to manage higher patient-to-nurse ratios and heavier workloads. With limited resources, nurses often juggle competing priorities, which increases the likelihood of errors and compromises both their well-being and patient safety (Morgan et al., 2022). The COVID-19 pandemic further amplified these pressures, placing nurses at the frontlines of a global health crisis. While the profession has always been challenging, the increasing demands on nurses highlight the urgency of addressing the factors contributing

to stress, sleep disorders, and workload to safeguard both healthcare workers and their patients **(Khalfan et al., 2023)**.

Stress is a pervasive issue in nursing, stemming from high patient acuity, emotional labor, and the constant need to multitask. Nurses often deal with critically ill patients, traumatic situations, and the emotional toll of end-of-life care, all of which contribute to chronic stress. Administrative responsibilities, understaffing, and time pressures exacerbate this burden **(Hughes, 2021)**. Over time, prolonged stress can lead to burnout, characterized by emotional exhaustion, depersonalization, and reduced professional efficacy. This not only affects the individual nurse but also impacts patient care quality, team dynamics, and overall organizational efficiency. Understanding the sources and consequences of stress in nursing is essential for developing effective interventions and fostering healthier work environments **(Badu et al., 2020)**.

Irregular shift schedules, night shifts, and long working hours make nurses particularly vulnerable to sleep disorders. Conditions like insomnia and shift-work disorder are common, disrupting their ability to achieve restorative sleep. Poor sleep quality impairs cognitive function, decision-making, and reaction times, increasing the risk of errors in patient care. **(Imes et al., 2023)**. Over time, chronic sleep deprivation can lead to more serious health issues, such as cardiovascular diseases, diabetes, and depression. For nurses, sleep disorders are not just personal health concerns but also systemic issues that compromise the safety and effectiveness of healthcare delivery. Addressing sleep-related challenges is therefore critical to improving both individual and organizational outcomes in healthcare **(Membrive-Jimenez et al., 2022)**.

Heavy workloads are a major source of stress and fatigue in nursing. High patient-to-nurse ratios force nurses to prioritize tasks, often leaving little time for thorough assessments or emotional support for patients. This "task-focused" approach diminishes job satisfaction and increases the risk of errors. Moreover, the physical demands of prolonged standing, lifting patients, and performing repetitive tasks contribute to musculoskeletal issues and physical exhaustion. The emotional toll of managing difficult patients and witnessing traumatic events further compounds the problem **(Waterfield & Barnason, 2022)**. Addressing workload challenges requires systemic changes, such as better staffing ratios, improved resource allocation, and task delegation, to ensure nurses can perform effectively without compromising their health or patient care **(Paguio et al., 2020)**.

Stress, sleep disorders, and workload are deeply interconnected, forming a vicious cycle that perpetuates nurse burnout. High workloads lead to stress, which impairs sleep quality, reducing the physical and mental resilience needed to manage demanding work environments. Poor sleep exacerbates stress levels and diminishes cognitive performance, further compounding the challenges of heavy workloads. This cycle not only affects nurses' well-being but also compromises patient safety and healthcare outcomes **(Almutairi, 2023)**. Understanding this interconnected relationship is essential for designing interventions that address all three factors simultaneously, rather than tackling them in isolation. Integrated approaches that promote balance, rest, and stress management are critical to breaking this cycle **(Kemp & Fisher, 2022)**.

Failure to address stress, sleep disorders, and workload in nursing has far-reaching consequences for both healthcare workers and the system at large. Burnout among nurses leads to increased absenteeism, higher turnover rates, and a diminished workforce, exacerbating existing nursing shortages **(Søvold et al., 2021)**. For patients, this translates to longer wait times, reduced care quality, and higher risks of medical errors. On an organizational level, the financial costs of recruiting and training replacements, along with decreased efficiency, can be substantial. Recognizing the ripple effects of these challenges highlights the importance of proactive measures to safeguard the well-being of nurses, ultimately ensuring the sustainability of healthcare systems **(Bartos, 2020)**.

The well-being of nurses directly influences patient outcomes. Stressed or fatigued nurses are more likely to make errors, leading to adverse events such as medication mistakes or delayed interventions **(Cho & Steege, 2021)**. On the other hand, well-supported and well-rested nurses deliver higher-quality care, demonstrate greater empathy, and build stronger patient relationships. Research consistently shows that improving nurse well-being not only enhances job satisfaction but also leads to better patient satisfaction and safety. This underscores the importance of addressing the factors contributing to stress, sleep

disorders, and workload in nursing, as doing so benefits both healthcare workers and the patients they serve **(Khalfan et al., 2023)**.

As a female-dominated profession, nursing is often shaped by gender-specific challenges. Many nurses face the dual burden of managing demanding professional roles alongside caregiving responsibilities at home, contributing to stress and burnout **(Wallace & Kay, 2022)**. Additionally, societal expectations of nurturing and self-sacrifice in nursing amplify the emotional toll of the job. These gendered dimensions exacerbate issues like sleep deprivation and mental health struggles, making it imperative to consider gender when designing interventions for nurse well-being. Policies that promote work-life balance, such as flexible scheduling and family support programs, can significantly alleviate these challenges **(Hales & Tyler, 2022)**.

Healthcare organizations play a pivotal role in addressing the challenges faced by nurses. Policies that prioritize nurse well-being, such as adequate staffing ratios, fair scheduling practices, and access to mental health resources, are essential. Leadership support is equally important, as nurses who feel valued and supported are better equipped to manage stress and workloads **(Xiao et al., 2022)**. Regular training in stress management and coping strategies, coupled with initiatives to promote work-life balance, can further enhance nurse resilience. Ultimately, organizations that invest in their nursing workforce benefit from improved morale, reduced turnover, and better patient care outcomes **(Fazal et al., 2022)**.

Technology offers innovative solutions to alleviate stress, sleep disorders, and workload in nursing. Digital tools like electronic health records (EHRs) and automated scheduling systems streamline administrative tasks, freeing up time for patient care. Wearable devices can monitor nurses' stress and fatigue levels, providing real-time feedback to promote self-care **(Clancy, 2020)**. Telehealth platforms reduce the burden of physical demands, enabling nurses to provide care remotely. However, the adoption of technology must be accompanied by training and user-friendly designs to prevent additional stress. When implemented effectively, technology can significantly improve the work environment for nurses **(Chen et al., 2022)**.

Raising awareness about the challenges faced by nurses is crucial for driving change. Advocacy efforts by professional nursing organizations and unions can influence policymakers and healthcare leaders to prioritize nurse well-being **(Chiu et al., 2020)**. Public awareness campaigns can also garner support for systemic changes, such as increased funding for staffing and mental health resources. By highlighting the interconnected issues of stress, sleep disorders, and workload, advocacy initiatives ensure that these challenges remain at the forefront of healthcare policy and practice. Collaboration between nurses, administrators, and policymakers is essential for creating meaningful and lasting solutions **(O'Hara et al., 2022)**.

