



Mindful Self-Care, Compassion, and the Relationship Between Commuting Stress and Nurses' Well-Being Considering Gender Differences

Fayez Mohammed Hubayni Almutairi ¹, Fahad Suliman A Alsaif ¹, Saad Abdulrazaq Ahmed Hayjan ¹, Mohammed Ahmed Almansour ¹, Rana Nashmi Alanazi ¹, Abdulkareem Saqer Almutairi ¹, Yasmeen Alhumaidi Jado Alanazi ¹, Nadyah Khalaf Safi Alanazi ¹, Nawal Hlal Almutairi ¹, Fahad Alabeidi ¹, Awad Shehabb Alanzi ¹, Almatrafi Jaber Sadi ¹, Amal Mukhleef Ayed Alshammari ¹, Mohammed Farhan Aldhafiri ¹, Mohammed Ibraheem ALshalan ¹

Abstract

Nurses have an important role in healthcare, but they experience considerable issues related to stress, burnout, and well-being, which are exacerbated by commuting stress and gender disparities. This literature review investigates the link between mindful self-care, compassion, and commuting stress in nurses, with a particular emphasis on gender-specific stress experiences and coping techniques. According to research, thoughtful self-care and self-compassion promote emotional resilience, minimize burnout, and increase work satisfaction. However, institutional impediments, workload limits, and workplace culture often prevent nurses from maintaining regular self-care habits. Additionally, commuting stress has been discovered as a significant contributor to tiredness, mental anxiety, and job discontentment. Long as well as unpredictable commutes adversely impact nurses' physical and psychological well-being, restricting their time for self-care and recuperation. Gender variations further hinder this problem, with female nurses submitting higher

psychological fatigue and work-life disagreement, whereas male nurses are inclined to externalize anxiety and employ problem-focused coping approaches. Future research should concentrate on long-term research studies on self-care efficiency, gender-sensitive stress administration initiatives, and the important part of organizational policies in minimizing commuting anxiety. Applying flexible work timetables, wellness applications, and intended self-care programs can help improve nurse well-being and retention, eventually resulting in more effective patient care and healthcare system sustainability.

Keywords: Nurse well-being, mindful self-care, burnout prevention, gender differences, commuting stress

1. Introduction

Nurses are an essential component of the healthcare system, delivering ongoing and frequently life-saving patient care. However, their job entails enormous physical, emotional, and psychological obstacles, which lead to high levels of stress, burnout, and mental health problems (M. Li et al., 2024). The rigorous nature of the nursing profession, which includes lengthy hours, exposure to patient suffering, and high patient loads, puts nurses at risk of acquiring chronic stress, compassion fatigue, and emotional depletion (Williams, Fruh, Barinas, & Graves, 2022). Because of

Significance | Mindful self-care and gender-sensitive strategies reduce nurse stress, burnout, and commuting anxiety, enhancing resilience, satisfaction, and retention.

*Correspondence. Fayez Mohammed Hubayni Almutairi, Ministry of National Guard Health Affairs, Prince Mutib Ibn Abdullah Ibn Abdulaziz Rd, Ar Rimayah, Riyadh 11426, Saudi Arabia.

Editor Tofayel, Ph.D., and accepted by the Editorial Board June 15, 2024 (received for review April 02, 2024)

Author Affiliation.

¹ Ministry of National Guard Health Affairs, Prince Mutib Ibn Abdullah Ibn Abdulaziz Rd, Ar Rimayah, Riyadh 11426, Saudi Arabia.

Please Cite This:

Almutairi, F. M. H., Alsaif, F. S. A., Hayjan, S. A. A., Almansour, M. A., Alanazi, & N., Almutairi, A. S., Alanazi, & A. J., Alanazi, & K. S., Almutairi, & H., Alabeidi, &., Alanzi, A. S., Sadi, A. J., Alshammari, & M. A., ALshalan, & I. I. (2024). "Mindful Self-Care, Compassion, and the Relationship Between Commuting Stress and Nurses' Well-Being Considering Gender Differences", *Journal of Angiotherapy*, 8(6), 1-13, 10189

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(<https://publishing.emanresearch.org>).

these considerations, nurses must practice conscious self-care and compassion to maintain their well-being and avoid burnout.

Self-care in nursing is defined as deliberate actions and behaviors that improve physical, emotional, and psychological well-being (Negarandeh, Aghajanloo, & Seylani, 2020). Mindful self-care, in particular, has been found to lower stress, boost resilience, and improve patient outcomes (Yang et al., 2024). It includes activities like mindfulness meditation, physical exercise, enough rest, emotional management, and work-life balance (Tan et al., 2023). Furthermore, self-compassion, or treating oneself with love and understanding during stressful circumstances, has been shown to reduce burnout and enhance psychological resilience (K. Neff, 2021). Nurses who participate in compassion-focused therapies report increased work satisfaction, better emotional regulation, and reduced secondary traumatic stress (Pereira et al., 2022). However, organizational restrictions, a lack of institutional support, and cultural attitudes toward self-care sometimes impede nurses from completely incorporating these behaviors into their daily routines (Marshman et al., 2023).

Commuting stress, or the physical and psychological strain induced by everyday travel to and from work, is another new field of study in nurse well-being (Ismail et al., 2024). Nurses often face lengthy and unpredictable commutes owing to shift-based scheduling, urban congestion, and limited public transit alternatives (HaGani, Englard Hershler, & Ben Shlush, 2022). According to research, commuting stress causes increased tiredness, mental discomfort, and poor job performance, especially in occupations with significant physical and emotional demands, such as nursing (D. Li et al., 2025). According to (Nata, Jamil, & Rawee), long commutes have been associated with greater levels of stress hormones (such as cortisol), worse sleep, and a higher risk of burnout. Furthermore, nurses who have long, or stressful commutes may have less time for self-care, sociability, and rest, aggravating professional weariness and unhappiness (Huaman et al., 2023).

Gender disparities are also important in determining nurses' experiences with professional stress, self-care, and commuting issues. According to research, female nurses are more prone to feeling emotional weariness and higher stress levels, while male nurses prefer to use depersonalization as a coping method (Strout et al., 2023). Women often shoulder more household and childcare obligations, which may exacerbate work-life conflict and raise stress (Rao & Shailashri, 2021). These gendered roles may also make commuting more difficult for female nurses, who often must balance work schedules with family commitments (ARUOTURE & ADEGBIE, 2024). Male nurses, on the other hand, report less stress from commuting and are more likely to use problem-solving coping techniques (Pahayahay & Khalili-Mahani, 2020; Poulus, Coulter, Trotter, & Polman, 2020). These results imply that workplace

treatments should include gender-specific stresses and coping skills in order to build a more inclusive approach to nursing well-being.

2 Research Questions and Objectives

This literature review is driven by the following main research question:

- i. How do mindful self-care, compassion, and commuting stress interact to impact nurses' well-being, and how do gender variations factor into this relationship?
- ii. To answer this question, this review examines:
- iii. Mindful self-care and compassion may reduce stress and improve nurse well-being.
- iv. Commuting stress affects nurses' physical and emotional well-being.
- v. Gender disparities in stress perception, coping methods, and self-care habits.
- vi. Implications of healthcare policy and future research orientations.

The review examines peer-reviewed studies published during the previous 5-10 years, obtained from sources including PubMed, CINAHL, Google Scholar, Cochrane Library, and MEDLINE. This study will identify research gaps, highlight successful treatments, and provide suggestions for improving nurse well-being via focused self-care methods, enhanced commuting regulations, and gender-sensitive workplace activities.

3. The Structure of Review

This research review is divided into four main sections to give a thorough examination of the elements influencing nurses' well-being, including mindful self-care, compassion, commuting stress, and gender disparities. The different right dimensions of well-being in figure 1.

3.1 Mindful Self-Care and Compassion in Nursing

This section investigates how self-care and compassion may help nurses cope with stress and burnout. It investigates various self-care measures, such as mindfulness-based therapies, emotional control, physical health practices, and work-life balance approaches. Furthermore, the importance of self-compassion in promoting emotional resilience and avoiding compassion fatigue is highlighted.

3.2 Commuting Stress and Its Effects on Well-Being

This section investigates the psychological and physiological effects of commuting stress on nurses, emphasizing how it contributes to burnout, weariness, and work discontent. It examines how lengthy commutes, uncertain job schedules, and transportation issues intensify stress and restrict chances for self-care. The biopsychosocial impacts of commuting stress

such as elevated cortisol levels, sleep disruptions, and impaired mental well-being, are also investigated.

3.3 Gender Differences in Stress and Coping Mechanisms

This section examines how male and female nurses handle job stress, self-care, and commuting-related issues. It investigates gender variations in coping techniques, finding that women are more prone to utilize emotion-focused tactics whereas males choose problem-solving approaches. Furthermore, the influence of family duties, caregiving tasks, and work-life balance on female nurses' stress levels is addressed.

3.4 Research Gaps and Future Directions

This section emphasizes significant gaps in current research, specifically addressing the long-term impacts of commuting stress on nurses' health, the importance of workplace policies in promoting self-care, and the need for gender-responsive treatments. It also identifies prospective future study topics, such as the efficacy of institutional well-being programs, the influence of flexible scheduling on nursing burnout, and the importance of digital health technologies in encouraging self-care.

4 Mindful Self-Care and Compassion in Nursing

Mindful self-care is an intentional activity that promotes physical, emotional, and psychological well-being, especially in high-stress occupations like nursing. Nurses commonly face lengthy working hours, mental tiredness, and exposure to patient suffering, leaving them prone to burnout, anxiety, and stress-related disorders (M. Li et al., 2024). Engaging in mindful self-care strategies allows nurses to successfully handle these challenges. Such practices include mindfulness meditation, healthy lifestyle choices, work-life balance, and emotional control approaches (Yang et al., 2024). When practiced regularly, mindful self-care has been associated with decreased burnout rates, increased work satisfaction, and better overall health (Teall & Melnyk, 2021).

4.1 Benefits of Mindful Self-Care

Mindfulness-based treatments (MBIs) have been well-researched among healthcare professionals. Tan et al. (2023) discovered that mindfulness-based interventions, such as meditation, deep breathing exercises, and guided relaxation methods, substantially lower stress, anxiety, and depressive symptoms among nurses. Shapiro et al. (2018) found that mindfulness techniques increase concentration, emotional control, and resilience, all of which are important for nurses working in high-pressure conditions. Furthermore, mindfulness training has been related to improved empathy and patient-centered care as nurses become more conscious of their emotions and behaviors (Kriakous, Elliott, Lamers, & Owen, 2021).