Chapter 2: Stress Among Nursing Professionals

Nursing is an emotionally demanding profession, requiring constant compassion, empathy, and emotional engagement with patients and their families. Nurses often care for critically ill patients, deliver bad news, and witness traumatic events, all of which can lead to emotional exhaustion. **(Yoo et al., 2020)**. Additionally, nurses frequently suppress their emotions to maintain professionalism, which may result in emotional dissonance over time. This ongoing emotional labor contributes significantly to stress levels. Addressing these emotional demands requires fostering supportive work environments where nurses feel safe discussing their emotions. Regular debriefings and counseling services can help nurses process difficult experiences and mitigate emotional strain **(Voultsov, 2021)**.

Caring for patients, especially in high-acuity settings, is one of the primary stressors for nurses. The pressure to provide high-quality care while managing multiple patients simultaneously can lead to feelings of overwhelm. Tasks such as managing critical conditions, dealing with uncooperative patients, or handling emergencies require quick decision-making and precision, adding to the stress **(Whittam et al., 2021)**. Nurses are also emotionally impacted by the outcomes of their care, particularly when dealing with end-of-life situations. To address this, healthcare organizations should provide adequate staffing and prioritize nurse-patient ratios that allow for manageable workloads. Training in time management and prioritization

can also help nurses handle patient care more effectively, reducing stress levels **(Povedano-Jiménez et al., 2021)**.

Administrative duties, such as documentation, charting, and compliance with hospital policies, can significantly contribute to nurse stress. These tasks often feel burdensome and detract from the time nurses can dedicate to direct patient care, leaving them frustrated. The pressure to meet deadlines and adhere to strict procedural guidelines adds to the workload, creating additional stress **(Wisner et al., 2021)**. Moreover, inadequate administrative support exacerbates the issue, as nurses may feel isolated and unsupported. Implementing user-friendly digital tools for documentation and providing administrative assistance can alleviate some of these pressures, enabling nurses to focus more on patient care **(Ralph et al., 2022)**.

Chronic stress takes a significant toll on nurses' physical health, leading to issues such as fatigue, headaches, hypertension, and a weakened immune system. Prolonged stress activates the body's fight-or-flight response, causing the release of cortisol, which, over time, disrupts bodily systems **(Shivakumara & Mathias, 2023)**. Nurses under constant stress are at higher risk of developing cardiovascular diseases, gastrointestinal disorders, and musculoskeletal problems. These health issues not only affect their well-being but also impair their ability to perform their duties effectively. To combat the physiological impacts of stress, healthcare organizations should promote wellness programs that include regular health screenings, fitness initiatives, and stress management workshops **(Zhu et al., 2020)**.

The psychological consequences of chronic stress on nurses are profound, often manifesting as anxiety, depression, and mood disorders. Nurses may experience irritability, difficulty concentrating, and a sense of helplessness, all of which can interfere with their professional and personal lives **(Kelly, 2020)**. In severe cases, chronic stress can lead to post-traumatic stress disorder (PTSD), particularly for those working in high-stress environments like emergency departments or intensive care units. To address these psychological impacts, accessible mental health resources, such as counseling services, peer support groups, and employee assistance programs, should be made available. Encouraging open discussions about mental health within the workplace can also help reduce stigma and support recovery **(Chenevert et al., 2022)**.

Chronic stress is a significant precursor to burnout, a state of emotional exhaustion, depersonalization, and reduced personal accomplishment. Burnout not only affects nurses' mental health but also impacts their job performance, leading to errors, absenteeism, and high turnover rates. Nurses experiencing burnout often feel disconnected from their work and may become less empathetic toward patients **(Bayes et al., 2021)**. To prevent burnout, healthcare organizations should focus on creating supportive work environments, fostering a sense of community, and recognizing nurses' contributions. Resilience training and opportunities for career growth can also help nurses cope with stress and maintain their motivation

(Golparvar & Parsakia, 2023).

Mindfulness practices, such as meditation, deep breathing, and yoga, have proven effective in reducing stress among nurses. Mindfulness helps nurses remain present and focused, enabling them to manage stressful situations more calmly and effectively **(Green & Kinchen, 2021)**. Research shows that mindfulness reduces cortisol levels, improves emotional regulation, and enhances overall well-being. Introducing mindfulness training programs in healthcare settings can provide nurses with valuable tools to cope with daily stressors. Simple practices, such as short breathing exercises during shifts, can make a significant difference in stress management and improve job satisfaction **(Saban et al., 2022)**.

Resilience training equips nurses with the skills to adapt to stress and bounce back from challenging situations. These programs often include components such as cognitive restructuring, emotional regulation, and problem-solving techniques. By building resilience, nurses can develop a stronger sense of self-efficacy and reduce the likelihood of stress leading to burnout **(Zhai et al., 2021)**. Healthcare organizations can incorporate resilience training into their professional development programs to support nurses in

managing stress more effectively. Encouraging peer support and mentorship within the workplace also fosters resilience by creating a collaborative and supportive environment **(Dossett et al., 2021)**.

Peer support systems play a crucial role in helping nurses manage stress. Sharing experiences with colleagues who understand the unique challenges of the profession fosters a sense of solidarity and reduces feelings of isolation. Formal peer support programs, such as debriefing sessions after critical incidents, allow nurses to process their emotions and gain valuable perspectives from their peers **(Agarwal et al., 2020)**. Informal support through friendships and camaraderie within teams also contributes to stress reduction. Organizations can encourage peer support by promoting a culture of teamwork and creating opportunities for social interactions among staff **(Wright et al., 2022)**.

Nurse leaders play a pivotal role in mitigating workplace stress by fostering a supportive and empathetic work environment. Effective leadership involves clear communication, recognition of staff contributions, and advocacy for nurses' needs. Leaders who actively address workload concerns, provide constructive feedback, and facilitate access to resources can help reduce stress among their teams **(Ota et al., 2022)**. Leadership training programs should include components on stress management and emotional intelligence to equip nurse leaders with the skills to support their staff. By prioritizing nurse well-being, leaders can enhance team morale and improve overall job satisfaction **(Aseery et al., 2023)**.

Healthcare organizations can implement systemic changes to address the root causes of stress among nurses. Initiatives such as improving staffing ratios, offering flexible scheduling, and reducing administrative burdens are critical. Providing access to stress management resources, including workshops, wellness programs, and mental health support, further enhances nurse well-being **(Paguio et al., 2020)**. Organizations should regularly assess workplace stress levels through surveys and feedback mechanisms, using this data to inform targeted interventions. By prioritizing nurse well-being as part of organizational culture, healthcare institutions can create a more supportive environment that reduces stress and improves patient outcomes **(Patrician et al., 2022)**.

Continuing education provides nurses with opportunities to expand their knowledge, develop new skills, and advance their careers, which can help reduce stress associated with professional stagnation. Training programs that focus on stress management techniques, communication skills, and time management are particularly beneficial. Offering educational opportunities such as online courses, workshops, and certifications also empowers nurses, boosting their confidence and job satisfaction **(Mlambo et al., 2021)**. Organizations should support continuing education by providing funding, flexible schedules, and access to learning resources. Investing in nurses' professional growth not only reduces stress but also enhances the quality of care delivered to patients **(King et al., 2021)**.