Self-care routines provide both psychological and physical advantages. According to research, nurses who exercise regularly, eat a nutritious diet and get enough sleep have less weariness,

musculoskeletal discomfort, and chronic stress (Chung, Chen, Chang, Hsu, & Hsieh, 2020). Self-care practices not only promote individual well-being, but also contribute to better patient care outcomes, since nurses with lower stress levels are more attentive, make better decisions, and have fewer medical mistakes (Xie et al., 2021).

4.2 Barriers to Mindful Self-Care in Nursing

Despite the well-documented advantages of focused self-care, many nurses struggle to integrate these practices into their daily routines. One of the most serious challenges is time restrictions and workload. Nurses often work long hours, overtime, and rotating schedules, leaving little time for self-care activities like exercise, mindfulness, or relaxation (Erbe, 2022). (Mendez, 2024) discovered that nurses working 12-hour shifts had greater levels of physical and emotional weariness, making it harder to participate in restorative activities. Additionally, variable schedules and frequent overtime demands limit their capacity to maintain consistent self-care practices.

Another significant challenge is the corporate culture, which lacks institutional support for self-care. Many healthcare environments value productivity and efficiency above personal well-being, which may prevent nurses from taking breaks or participating in stress-relieving activities (Negarandeh et al., 2020). Some businesses may not offer formal wellness programs, mental health assistance, or dedicated relaxation areas, which contributes to increased stress, burnout, and job dissatisfaction (Varghese et al., 2021). In such high-pressure situations, nurses may feel guilty or hesitant to prioritize their well-being, worrying that doing so may be regarded as unprofessional or dismissive of patient care (Figure 2).

In addition to workload and institutional impediments, nurses face emotional pressures and compassion fatigue, which may undermine self-care. Nurses are taught to prioritize patient care above their personal needs, which may lead to self-neglect and emotional exhaustion (Ondrejková & Halamová, 2022). Compassion fatigue, a syndrome in which persistent exposure to patient suffering causes emotional numbness and tiredness, might make it more challenging for nurses to practice self-compassion and wellness activities (Oktay & Ozturk, 2022). As a consequence, many nurses suffer from chronic stress, anxiety, and depression, which, if not treated, may have a negative influence on their general well-being and work performance.

Furthermore, financial and logistical difficulties significantly restrict nurses' capacity to exercise self-care. Many self-care activities, including therapy, fitness programs, and wellness vacations, entail a financial commitment that may not be affordable for many nurses (Strout et al., 2023). Furthermore, nurses with family and caregiving responsibilities sometimes struggle to find time for self-care since they must combine job commitments with personal tasks (Rao & Shailashri, 2021). This

dual load adds to stress and reduces chances to engage in activities that improve mental and physical well-being.

4.3 Strategies for Promoting Mindful Self-Care among Nurses

To overcome these challenges, healthcare organizations, governments, and nursing leaders must take proactive measures to promote and support nurses' self-care. Implementing workplace wellness initiatives is a successful method. Hospitals and healthcare institutions should implement organized wellness programs that include mindfulness training, stress management seminars, and access to mental health services (El-Ashry, Elsayed, Ghoneam, & Atta, 2023; Xie et al., 2021). Creating dedicated relaxation places and implementing brief mindfulness breaks into shifts may greatly improve nurse well-being and work satisfaction.

A further significant strategy is flexible scheduling and supporting policies that encourage work-life balance. Flexible work schedules, shorter hours, and enough rest times help nurses manage their workloads and integrate self-care into their daily routines (Mendez, 2024). Healthcare institutions can also promote the use of paid mental health days and self-care leave, which may help nurses recuperate from emotional fatigue and preserve their mental health. Educational activities and peer support groups may also help promote self-care. Institutions should include mindfulness and self-care education in nursing curricula and professional training programs to ensure that nurses gain the skills needed to successfully manage stress (Erbe, 2022). Furthermore, peer support groups and mentoring programs may offer an excellent forum for nurses to share their experiences, address issues, and encourage one another to participate in self-care activities. Creating a culture of peer encouragement and responsibility may help mainstream self-care as a necessary component of professional activity.

Additionally, establishing a culture of self-compassion is critical to changing workplace attitudes about nurse well-being. Leadership is essential in advocating for self-care, normalizing mental health issues, and actively supporting nurses who participate in wellness activities (Andrews, Tierney, & Seers, 2020). Healthcare managers and supervisors can set an example by showing self-care behaviors and promoting open discussions about stress management. Institutions may help nurses retain their physical and emotional resilience by creating a climate that values and prioritizes self-care, thereby enhancing nurse retention and patient care quality.

4.4 The Impact of Compassion in Well-being

Nurses' well-being is heavily influenced by compassion, both for themselves and for others. Self-compassion, described as the capacity to treat oneself with kindness, acknowledge common human challenges, and maintain emotional balance, is especially crucial in jobs that require a lot of stress and emotional work (K. D. Neff, 2023). Nurses routinely face patient pain, grief, and ethical quandaries, all of which need emotional endurance and compassion to handle successfully. Nurses who practice self-compassion are

better able to manage job pressures, regulate emotions, and preserve psychological well-being (Yang et al., 2024).