Creating a workplace culture that prioritizes nurse well-being is essential for long-term stress reduction. This involves fostering open communication, recognizing achievements, and ensuring that nurses feel valued and supported. Regular team-building activities, wellness initiatives, and mental health awareness campaigns can contribute to a positive work environment **(Moloney et al., 2020)**. Organizations should also establish policies that encourage work-life balance, such as offering adequate leave and flexible work arrangements. By building a culture of well-being, healthcare institutions can not only reduce stress among nurses but also enhance overall job satisfaction, retention, and patient care quality **(Abdullah et al., 2021)**.

Chapter 3: Sleep Disorders and Their Impact on Nurses

Sleep disorders are prevalent among nurses due to the demanding nature of their profession. Studies indicate that conditions such as insomnia, sleep apnea, and shift-work disorder affect a significant proportion of nursing professionals. Insomnia, often triggered by stress or irregular schedules, is one of the most commonly reported issues **(Salari et al., 2020)**. Sleep apnea, characterized by disrupted breathing during sleep, can further exacerbate fatigue in an already exhausted workforce. Shift-work disorder, which arises from working irregular hours, particularly night shifts, disrupts the circadian rhythm, making restorative sleep difficult. Research shows that nearly 60% of nurses report poor sleep quality, significantly

higher than the general population. Addressing these disorders is essential, as they compromise both nurse well-being and their ability to deliver safe, effective patient care **(Simonetti et al., 2021)**.

Insomnia, characterized by difficulty falling or staying asleep, is highly prevalent among nurses due to stress, long shifts, and high workloads. Emotional strain from patient care and decision-making often leads to mental overactivation, preventing restful sleep. Persistent insomnia not only reduces sleep duration but also impairs recovery during sleep, leaving nurses fatigued **(Al Maqbali et al., 2021)**. Research highlights that 30–40% of nurses report symptoms of insomnia, with higher rates among those working night shifts or rotating schedules. Untreated insomnia can lead to chronic exhaustion, depression, and decreased cognitive functioning. Educational programs on stress management and relaxation techniques can help nurses combat insomnia and promote better sleep quality **(d’Ettorre et al., 2020)**.

Sleep apnea, a condition characterized by interrupted breathing during sleep, is another significant sleep disorder among nurses. This condition is particularly common in nurses with obesity or chronic stress. Sleep apnea leads to fragmented sleep and excessive daytime fatigue, impairing both physical and cognitive performance **(Marvaldi et al., 2021)**. Nurses with untreated sleep apnea often experience difficulty concentrating, slower reaction times, and irritability, which can jeopardize patient safety. The condition also increases the risk of cardiovascular diseases, hypertension, and metabolic disorders. Screening programs for sleep apnea in healthcare settings, combined with treatment options like continuous positive airway pressure (CPAP) therapy, can help mitigate its impact on nurses' health and job performance. **(Cody, 2021)**.

Shift-work disorder is a prevalent issue among nurses due to their irregular and rotating work schedules. This disorder occurs when work hours conflict with the natural circadian rhythm, resulting in difficulty sleeping during the day and staying awake during night shifts. Nurses experiencing shift-work disorder often report reduced total sleep time, poor sleep quality, and chronic fatigue **(Weaver et al., 2023)**. Studies reveal that night shift nurses are more likely to develop this condition, leading to impaired alertness and higher risks of errors during patient care. Preventative strategies, such as consistent shift rotation schedules and improved work environment lighting, can reduce the prevalence of shift-work disorder and its associated health consequences **(Olson et al., 2020)**.

Irregular shift schedules significantly disrupt nurses' sleep patterns and overall sleep quality. Alternating between day and night shifts disturbs the body's circadian rhythm, making it challenging for nurses to maintain a consistent sleep routine. Long shifts exceeding 12 hours further exacerbate fatigue, leaving insufficient time for recovery. Studies suggest that nurses working rotating or night shifts report shorter sleep durations, frequent awakenings, and difficulty falling asleep **(Weaver et al., 2023)**. Chronic sleep deprivation from irregular schedules leads to a cumulative sleep debt, which negatively impacts their physical and mental well-being. Implementing fixed shift patterns and scheduling sufficient rest periods between shifts can help nurses achieve better sleep quality and improve their overall health. **(Chang & Li, 2022)**.

Sleep deprivation and disorders in nurses have profound effects on cognitive functioning. Lack of restorative sleep impairs memory, attention, and decision-making abilities, all critical for safe and effective nursing care. Research shows that sleep-deprived nurses are more likely to make calculation errors, forget critical steps in procedures, or misinterpret patient data **(Phillips, 2020)**. Chronic sleep deprivation can also impair problem-solving skills, creativity, and the ability to handle complex situations. These cognitive deficits increase the likelihood of adverse patient outcomes and place additional stress on nurses. Addressing sleep issues through organizational policies and personal interventions is essential to ensure that nurses can perform their duties with clarity and precision **(Capezuti et al., 2022)**.

Poor sleep quality directly impacts nurses' job performance, leading to reduced efficiency, slower reaction times, and increased absenteeism. Fatigue from inadequate sleep decreases energy levels, making it harder for nurses to meet the physical and emotional demands of their work. Additionally, sleep-deprived nurses often struggle with maintaining focus during long shifts, leading to diminished productivity **(Shaik et al., 2022)**. Research indicates that nurses with sleep disorders are more likely to experience burnout, reduced

job satisfaction, and a greater intention to leave the profession. Employers should prioritize sleep education programs and schedule adjustments to help nurses maintain optimal performance levels and job satisfaction **(Brossoit et al., 2020)**.

Chronic sleep disorders put nurses at increased risk of developing serious health problems, including obesity, diabetes, hypertension, and cardiovascular disease. Sleep deprivation disrupts hormonal balance, leading to metabolic changes and increased inflammation. Nurses with irregular sleep patterns also face higher risks of mental health issues, such as depression, anxiety, and mood disorders **(Yeghiazarians et al., 2021)**. Furthermore, long-term sleep disturbances weaken the immune system, making nurses more susceptible to infections. These health risks not only compromise nurses' well-being but also reduce their ability to provide quality care. Healthcare organizations should implement wellness initiatives that address sleep issues to mitigate these long-term health risks **(Ramar et al., 2021)**.

Improving sleep hygiene is essential to help nurses overcome sleep disorders. Educating nurses on healthy sleep practices, such as maintaining consistent sleep schedules, limiting caffeine intake, and creating a conducive sleep environment, can enhance sleep quality **(Shriane et al., 2023)**. Relaxation techniques like meditation and breathing exercises can help nurses unwind after stressful shifts. Employers can support sleep hygiene by implementing policies such as shorter shifts, mandatory rest breaks, and designated rest areas within healthcare facilities. Sleep hygiene programs tailored to the nursing profession can significantly improve both individual health outcomes and overall job performance **(Booker et al., 2022)**.

Adjusting shift schedules can play a pivotal role in alleviating sleep disorders among nurses. Fixed or forward-rotating shift schedules (e.g., day-to-evening-to-night) allow the body to adapt more effectively than erratic rotations. Limiting consecutive night shifts and scheduling at least 48 hours of rest between rotations can reduce circadian rhythm disruptions **(Glaros et al., 2023)**. Additionally, shorter shift durations, such as limiting work hours to 8-10 hours instead of 12-14, provide nurses with more time for rest and recovery. Pilot programs implementing adjusted shifts have shown improvements in nurse satisfaction, sleep quality, and patient care outcomes. Health systems should prioritize evidence-based shift planning to promote nurse well-being **(Robbins et al., 2021)**.