(Pereira et al., 2022) revealed that higher levels of self-compassion among nurses were connected with less emotional weariness, less burnout, and better work satisfaction. Their results are consistent with (Conversano et al., 2020), who argue that self-compassion promotes emotional resilience, allowing nurses to recover more rapidly from stressful events. Furthermore, self-compassion boosts professional happiness because nurses who practice self-kindness are less likely to perceive workplace obstacles as personal failings, resulting in a better work-life balance (Kriakous et al., 2021).

While compassion is an important element of nursing, excessive empathy without enough self-care may result in compassion fatigue, a condition of emotional exhaustion and anguish induced by extended exposure to patient suffering (Oktay & Ozturk, 2022). Compassion fatigue is characterized by emotional depletion, decreased empathy, and feelings of detachment or powerlessness, which may have a detrimental impact on both nurse well-being and patient care (Ondrejková & Halamová, 2022).

(Xie et al., 2021) noticed that nurses who work in high-stress areas, such as emergency rooms and critical care units, are more likely to experience compassion fatigue. Continuous trauma and suffering may cause chronic stress, sleep problems, anxiety, and depression (El-Ashry et al., 2023). In severe situations, compassion fatigue may lead to increased turnover, absenteeism, and poor work performance (Guastello et al., 2024).

4.5 Institutional Strategies for Addressing Compassion Fatigue

Given the severe implications of compassion fatigue, healthcare institutions have started to create ways to help nurses and maintain a compassionate staff. Peer support programs, professional therapy, and reflective practices have all been demonstrated to alleviate emotional tiredness and increase emotional well-being (Andrews et al., 2020). Mindfulness-based stress reduction (MBSR) programs, in particular, have grown in popularity because of their efficacy in increasing self-awareness, improving emotional regulation, and alleviating burnout symptoms (Møller et al., 2022). Furthermore, organized debriefing sessions, mentoring programs, and access to mental health services help nurses process their emotions and build coping skills to reduce compassion fatigue (Erbe, 2022). Institutions that focus on self-care education and work-life balance policies promote long-term nurse retention and a better working environment (Kumareswaran & Sundram, 2024).

Therefore, maintaining emotional resilience and avoiding burnout require striking a balance between self-compassion and compassion for others, even if compassion is a basic element of nursing. Healthcare companies must emphasize institutional support networks, self-care education, and wellness efforts to ensure that nurses can continue to offer compassionate, high-quality patient care without jeopardizing their health.

5 Commuting Stress and Its Effects on Well-Being

Commuting stress is the physical, emotional, and psychological strain caused by every day commuting to and from work (Table 1). Nurses, particularly those working rotating hours or midnight schedules, often encounter major mobility issues, traffic congestion, and long commute times, all of which lead to increased stress and lower job satisfaction (Ismail et al., 2024). Nurses, unlike professionals in other industries, commonly travel outside of normal working hours, making public transit less accessible and increasing dependence on personal automobiles or expensive taxi services (Gan & Zhang, 2025; HaGani et al., 2022).

According to research by (D. Li et al., 2025), nurses who work in urban healthcare settings have longer and more stressful commutes than those in rural hospitals. Heavy traffic, unreliable public transit, and unpredictable shift start, and finish times all lead to increased travel-related anxiety (Nata et al.). Furthermore, nurses in rural locations may face a variety of commuting stresses, including large distances, a lack of public transportation, and severe weather conditions, which all have an effect on their well-being (Rao & Shailashri, 2021).

Shift work, prolonged duty hours, and forced overtime contribute to commuting stress, making time management harder and increasing tiredness (Huaman et al., 2023). Longer commutes have been linked to poorer energy levels, lower workplace engagement, and an increased likelihood of absenteeism (Li et al., 2023). Because nurses must maintain high levels of attention, empathy, and decision-making abilities, the influence of commute-related tiredness on patient care quality cannot be overlooked (Guastello et al., 2024).

5.1 Impact on Mental and Physical Health

Long commutes have been associated with higher cortisol levels, sleep problems, and greater burnout rates among healthcare professionals (Zhang & Ma, 2024). Nurses who travel more than 45 minutes per day report greater stress levels, worse sleep quality, and lower work satisfaction compared to those who commute less (Tawash et al., 2024). Furthermore, traffic congestion and unforeseen delays can induce annoyance, anxiety, and time pressure, making it difficult for nurses to psychologically prepare for their shifts or relax after work (Gan & Zhang, 2025).

Commuting stress has a substantial influence on work-life balance. Long commutes limit the amount of time available for self-care activities including exercise, family connections, relaxation, and socializing, all of which are necessary for sustaining mental and physical health (D. Li et al., 2025). Nurses with long commutes are more likely to be exhausted and report having less time for meal preparation, leisure activities, or quality sleep, resulting in decreased overall well-being (Chung et al., 2020).

Studies show that commute-related tiredness has a detrimental influence on nurses' professional performance. Chronic stress from

commuting has been linked to greater absenteeism, less job engagement, and worse professional satisfaction (Zhang & Ma, 2024). Furthermore, Trinkoff et al. (2021) discovered that nurses with high commuting stress had worse focus, an increased likelihood of mistakes, and reduced patient contact quality, highlighting the larger significance of this problem for healthcare delivery.