Fatigue management programs are critical for addressing sleep issues in nursing professionals. These programs educate nurses on recognizing fatigue symptoms and adopting strategies to mitigate them, such as strategic napping, proper hydration, and time management **(Trinkoff et al., 2021)**. Institutions can support fatigue management by incorporating rest breaks during shifts, providing access to quiet rooms, and scheduling less physically demanding tasks after long shifts. Wearable devices that monitor sleep and alertness can also help nurses track their fatigue levels. Comprehensive fatigue management programs not only improve sleep health but also enhance job performance and patient safety **(Querstret et al., 2020)**.

Sleep education is a vital component of addressing sleep disorders among nurses. Workshops and training programs can help nurses understand the importance of sleep, the consequences of sleep deprivation, and strategies for improving sleep quality. Education should also include information on recognizing sleep disorders, such as insomnia and shift-work disorder, and seeking professional help when needed **(Meaklim et al., 2020)**. Institutions can collaborate with sleep specialists to develop tailored educational materials for nurses. Empowering nurses with knowledge about sleep hygiene and its impact on health and job performance creates a culture that prioritizes well-being and resilience in the healthcare workforce **(Williams et al., 2022)**.

Organizational support is essential in addressing sleep disorders and promoting overall well-being among nurses. Policies that limit overtime, ensure adequate staffing, and promote work-life balance can help reduce the impact of sleep deprivation. Providing resources such as access to sleep clinics, mental health support, and wellness programs further reinforces the importance of sleep health **(Lovejoy et al., 2021)**. Encouraging open discussions about sleep challenges and creating a supportive environment can reduce stigma and ensure nurses feel empowered to prioritize their rest. Organizations that invest in sleep health initiatives see benefits in reduced absenteeism, improved nurse satisfaction, and enhanced patient care quality **(Cho et al., 2024)**.

Chapter 4: The Role of Workload in Nurse Well-Being

High patient-to-nurse ratios are a critical factor contributing to physical strain among nurses. Handling multiple patients simultaneously often requires prolonged standing, lifting, and bending, leading to musculoskeletal injuries. These physical demands can cause chronic pain, fatigue, and long-term health issues, such as back and joint problems. The cumulative effect of these physical stressors reduces the nurse's ability to perform effectively and can increase absenteeism (Rovinski-Wagner & Mills, 2022). Research shows that nurses with fewer patients experience less physical strain and improved job satisfaction. Addressing this issue requires ensuring adequate staffing levels, providing ergonomic equipment, and offering wellness programs aimed at physical health maintenance. Without such interventions, the physical toll of high patient-to-nurse ratios can severely impact the well-being of nurses and their capacity to deliver quality care (Alyamani et al., 2022).

The mental strain associated with high patient-to-nurse ratios is a growing concern in the healthcare field. Juggling multiple patients often leads to cognitive overload, emotional exhaustion, and decision fatigue. Nurses may feel pressured to meet competing demands, which can cause anxiety, stress, and feelings of inadequacy. Over time, this mental strain can contribute to burnout, characterized by depersonalization, reduced personal accomplishment, and emotional fatigue (Harvey et al., 2020). Studies suggest that nurses experiencing high mental strain are more likely to leave the profession, further exacerbating staffing shortages. Providing access to mental health support, peer counseling, and training on stress management techniques can help nurses navigate the mental challenges associated with heavy workloads. Promoting mental well-being is essential for sustaining the nursing workforce (Labrague & de Los Santos, 2021).

Overburdened nurses face an increased risk of making errors, jeopardizing patient safety. High workloads often result in missed care, medication errors, or incomplete patient monitoring. Studies indicate that patient mortality rates rise when nurses are assigned more patients than recommended ratios (Regina et al., 2021). Overloaded nurses may inadvertently overlook critical patient signs or fail to respond promptly to emergencies due to divided attention. This compromises the quality of care delivered and erodes patient trust in the healthcare system. Addressing this requires proactive workload management strategies, such as hiring additional staff, automating routine tasks, and implementing real-time monitoring systems. By reducing nurse workloads, healthcare facilities can enhance patient safety, minimize errors, and ensure the consistent delivery of high-quality care (Al Ma'mari et al., 2020).

Nurses experiencing excessive workloads often struggle to provide the level of care they aspire to, leading to professional dissatisfaction and burnout. When care quality is compromised, nurses may feel demoralized, further perpetuating the cycle of stress and reduced performance. This affects not only the nurses but also the patients, who may experience suboptimal outcomes due to delayed treatments or insufficient attention (Singh et al., 2022). Burnout also reduces nurses' ability to empathize with patients, impacting the therapeutic relationship essential for recovery. Investing in supportive measures, such as balanced workloads and sufficient breaks, is critical for preserving care quality. Encouraging open communication and providing resources to address burnout can create a healthier work environment, improving both nurse and patient experiences (Richmond et al., 2022).

Nurses employ various coping mechanisms to manage heavy workloads, with effective time management being one of the most common. Prioritizing tasks, delegating responsibilities, and setting achievable goals allow nurses to navigate their duties more efficiently. For example, creating to-do lists and using digital scheduling tools can help organize tasks and minimize delays. However, these strategies are often limited by systemic issues, such as understaffing or last-minute changes to patient needs (Vizeshfar et al., 2022). Training nurses in advanced time management techniques can enhance their ability to handle complex workloads. Workshops, mentorship programs, and access to organizational tools empower nurses to manage their time effectively, reducing stress and improving productivity (Farokhzadian et al., 2020).

Peer support is a vital coping mechanism for nurses managing high workloads. Sharing experiences, discussing challenges, and seeking advice from colleagues can provide emotional relief and practical solutions. Peer support groups foster a sense of camaraderie, reducing feelings of isolation and helping

nurses feel more connected to their teams. Informal discussions during breaks or debriefing sessions after intense shifts offer opportunities for emotional processing (**Shalaby & Agyapong, 2020**). Formal peer support programs, led by trained facilitators, can further enhance resilience by providing structured environments for mutual encouragement. Encouraging a culture of support within healthcare settings not only improves nurse well-being but also strengthens team dynamics and collaborative care delivery (**Lu et al., 2022**).

Organizations play a critical role in addressing nurse workloads by implementing policies and systems to alleviate strain. Ensuring adequate staffing levels through strategic recruitment and retention initiatives is a fundamental step. Healthcare facilities should conduct regular workload assessments to identify bottlenecks and redistribute responsibilities equitably (**Sprung et al., 2023**). Additionally, fostering a culture that prioritizes employee well-being, such as offering flexible scheduling and wellness programs, can mitigate the negative effects of heavy workloads. Encouraging open communication between management and staff ensures that workload concerns are addressed proactively. Organizations that prioritize workload management see improved nurse satisfaction, retention, and patient outcomes (**Udod et al., 2021**).