5.2 The association between Commuting and Burnout

Burnout among nurses is a serious issue, and commute stress is a contributing cause. Al-Worafi (2023) defines burnout as persistent occupational stress that has not been properly handled, with symptoms including emotional weariness, cynicism, and decreased professional effectiveness. Long and unpleasant commutes contribute to nurses' cumulative stress load, raising the likelihood of burnout and work dissatisfaction (Li et al., 2023).

According to research conducted by Møller et al. (2022), nurses with longer commutes had considerably greater burnout rates than those with shorter commutes. According to the research, lengthy commutes mixed with occupational stress led to a cycle of chronic exhaustion, poor mood regulation, and emotional disengagement from work (Wei et al., 2021). Furthermore, commute stress has been linked to sadness, anxiety, and decreased overall life satisfaction among healthcare workers (Gan & Zhang, 2025).

5.3 Influence on Sleep Quality and Physical Health

Poor sleep quality is another key result of commute stress. Nurses with lengthy travel times often have shorter sleep durations, difficulties falling asleep, and reduced sleep efficiency, which may contribute to cognitive impairment, slower response times, and a diminished capacity to manage patient care efficiently (Tawash et al., 2024). Sleep deprivation may also damage the immune system, raise the risk of cardiovascular disease, and exacerbate metabolic problems (Choi & Lee, 2020).

In addition, prolonged inactive hours during lengthy journeys may lead to physical health problems such as musculoskeletal discomfort, poor posture, and an increased risk of obesity (Rao & Shailashri, 2021). According to (D. Li et al., 2025), nurses who lead sedentary lives owing to lengthy commuting hours are more likely to develop chronic diseases such as hypertension and diabetes, which impair their ability to function in a physically demanding job.

5.4 Strategies for Reducing Commuting Stress among Nurses

To combat the detrimental consequences of commute stress, healthcare organizations and policymakers must develop initiatives that encourage workplace flexibility, transportation assistance, and stress-reduction programs. Long and unexpected commutes are common among nurses, contributing to stress, sleep deprivation, and poor work satisfaction (Tawash et al., 2024). Implementing flexible working arrangements may considerably reduce these tensions. Alternative work patterns, such as shortened workweeks

and hybrid models, enable nurses to minimize the number of commuting days per week, lowering travel fatigue (Kumareswaran & Sundram, 2024). Additionally, remote administrative responsibilities may be given to nurses on certain days, allowing for rehabilitation and improved work-life balance without losing productivity.

Transportation assistance services are another great strategy to reduce commute stress. Healthcare institutions may provide commuting perks such as subsidized public transportation, shuttle services, or fuel allowances to alleviate financial pressures and increase accessibility (Choi & Lee, 2020). Carpooling initiatives may also be implemented inside hospitals to provide social support among employees while lowering individual stress levels. Such programs not only foster a feeling of community among nurses but also help to improve environmental sustainability by reducing the number of single-passenger automobiles on the road.

For nurses who work night hours or have severe transportation issues, on-site accommodations and wellness programs may provide a workable option. Hospitals may provide temporary lodging, enabling nurses to relax and recuperate without having to drive great distances following stressful shifts (Trinkoff et al., 2021). Creating relaxation zones and wellness programs inside hospitals may also assist nurses to unwind before and after work, therefore increasing their general well-being and job performance. Massage treatment, sleep rooms, and access to exercise facilities are examples of wellness initiatives that allow nurses to handle stress in a healthy and regulated manner.

Mindfulness and stress reduction training could assist nurses in managing the anxiety and frustration that comes with commuting. Teaching mindfulness practices, guided relaxation, and breathing exercises may help with emotional regulation and resilience (J. Liu, Ettema, & Helbich, 2022). Short meditation breaks before and after shifts may help to reduce cortisol levels, improve attention, and develop a calmer mental state before dealing with patients. Hospitals and healthcare institutions should include mindfulness-based interventions (MBIs) in workplace wellness programs to provide nurses with techniques that enhance psychological well-being and stress reduction.

Implementing these techniques may considerably minimize the effect of commute stress on nurses, resulting in higher retention rates, job satisfaction, and overall workplace morale. Given that research suggests that lengthy commutes correlate to increased stress, worse mental health, and reduced job engagement (Malomo, 2023), hospitals must implement proactive policies that promote nurse well-being and sustainable work conditions. Addressing commute stress via flexible scheduling, transportation advantages, on-site accommodations, and stress reduction training may improve patient care results since nurses who are less stressed are more likely to be engaged, focused, and compassionate at work.

6 Gender Differences in Stress and Coping Mechanisms

Gender has an important effect on how nurses feel and react to stress at work. Research consistently shows that while male nurses tend to use depersonalization and detachment as coping mechanisms, female nurses report higher levels of emotional exhaustion (Wei et al., 2021). Biological, psychological, and social variables that impact emotional regulation and resilience in high-stress settings like healthcare often impact how different people perceive stress (Poulus et al., 2020).

Female nurses are more susceptible to suffering emotional and psychological professional stress, including feelings of overwhelm, self-doubt, and personal failure when faced with heavy workloads, according to research by (Garcia et al., 2022). Male nurses, on the other hand, tend to characterize stress less as an inner battle and more as an external obstacle, such as administrative hassles or workplace inefficiencies. This is consistent with conventional gender norms, which urge males to be practical and solution-focused while expecting women to be more emotionally sensitive and sympathetic (Pahayahay & Khalili-Mahani, 2020; Poulus et al., 2020).