Balanced staffing is one of the most effective strategies for reducing nurse workloads. Maintaining optimal nurse-to-patient ratios ensures that each nurse can provide adequate attention to their patients without feeling overwhelmed. Evidence suggests that staffing levels directly correlate with both nurse satisfaction and patient safety (**Griffiths et al., 2021**). Understaffing leads to burnout, while overstaffing may increase operational costs. Striking the right balance requires careful workforce planning, considering factors such as patient acuity, case complexity, and nurse experience. Utilizing predictive analytics and real-time data on patient needs can help healthcare facilities allocate staff more effectively, ensuring workloads remain manageable (**Folse, 2022**).

Task delegation is an essential organizational strategy for alleviating nurse workloads. Assigning non-clinical tasks, such as administrative duties, to support staff allows nurses to focus on patient care. Delegating responsibilities to licensed practical nurses (LPNs) or nurse aides for routine procedures, such as vital sign monitoring or basic wound care, further reduces the burden on registered nurses (**Picco et al., 2021**). Effective delegation requires clear communication, trust, and adequate training for support staff to ensure tasks are performed competently. When done correctly, task delegation not only eases nurse workloads but also enhances team efficiency and patient care quality (**Shore et al., 2022**).

Technology offers innovative solutions for managing nurse workloads. Electronic health records (EHRs) streamline documentation, reducing the time nurses spend on paperwork. Automated systems for medication dispensing and patient monitoring minimize manual tasks, freeing up time for direct patient care. Mobile apps and digital tools enable nurses to track tasks, communicate with colleagues, and access patient information efficiently (**Moy et al., 2023**). However, the implementation of technology must be accompanied by adequate training to ensure nurses can use these tools effectively. Integrating technology into healthcare workflows enhances productivity, reduces errors, and improves the overall work experience for nurses (**Moore et al., 2020**).

Real-time workload monitoring systems help healthcare facilities identify and address workload imbalances. These systems track patient acuity levels, nurse availability, and task completion rates, providing actionable insights to redistribute responsibilities dynamically (**Jiang et al., 2023**). For instance, if one unit experiences a surge in patient admissions, additional staff can be deployed to prevent overburdening the existing team. Real-time monitoring also helps managers anticipate staffing needs and plan schedules more effectively. While the initial investment in such systems can be high, the long-term benefits of improved workload management, reduced nurse burnout, and enhanced patient outcomes make them a valuable tool for modern healthcare (**Gürsan, & de Gooyert, 2021**).

Training programs focused on workload management equip nurses with skills to navigate challenging work environments. Workshops on prioritization, delegation, and stress management provide practical tools for handling demanding shifts. Simulation-based training allows nurses to practice responding to high-

pressure situations, building confidence and resilience (Jeffery et al., 2023). Additionally, leadership training for nurse managers ensures they can support their teams effectively by identifying workload issues and providing timely interventions. Regularly updating training programs to reflect emerging challenges, such as the integration of new technologies, ensures that nurses remain equipped to handle evolving workloads (Rees et al., 2021).

Creating sustainable workloads requires a combination of short- and long-term strategies. Short-term measures, such as hiring temporary staff during peak periods, address immediate concerns but may not resolve systemic issues. Long-term solutions include investing in workforce expansion, promoting interdisciplinary collaboration, and leveraging technology to streamline workflows (Buchan et al., 2022). Regular workload assessments and employee feedback can guide policy adjustments to ensure workloads remain manageable. By adopting a proactive and holistic approach to workload management, healthcare organizations can support nurse well-being, enhance retention, and improve patient care outcomes (Moloney et al., 2020).

References:

1. Roca, J., Canet-Vélez, O., Cemeli, T., Lavedán, A., Masot, O., & Botigué, T. (2021). Experiences, emotional responses, and coping skills of nursing students as auxiliary health workers during the peak COVID-19 pandemic: A qualitative study. *International journal of mental health nursing*, 30(5), 1080-1092
2. Hochwarter, W., Jordan, S., Kiewitz, C., Liborius, P., Lampaki, A., Franczak, J., ... & Khan, A. K. (2022). Losing compassion for patients? The implications of COVID-19 on compassion fatigue and event-related post-traumatic stress disorder in nurses. *Journal of Managerial Psychology*, 37(3), 206-223..
3. Morgan, R., Tan, H. L., Oveisi, N., Memmott, C., Korzuchowski, A., Hawkins, K., & Smith, J. (2022). Women healthcare workers' experiences during COVID-19 and other crises: A scoping review. *International Journal of Nursing Studies Advances*, 4, 100066..
4. Khalfan, S. S., Muki, S. K., Minani, J., Khamis, K. A., Said, F. A., Suleiman, B., & Rashid, H. K. (2023). Review of Work-Related Stress and the Incidence of Hypertension among Nurses. *Asian Journal of Research in Nursing and Health*, 6(1), 343-351..
5. Hughes, T. (2021). Ethical Conflicts and Legal Liability in Professional Nursing. *The Medical-Legal Aspects of Acute Care Medicine: A Resource for Clinicians, Administrators, and Risk Managers*, 393-415..
6. Badu, E., O'Brien, A. P., Mitchell, R., Rubin, M., James, C., McNeil, K., ... & Giles, M. (2020). Workplace stress and resilience in the Australian nursing workforce: A comprehensive integrative review. *International journal of mental health nursing*, 29(1), 5-34..
7. Imes, C. C., Tucker, S. J., Trinkoff, A. M., Chasens, E. R., Weinstein, S. M., Dunbar-Jacob, J., ... & Baldwin, C. M. (2023). Wake-up call: night shifts adversely affect nurse health and retention, patient and public safety, and costs. *Nursing Administration Quarterly*, 47(4), E38-E53.
8. Membrive-Jimenez, M. J., Gomez-Urquiza, J. L., Suleiman-Martos, N., Velando-Soriano, A., Ariza, T., De la Fuente-Solana, E. I., & Canadas-De la Fuente, G. A. (2022, May). Relation between burnout and sleep problems in nurses: a systematic review with meta-analysis. In *Healthcare* (Vol. 10, No. 5, p. 954). MDPI.
9. Waterfield, D., & Barnason, S. (2022). The integration of care ethics and nursing workload: A qualitative systematic review. *Journal of nursing management*, 30(7), 2194-2206.
10. Paguio, J. T., Yu, D. S. F., & Su, J. J. (2020). Systematic review of interventions to improve nurses' work environments. *Journal of Advanced Nursing*, 76(10), 2471-2493.
11. Almutairi, S. F. (2023). Burnout among Healthcare Professionals: A Review of Causes, Impacts, and Alleviation Strategies. *Review of Contemporary Philosophy*, 22, 43-52..
12. Kemp, A. H., & Fisher, Z. (2022). Wellbeing, whole health and societal transformation: theoretical insights and practical applications. *Global Advances in Health and Medicine*, 11, 21649561211073077.
13. Søvold, L. E., Naslund, J. A., Kousoulis, A. A., Saxena, S., Qoronfleh, M. W., Grobler, C., & Münter, L. (2021). Prioritizing the mental health and well-being of healthcare workers: an urgent global public health priority. *Frontiers in public health*, 9, 679397