Furthermore, gender disparities in stress perception are influenced by workplace culture and organizational expectations. Emotional tiredness is exacerbated by the fact that female nurses are more likely to assume extra caregiving responsibilities at work, such as resolving interpersonal problems, training younger staff, and offering patients emotional support (D. Liu et al., 2021). In contrast, male nurses are less likely to feel pressured to perform these emotional labor duties, which lowers their risk of burnout from emotional exhaustion (ARUOTURE & ADEGBIE, 2024).

6.1 Gender Differences and Commuting Stress

Research indicates that female nurses have more responsibilities than their male colleagues when it comes to commuting stress. Due in large part to juggling job obligations with caregiving and family activities, women are more likely to suffer from higher levels of total commuter stress (Loezar-Hernández, Briones-Vozmediano, Ronda-Pérez, & Otero-García, 2023). Women often have to handle childcare, elder care, and home chores before and after lengthy shifts due to the dual weight of professional and domestic duties. This leaves them with less flexibility and recuperation time after a demanding commute.

(ARUOTURE & ADEGBIE, 2024) reported that female nurses had increased commuting-related anxiety because extended journey durations diminished the time available for relaxation, self-care, and family relationships. Furthermore, safety concerns are a key contributor to commute stress for women, especially those working night shifts. Female nurses who use public transportation often experience feelings of uneasiness and vulnerability, especially when commuting early in the morning or late at night (Gerpott, Rivkin,



Figure 1. The Eight Dimensions of Well-Being



Figure 2. Prioritizing Nurses Well- being (Huaman et al,2023)

& Unger, 2022). On the other hand, male nurses report less stress from commuting since they often have more freedom to change their work schedules and are less likely to take on extra household duties (Choi & Lee, 2020). Furthermore, males are more likely to drive to work rather than use public transportation, which reduces their exposure to commuting-related stresses such as delays, congested transit systems, and unexpected travel conditions (Gan & Zhang, 2025; J. Liu et al., 2022).

Despite these differences, lengthy commutes cause weariness, aggravation, and time pressure in both male and female nurses, reducing job performance, sleep quality, and mental well-being (Tawash et al., 2024). Workplace interventions, such as flexible scheduling, employer-sponsored commuting choices, and wellness programs, may help reduce commute stress for all nurses, especially women who experience unique challenges.

6.2 Gender Differences and Self-Care Practices

Gender also influences how nurses participate in self-care and stress management activities. According to research, women are more prone to participate in emotional self-care techniques like mindfulness, journaling, social support, and therapy, while males choose physical self-care activities like exercise, sports, and leisure interests (Garcia et al., 2022). Research by Partlak

Günüşen et al. (2022) indicated that female nurses prefer self-care activities that emphasize emotional connection, including support groups, conversing with colleagues, and engaging in relaxation methods such as yoga and meditation. These exercises assist in decreasing emotional discomfort, promote emotional regulation, and increase resilience against burnout and compassion fatigue (K. Neff, 2021). However, because of time limits and caregiving duties, female nurses often find it difficult to regularly exercise self-care, even if they are more likely to seek social and emotional assistance (Loezar-Hernández et al., 2023).

In contrast, male nurses are more likely to take care of themselves physically, relying on leisure activities and exercise as their main means of reducing stress and avoiding burnout (Teresa-Morales et al., 2022). According to studies, males are more inclined to internalize stress rather than talk about it with mentors or coworkers because of cultural standards that discourage vulnerability, which may make them less likely to seek emotional support (ARUOTURE & ADEGBIE, 2024). On the other hand, men who regularly practice physical self-care—such as going to the gym, being outside, and playing competitive sports—report feeling less stressed and having better mental clarity than those who don't (Kwon, 2023).

6.3 The Requirement for Gender-Specific Approaches

There is an increasing need for tailored treatments that address these gender-specific stressors in nursing, given the pronounced variations in the experiences of male and female nurses with regard to professional stress, commuting difficulties, and self-care

participation. Healthcare organizations should implement targeted strategies that acknowledge these differences and foster supportive environments where both men and women can effectively manage stress. Creating policies that support flexibility, well-being initiatives, and gender-inclusive self-care programs may greatly boost work satisfaction, retention, and general mental health among nurses.

One of the most effective approaches to reducing gender-specific stress is to introduce flexible work rules and schedule changes. According to research, female nurses are more prone to face work-family conflict since they often assume extra caregiving obligations outside of work (Gerpott et al., 2022). Flexible work arrangements and shift alterations may assist female nurses combine their professional and domestic duties, lowering commute stress and burnout. Similarly, promoting self-care breaks and wellness time during shifts may help both male and female nurses by enabling them to adopt stress management practices into their regular routines (Partlak Günüşen et al., 2022).

Employer-sponsored transportation and safety initiatives can also reduce stress related to commuting, especially for female nurses who work night shifts. Since women are more likely to experience safety issues when traveling late at night, healthcare organizations should implement safe and dependable transportation options (Choi & Lee, 2020). Offering hospital shuttle services, subsidized public transportation, or carpooling programs can improve work-life balance and lessen the financial burden of long commutes (Malomo, 2023). Additionally, promoting remote work options for administrative nursing tasks can further support flexibility and well-being, giving nurses more control over their work schedules.