14. Bartos, S. (Ed.). (2020). *Promoting the Well-being of the Critical Care Nurse, An Issue of Critical Care Nursing Clinics of North America, E-Book: Promoting the Well-being of the Critical Care Nurse, An Issue of Critical Care Nursing Clinics of North America, E-Book* (Vol. 32, No. 3). Elsevier Health Sciences..
15. Cho, H., & Steege, L. M. (2021). Nurse fatigue and nurse, patient safety, and organizational outcomes: A systematic review. *Western Journal of Nursing Research*, 43(12), 1157-1168.
16. Khalfan, S. S., Muki, S. K., Minani, J., Khamis, K. A., Said, F. A., Suleiman, B., & Rashid, H. K. (2023). Review of Work-Related Stress and the Incidence of Hypertension among Nurses. *Asian Journal of Research in Nursing and Health*, 6(1), 343-351..
17. Wallace, J. E., & Kay, F. M. (2022). Supportive relations in a feminized occupation: How male and female veterinarians compare. *Canadian Review of Sociology/Revue canadienne de sociologie*, 59(1), 4-22
18. Hales, S., & Tyler, M. (2022). Heroism and/as injurious speech: Recognition, precarity, and inequality in health and social care work. *Gender, Work & Organization*, 29(4), 1199-1218..
19. Xiao, Q., Cooke, F. L., & Chen, L. (2022). Nurses' well-being and implications for human resource management: A systematic literature review. *International Journal of Management Reviews*, 24(4), 599-624
20. Fazal, S., Masood, S., Nazir, F., & Majoka, M. I. (2022). Individual and organizational strategies for promoting work-life balance for sustainable workforce: A systematic literature review from Pakistan. *Sustainability*, 14(18), 11552.
21. Clancy, T. R. (2020). Technology solutions for nurse leaders. *Nursing Administration Quarterly*, 44(4), 300-315.
22. Chen, Y. T., Chiu, Y. C., Teng, M. L., & Liao, P. H. (2022). The effect of medical material management system app on nursing workload and stress. *BMC nursing*, 21(1), 19..
23. Chiu, P., Duncan, S., & Whyte, N. (2020). Charting a research agenda for the advancement of nursing organizations' influence on health systems and policy. *Canadian Journal of Nursing Research*, 52(3), 185-193.
24. O'Hara, S., Ackerman, M. H., Raderstorf, T., Kilbridge, J. F., & Melnyk, B. M. (2022). Building and sustaining a culture of innovation in nursing academics, research, policy, and practice: outcomes of the National Innovation Summit. *Journal of Professional Nursing*, 43, 5-11.
25. Yoo, H. J., Lim, O. B., & Shim, J. L. (2020). Critical care nurses' communication experiences with patients and families in an intensive care unit: A qualitative study. *Plos one*, 15(7), e0235694.
26. Voultsov, P. (2021). Nurses' emotional reactions and compassion fatigue: A systematic review. *Aristotle Biomedical Journal*, 3(2), 1-16.
27. Whittam, S., Torning, N., & Patching, J. (2021). A narrative inquiry approach to understanding senior intensive care nurses' experiences of working with new graduate nurses. *Journal of Clinical Nursing*, 30(21-22), 3314-3329..
28. Povedano-Jiménez, M., Ropero-Padilla, C., Rodríguez-Arrastia, M., & García-Caro, M. P. (2021). Personal and emotional factors of nursing professionals related to coping with end-of-life care: a cross-sectional study. *International Journal of Environmental Research and Public Health*, 18(18), 9515..
29. Wisner, K., Chesla, C. A., Spetz, J., & Lyndon, A. (2021). Managing the tension between caring and charting: Labor and delivery nurses' experiences of the electronic health record. *Research in Nursing & Health*, 44(5), 822-832..
30. Ralph, J., Freeman, L. A., Menard, A. D., & Soucie, K. (2022). Practical strategies and the need for psychological support: recommendations from nurses working in hospitals during the COVID-19 pandemic. *Journal of health organization and management*, 36(2), 240-255..
31. Shivakumara, J., & Mathias, T. (2023). Stress, a Great Impact on Mental Health. *Asian Journal of Nursing Education and Research*, 13(3), 232-237..
32. Zhu, J., Ying, W., Zhang, L., Peng, G., Chen, W., Anto, E. O., ... & Wang, W. (2020). Psychological symptoms in Chinese nurses may be associated with predisposition to chronic disease: a cross-sectional study of suboptimal health status. *EPMA Journal*, 11, 551-563..
33. Kelly, L. (2020). Burnout, compassion fatigue, and secondary trauma in nurses: Recognizing the occupational phenomenon and personal consequences of caregiving. *Critical Care Nursing Quarterly*, 43(1), 73-80.

34. Chenevert, M., Vignoli, M., Conway, P. M., & Balducci, C. (2022). Workplace bullying and post-traumatic stress disorder symptomology: the influence of role conflict and the moderating effects of neuroticism and managerial competencies. *International journal of environmental research and public health*, 19(17), 10646..
35. Bayes, A., Tavella, G., & Parker, G. (2021). The biology of burnout: Causes and consequences. *The World Journal of Biological Psychiatry*, 22(9), 686-698.
36. Golparvar, M., & Parsakia, K. (2023). Building Resilience: Psychological Approaches to Prevent Burnout in Health Professionals. *KMAN Counseling & Psychology Nexus*, 1(1), 159-166..
37. Green, A. A., & Kinchen, E. V. (2021). The effects of mindfulness meditation on stress and burnout in nurses. *Journal of Holistic Nursing*, 39(4), 356-368..
38. Saban, K. L., Collins, E. G., Mathews, H. L., Bryant, F. B., Tell, D., Gonzalez, B., ... & Janusek, L. W. (2022). Impact of a mindfulness-based stress reduction program on psychological well-being, cortisol, and inflammation in women veterans. *Journal of General Internal Medicine*, 37(Suppl 3), 751-761.
39. Zhai, X., Ren, L. N., Liu, Y., Liu, C. J., Su, X. G., & Feng, B. E. (2021). Resilience training for nurses: A meta-analysis. *Journal of Hospice & Palliative Nursing*, 23(6), 544-550..
40. Dossett, M. L., Needles, E. W., Nittoli, C. E., & Mehta, D. H. (2021). Stress management and resiliency training for healthcare professionals: a mixed-methods, quality-improvement, cohort study. *Journal of occupational and environmental medicine*, 63(1), 64-68..
41. Agarwal, B., Brooks, S. K., & Greenberg, N. (2020). The role of peer support in managing occupational stress: a qualitative study of the sustaining resilience at work intervention. *Workplace Health & Safety*, 68(2), 57-64..
42. Wright, A., Marsh, D., & Wibberley, G. (2022). Favours within'the tribe': Social support in coworking spaces. *New Technology, Work and Employment*, 37(1), 59-78..
43. Ota, M., Lam, L., Gilbert, J., & Hills, D. (2022). Nurse leadership in promoting and supporting civility in health care settings: a scoping review. *Journal of Nursing Management*, 30(8), 4221-4233..
44. Paguio, J. T., Yu, D. S. F., & Su, J. J. (2020). Systematic review of interventions to improve nurses' work environments. *Journal of Advanced Nursing*, 76(10), 2471-2493.
45. Patrician, P. A., Bakerjian, D., Billings, R., Chenot, T., Hooper, V., Johnson, C. S., & Sables-Baus, S. (2022). Nurse well-being: A concept analysis. *Nursing outlook*, 70(4), 639-650..
46. Mlambo, M., Silén, C., & McGrath, C. (2021). Lifelong learning and nurses' continuing professional development, a metasynthesis of the literature. *BMC nursing*, 20, 1-13..
47. King, R., Taylor, B., Talpur, A., Jackson, C., Manley, K., Ashby, N., ... & Robertson, S. (2021). Factors that optimise the impact of continuing professional development in nursing: A rapid evidence review. *Nurse education today*, 98, 104652.
48. Moloney, W., Fieldes, J., & Jacobs, S. (2020). An integrative review of how healthcare organizations can support hospital nurses to thrive at work. *International journal of environmental research and public health*, 17(23), 8757.
49. Abdullah, M. I., Huang, D., Sarfraz, M., Ivascu, L., & Riaz, A. (2021). Effects of internal service quality on nurses' job satisfaction, commitment and performance: Mediating role of employee well-being. *Nursing Open*, 8(2), 607-619.
50. Salari, N., Khazaie, H., Hosseini-Far, A., Ghasemi, H., Mohammadi, M., Shohaimi, S., ... & Hosseini-Far, M. (2020). The prevalence of sleep disturbances among physicians and nurses facing the COVID-19 patients: a systematic review and meta-analysis. *Globalization and health*, 16, 1-14.
51. Simonetti, V., Durante, A., Ambrosca, R., Arcadi, P., Graziano, G., Pucciarelli, G., ... & Cicolini, G. (2021). Anxiety, sleep disorders and self-efficacy among nurses during COVID-19 pandemic: A large cross-sectional study. *Journal of clinical nursing*, 30(9-10), 1360-1371.
52. Al Maqbali, M., Al Sinani, M., & Al-Lenjawi, B. (2021). Prevalence of stress, depression, anxiety and sleep disturbance among nurses during the COVID-19 pandemic: A systematic review and meta-analysis. *Journal of psychosomatic research*, 141, 110343..
53. d'Ettorre, G., Pellicani, V., Caroli, A., & Greco, M. (2020). Shift work sleep disorder and job stress in shift nurses: implications for preventive interventions. *La Medicina del lavoro*, 111(3), 195.

54. Marvaldi, M., Mallet, J., Dubertret, C., Moro, M. R., & Guessoum, S. B. (2021). Anxiety, depression, trauma-related, and sleep disorders among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. *Neuroscience & Biobehavioral Reviews*, 126, 252-264..
55. Cody, S. L. (Ed.). (2021). *Sleep Disorders, An Issue of Nursing Clinics*, E-Book: *Sleep Disorders, An Issue of Nursing Clinics*, E-Book (Vol. 56, No. 2). Elsevier Health Sciences.
56. Weaver, S. H., De Cordova, P. B., Vitale, T. R., Hargwood, P., & Salmund, S. (2023). Experiences and perceptions of nurses working night shift: a qualitative systematic review. *JBHI evidence synthesis*, 21(1), 33-97..
57. Olson, J. A., Artenie, D. Z., Cyr, M., Raz, A., & Lee, V. (2020). Developing a light-based intervention to reduce fatigue and improve sleep in rapidly rotating shift workers. *Chronobiology international*, 37(4), 573-591.
58. Chang, W. P., & Li, H. B. (2022). Influence of shift work on rest-activity rhythms, sleep quality, and fatigue of female nurses. *Chronobiology International*, 39(4), 557-568.
59. Phillips, K. (2020). Worked to Death: An Analysis of Sleep Deprivation in Healthcare and Its Sometimes Fatal Consequences. *Appalachian JIL*, 20, 71..
60. Capezuti, E., Zadeh, R. S., Brigham, M. A., Dias, B. A., Kim, B. C., Lengetti, E., ... & Krieger, A. C. (2022). Development and palliative care staff reactions to a sleep regulation educational intervention. *BMC Palliative Care*, 21(1), 12.
61. Shaik, L., Cheema, M. S., Subramanian, S., Kashyap, R., & Surani, S. R. (2022). Sleep and safety among healthcare workers: the effect of obstructive sleep apnea and sleep deprivation on safety. *Medicina*, 58(12), 1723..
62. Brossoit, R. M., Crain, T. L., Hammer, L. B., Lee, S., Bodner, T. E., & Buxton, O. M. (2020). Associations among patient care workers' schedule control, sleep, job satisfaction and turnover intentions. *Stress and Health*, 36(4), 442-456.
63. Yeghiazarians, Y., Jneid, H., Tietjens, J. R., Redline, S., Brown, D. L., El-Sherif, N., ... & Somers, V. K. (2021). Obstructive sleep apnea and cardiovascular disease: a scientific statement from the American Heart Association. *Circulation*, 144(3), e56-e67..
64. Ramar, K., Malhotra, R. K., Carden, K. A., Martin, J. L., Abbasi-Feinberg, F., Aurora, R. N., ... & Trotti, L. M. (2021). Sleep is essential to health: an American Academy of Sleep Medicine position statement. *Journal of Clinical Sleep Medicine*, 17(10), 2115-2119..
65. Shriane, A. E., Rigney, G., Ferguson, S. A., Bin, Y. S., & Vincent, G. E. (2023). Healthy sleep practices for shift workers: consensus sleep hygiene guidelines using a Delphi methodology. *Sleep*, 46(12), zsad182..
66. Booker, L. A., Sletten, T. L., Barnes, M., Alvaro, P., Collins, A., Chai-Coetzer, C. L., ... & Howard, M. E. (2022). The effectiveness of an individualized sleep and shift work education and coaching program to manage shift work disorder in nurses: a randomized controlled trial. *Journal of Clinical Sleep Medicine*, 18(4), 1035-1045..
67. Glaros, Z., Carvalho, R. E., & Flynn-Evans, E. E. (2023). An evaluation of sleepiness, performance, and workload among operators during a real-time reactive telerobotic lunar mission simulation. *Human factors*, 65(6), 1173-1182
68. Robbins, R., Underwood, P., Jackson, C. L., Jean-Louis, G., Madhavaram, S., Kuriakose, S., ... & Buxton, O. M. (2021). A systematic review of workplace-based employee health interventions and their impact on sleep duration among shift workers. *Workplace health & safety*, 69(11), 525-539.
69. Trinkoff, A. M., Baldwin, C. M., Chasens, E. R., Dunbar-Jacob, J., Geiger-Brown, J., Imes, C. C., ... & Tucker, S. J. (2021). CE: Nurses are more exhausted than ever: What should we do about it?. *AJN The American Journal of Nursing*, 121(12), 18-28..
70. Querstret, D., O'Brien, K., Skene, D. J., & Maben, J. (2020). Improving fatigue risk management in healthcare: A systematic scoping review of sleep-related/fatigue-management interventions for nurses and midwives. *International journal of nursing studies*, 106, 103513..
71. Meaklim, H., Jackson, M. L., Bartlett, D., Saini, B., Falloon, K., Junge, M., ... & Meltzer, L. J. (2020). Sleep education for healthcare providers: Addressing deficient sleep in Australia and New Zealand. *Sleep health*, 6(5), 636-650.