Another significant technique is to create gender-inclusive self-care programs that address the varying stress management preferences of male and female nurses. According to research, women are more prone to participate in emotional self-care activities such as mindfulness, journaling, and peer support, while males are more likely to depend on physical activities like exercise and recreational sports to deal with stress (Kwon, 2023). Healthcare organizations may assist nurses in finding stress reduction approaches that match their unique preferences by developing wellness programs that include both mental and physical self-care measures. Furthermore, encouraging gender-sensitive peer support groups can provide a safe space for both men and women to share their stories, seek advice, and develop emotional resilience (K. D. Neff, 2023).

Gender variations significantly influence how nurses perceive, feel, and manage stress, notably in terms of employment problems, commuting burdens, and self-care participation. Female nurses often experience greater levels of emotional weariness as a result of caring obligations and occupational demands, while male nurses prefer to externalize stress and depend more on physical coping

Table 1. key studies on commuting stress and its effects on nurses’ well-being, mental and physical health, burnout, and gender-specific stress management approaches.

	Key Points	References (APA style)
Commuting Stress Among Nurses	Long and unpredictable commutes lead to stress, lower job satisfaction, fatigue, and reduced patient care quality.	Ismail et al. (2024); Gan & Zhang (2025); HaGani et al. (2022); D. Li et al. (2025); Nata et al. (n.d.); Rao & Shailashri (2021); Huaman et al. (2023); Guastello et al. (2024)
Mental and Physical Health Impacts	Increased cortisol levels, sleep disorders, burnout, physical discomfort, and chronic diseases due to sedentary commuting.	Zhang & Ma (2024); Tawash et al. (2024); Choi & Lee (2020); D. Li et al. (2025); Chung et al. (2020); Rao & Shailashri (2021)
Burnout and Job Performance	Commute stress increases burnout, absenteeism, job disengagement, mistakes, and decreases patient interaction quality.	Al-Worafi (2023); Møller et al. (2022); Wei et al. (2021); Trinkoff et al. (2021); Zhang & Ma (2024); Gan & Zhang (2025)
Influence on Sleep and Fatigue	Long commutes reduce sleep quality and duration, leading to cognitive impairment and physical health problems.	Tawash et al. (2024); Choi & Lee (2020); Rao & Shailashri (2021); D. Li et al. (2025)
Stress-Reduction Strategies	Flexible scheduling, transportation assistance, carpooling, on-site accommodations, wellness programs, mindfulness training, and stress-reduction techniques.	Kumareswaran & Sundram (2024); Choi & Lee (2020); Trinkoff et al. (2021); J. Liu et al. (2022); Malomo (2023); Gan & Zhang (2025)
Gender Differences in Stress Perception	Female nurses experience higher emotional exhaustion and caregiving burdens; males externalize stress and focus on solutions.	Wei et al. (2021); Garcia et al. (2022); Poulus et al. (2020); Pahayahay & Khalili-Mahani (2020); D. Liu et al. (2021); ARUOTURE & ADEGBIE (2024)
Gender Differences in Commuting Stress	Female nurses face more stress due to caregiving responsibilities and safety concerns; males experience less commuting-related anxiety.	Loezar-Hernández et al. (2023); ARUOTURE & ADEGBIE (2024); Gerpott et al. (2022); Choi & Lee (2020); Gan & Zhang (2025); J. Liu et al. (2022)
Self-Care Practices by Gender	Women prefer emotional self-care (mindfulness, social support); men prefer physical activities (sports, exercise).	Garcia et al. (2022); Partlak Günüşen et al. (2022); K. Neff (2021); Teresa-Morales et al. (2022); Kwon (2023); Loezar-Hernández et al. (2023)
Need for Gender-Specific Approaches	Flexible scheduling, safe transportation, remote work, and gender-inclusive wellness programs help address these differences.	Gerpott et al. (2022); Malomo (2023); Choi & Lee (2020); Partlak Günüşen et al. (2022); K. D. Neff (2023); Kwon (2023)

strategies. Addressing these differences via individualized workplace interventions, flexible schedule alternatives, and gender-inclusive wellness programs may result in lower stress, increased nurse retention, and more job satisfaction. Recognizing and reacting to these disparities allows healthcare organizations to develop more successful, inclusive methods to promote nurse well-being, resilience, and overall professional satisfaction.

7 Research Gaps and Future Directions

Despite expanding studies on nurse well-being, mindful self-care, and commute stress, some key gaps exist that must be addressed. The dearth of long-term research on the effects of self-care behaviors is among the most urgent gaps. There is no research evaluating the long-term impacts of mindful self-care and self-compassion on nurse retention, resilience, and general health outcomes, even though several studies have shown their short-term advantages in lowering stress and burnout (Flaubert et al., 2021). Future research needs to concentrate on how long-term self-care routines affect nurses' capacity to manage ongoing stresses at work and if they result in increased job satisfaction, less attrition, and better patient care. Research should also look into which particular self-care techniques have the longest-lasting advantages and how healthcare institutions can institutionalize them to support nursing staff in the long run.

Gender-focused stress management interventions represent another important research gap. Few studies have created focused interventions that address the particular stressors faced by male and female nurses, despite research confirming gender differences in stress perception, coping strategies, and self-care engagement (K. Neff & Germer, 2024). Future studies should examine specialized stress-reduction techniques including peer support groups, gender-sensitive self-care initiatives, and workplace regulations that acknowledge the disparities in the difficulties faced by male and female nurses.

Male nurses may be more likely to feel depersonalization and a lack of emotional support, while female nurses are more likely to experience emotional tiredness and work-family conflict. Creating personalized well-being programs that address these specific requirements might contribute to a more inclusive and supportive hospital environment. Furthermore, further research is required to determine how social expectations, workplace culture, and family duties impact gender-specific stress experiences, as well as what therapies might successfully bridge the gap between various coping mechanisms.

Furthermore, empirical research is scarce on the efficacy of institutional strategies in lowering stress and enhancing well-being among nurses. While some studies indicate that flexible scheduling, commuting perks, and workplace wellness programs improve job satisfaction and minimize burnout, additional research is needed to

evaluate their long-term efficacy and viability in various healthcare contexts (Niinihuhta & Häggman-Laitila, 2022). Research ought to examine how policies like hybrid work arrangements, on-site wellness centers, and organized self-care efforts affect nurse well-being over time.

Furthermore, investigations should look into whether these rules are equitable for all nurses, especially those in rural regions, night shift workers, and those with caregiving duties. Understanding the barriers to implementing workplace wellness initiatives, as well as identifying the most cost-effective, high-impact strategies, will be critical in shaping future healthcare policies that promote a healthy, sustainable nursing workforce. Addressing these research gaps is critical for generating evidence-based methods to improve nurse well-being, minimize burnout, and increase work satisfaction. Further research should concentrate on long-term self-care advantages, gender-sensitive initiatives, and the actual efficacy of educational policies, guaranteeing that nurses obtain the assistance they require to succeed in their profession.

This literature review illustrates the complicated interaction between mindful self-care, compassion, commuting stress, and gender inequalities in nursing. Nurses suffer significant levels of stress and burnout, which may be reduced via self-care and self-compassion. However, the continuous use of these well-being techniques is hampered by a number of institutional restrictions, time limitations, and workplace impediments. It has been shown that mindful self-care, such as stress reduction methods, physical activity, social support, and relaxation exercises, improves nurses' mental health and resilience, which in turn improves their general well-being and work satisfaction (Flaubert et al., 2021; Williams et al., 2022). Furthermore, self-compassion—which entails being nice to oneself and preserving emotional equilibrium—has been connected to better-coping strategies and less emotional tiredness in high-stress settings like the medical field (K. Neff, 2021; K. D. Neff, 2023). Despite these advantages, a lot of nurses find it difficult to include self-care into their daily schedules because of their lengthy workdays, a lack of institutional support, and the emotional toll that patient care duties take (Partlak Günüşen et al., 2022).

Stress from commuting is another important issue included in this analysis since it has a substantial impact on nurses' mental and physical health. According to Sasaki et al. (2022), long and uncertain commutes are associated with greater stress levels, worse sleep quality, and a higher risk of burnout. Long travel durations are associated with increased tiredness, work-life imbalance, and decreased job satisfaction among nurses, especially those on rotational schedules or night shifts (Malomo, 2023). Stress from commuting also cuts into leisure and self-care time, which exacerbates physical and mental tiredness (Li et al., 2023). Addressing commuting stress necessitates institutional measures such as flexible work hours, commuter perks, and on-site

accommodations to support nurses' well-being while meeting their professional obligations (Niinihuhta & Häggman-Laitila, 2022).

This study also emphasizes how gender disparities affect coping techniques, stress perception, and commuter experiences, requiring customized well-being tactics. According to research, male nurses often see stress as exterior problems rather than emotional strain, while female nurses report greater levels of emotional tiredness as a result of their simultaneous duties at home and work (Wei et al., 2021).

Furthermore, safety worries and increased caring responsibilities cause women to experience higher levels of stress during commutes, whereas males are more inclined to modify their schedules or use stress-reduction techniques (Nowrouzi-Kia et al., 2024). In order to better assist both male and female nurses in managing job-related stress, these disparities highlight the need for gender-sensitive policies, such as customized wellness programs, flexible work hours, and employer-sponsored transportation efforts.

8 Conclusion

To improve nurse well-being and workplace sustainability, healthcare companies must adopt comprehensive wellness programs that include mindfulness-based stress reduction (MBSR) methods, institutional rules that reduce commute stress, and gender-sensitive treatments. Recognizing gender-specific stressors and work-life balance difficulties would enable more effective, individualized treatments to help male and female nurses manage work-related stress. Managing commute stress via flexible scheduling, employer-sponsored transportation choices, and on-site accommodations may greatly boost nurse retention, work satisfaction, and overall mental health. Healthcare organizations may build a workplace culture that values well-being, self-care, and resilience, resulting in a more engaged, healthier, and sustainable nursing staff, which leads to improved patient care and healthcare outcomes.

Author contributions

F.M.H.A. contributed to conceptualization, supervision, and manuscript review. F.S.A.A., S.A.A.H., and M.A.A. were involved in data collection and analysis. R.N.A., A.S.A., Y.A.J.A., and N.K.S.A. contributed to methodology and manuscript drafting. N.H.A., F.A., A.S.A., and A.J.S. assisted in data interpretation and visualization. A.M.A.A. and M.I.A. participated in manuscript editing and final approval.

Acknowledgment

The authors were grateful to their department.

Competing financial interests

The authors have no conflict of interest.

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