72. Williams, S. G., Fruh, S., Barinas, J. L., & Graves, R. J. (2022). Self-care in nurses. *Journal of radiology nursing*, 41(1), 22-27..
73. Lovejoy, M., Kelly, E. L., Kubzansky, L. D., & Berkman, L. F. (2021). Work redesign for the 21st century: promising strategies for enhancing worker well-being. *American Journal of Public Health*, 111(10), 1787-1795.
74. Cho, H., Steege, L. M., & Pavek, K. U. (2024). Psychological detachment from work during nonwork time as a moderator and mediator of the relationship of workload with fatigue and sleep in hospital nurses. *Sleep Health*, 10(5), 558-566.
75. Rovinski-Wagner, C., & Mills, P. D. (2022). Patient safety. *Quality and Safety Education for Nurses: Core Competencies for Nursing Leadership and Care Management*, 317.
76. Alyamani, Z., Alsaedi, M. H., Ashi, A. A. H., Yanksary, A. S., Yankusary, E. S., Almowald, L. T. N., ... & Alshareef, R. S. (2022). The Impact Of Nurse-To-Patient Ratios On Patient Outcomes And Quality Of Care. *Journal of Positive Psychology and Wellbeing*, 6(3), 676-681..
77. Harvey, C., Thompson, S., Otis, E., & Willis, E. (2020). Nurses' views on workload, care rationing and work environments. *Journal of nursing management*, 28(4), 912-918..
78. Labrague, L. J., & de Los Santos, J. A. A. (2021). Fear of Covid-19, psychological distress, work satisfaction and turnover intention among frontline nurses. *Journal of nursing management*, 29(3), 395-403..
79. Regina, M. L., Vecchié, A., Bonaventura, A., & Prisco, D. (2021). Patient safety in internal medicine. *Textbook of Patient Safety and Clinical Risk Management*, 213-252..
80. Al Ma'mari, Q., Sharour, L. A., & Al Omari, O. (2020). Fatigue, burnout, work environment, workload and perceived patient safety culture among critical care nurses. *British journal of nursing*, 29(1), 28-34.
81. Singh, C., Jackson, D., Munro, I., & Cross, W. (2022). Job experiences, challenges, revelations and narratives of nurse academics. A qualitative study. *Journal of Advanced Nursing*, 78(8), 2622-2633.
82. Richemond, D., Needham, M., & Jean, K. (2022). The Effects of Nurse Burnout on Patient Experiences. *Open Journal of Business and Management*, 10(5), 2805-2828.
83. Vizeshfar, F., Rakhshan, M., Shirazi, F., & Dokoochaki, R. (2022). The effect of time management education on critical care nurses' prioritization: a randomized clinical trial. *Acute and Critical Care*, 37(2), 202..
84. Farokhzadian, J., Miri, S., Doostkami, M., Reza Hosseini, Z., & Shahrabaki, P. M. (2020). Promoting the psychosocial and communication aspects of nursing care quality using time management skills training. *Journal of education and health promotion*, 9(1), 361.
85. Shalaby, R. A. H., & Agyapong, V. I. (2020). Peer support in mental health: literature review. *JMIR mental health*, 7(6), e15572..
86. Lu, L., Ko, Y. M., Chen, H. Y., Chueh, J. W., Chen, P. Y., & Cooper, C. L. (2022). Patient safety and staff well-being: organizational culture as a resource. *International Journal of Environmental Research and Public Health*, 19(6), 3722..
87. Sprung, C. L., Devereaux, A. V., Ghazipura, M., Burry, L. D., Hossain, T., Hamele, M. T., ... & Task Force for Mass Critical Care Writing Group. (2023). *Critical Care Staffing in Pandemics and Disasters: A Consensus Report From a Subcommittee of the Task Force for Mass Critical Care-Systems Strategies to Sustain the Health Care Workforce*. *Chest*, 164(1), 124-136..
88. Udod, S., MacPhee, M., Wagner, J. I., Berry, L., Perchie, G., & Conway, A. (2021). Nurse perspectives in the emergency department: The synergy tool in workload management and work engagement. *Journal of Nursing Management*, 29(6), 1763-1770.
89. Griffiths, P., Saville, C., Ball, J. E., Jones, J., Monks, T., & Safer Nursing Care Tool study team. (2021). Beyond ratios-flexible and resilient nurse staffing options to deliver cost-effective hospital care and address staff shortages: A simulation and economic modelling study. *International Journal of Nursing Studies*, 117, 103901..
90. Folse, V. N. (2022). *Quality and Safety. Leading and Managing in Nursing E-Book: Leading and Managing in Nursing E-Book*, 18.

91. Picco, M., Gheduzzi, E., & Masella, C. (2021). Integration of task shifting practices into the nursing role at the community and home care level. In *ABSTRACT BOOK HEALTH MANAGEMENT: MANAGING THE PRESENT AND SHAPING THE FUTURE* (pp. 71-71)..
92. Shore, C. B., Maben, J., Mold, F., Winkley, K., Cook, A., & Stenner, K. (2022). Delegation of medication administration from registered nurses to non-registered support workers in community care settings: A systematic review with critical interpretive synthesis. *International Journal of Nursing Studies*, 126, 104121.
93. Moy, A. J., Hobensack, M., Marshall, K., Vawdrey, D. K., Kim, E. Y., Cato, K. D., & Rossetti, S. C. (2023). Understanding the perceived role of electronic health records and workflow fragmentation on clinician documentation burden in emergency departments. *Journal of the American Medical Informatics Association*, 30(5), 797-808..
94. Moore, E. C., Tolley, C. L., Bates, D. W., & Slight, S. P. (2020). A systematic review of the impact of health information technology on nurses' time. *Journal of the American Medical Informatics Association*, 27(5), 798-807.
95. Jiang, H., Gomes, P., & Vander Meer, D. (2023). Promoting continuity of care in nurse-patient assignment: A multiple objective heuristic algorithm. *Decision Support Systems*, 167, 113926..
96. Gürsan, C., & de Gooyert, V. (2021). The systemic impact of a transition fuel: Does natural gas help or hinder the energy transition?. *Renewable and Sustainable Energy Reviews*, 138, 110552..
97. Jeffery, J., Rogers, S., Redley, B., & Searby, A. (2023). Nurse manager support of graduate nurse development of work readiness: an integrative review. *Journal of clinical nursing*, 32(17-18), 5712-5736..
98. Rees, S., Farley, H., & Moloney, C. (2021). How registered nurses balance limited resources in order to maintain competence: a grounded theory study. *BMC nursing*, 20, 1-10.
99. Buchan, J., Catton, H., & Shaffer, F. (2022). Sustain and retain in 2022 and beyond. *Int. Counc. Nurses*, 71, 1-71.
100. Moloney, W., Fieldes, J., & Jacobs, S. (2020). An integrative review of how healthcare organizations can support hospital nurses to thrive at work. *International journal of environmental research and public health*, 17(23), 8757..