


METHODS USED TO REDUCE STRESS AND BURNOUT IN NURSES

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ABSTRACT

Nurses, as key professionals in healthcare, often experience burnout and high levels of stress due to demanding work conditions, extended hours, and significant emotional labor. These factors can lead to decreased occupational well-being and compromised performance. The increased workload in healthcare settings has further amplified stress levels among nurses, increasing the risk of errors. To address burnout effectively, it is essential to implement structured work hours, improve workplace conditions, and provide specialized training on managing burnout and stress. Recognizing burnout within workforce management practices and developing targeted interventions may help reduce turnover among nursing staff. This review differentiates the concepts of stress and burnout, explores individual and environmental contributors to burnout, and suggests evidence-based strategies to support nurse well-being.

Keywords: Burnout, stress management, nursing, occupational well-being.

HEMŞİRELERDE STRES VE TÜKENMİŞLİĞİ AZALTMAK İÇİN KULLANILAN YÖNTEMLER

ÖZ

Hemşireler, sağlık hizmetlerinde kilit profesyoneller olarak, zorlu çalışma koşulları, uzun çalışma saatleri ve önemli duygusal emek nedeniyle genellikle tükenmişlik ve yüksek düzeyde stres yaşarlar. Bu faktörler, mesleki refahın azalmasına ve performansın düşmesine neden olabilir. Sağlık hizmeti ortamlarında artan iş yükü, hemşireler arasındaki stres düzeylerini daha da artırarak hata riskini artırdı. Tükenmişliği etkili bir şekilde ele almak için yapılandırılmış çalışma saatlerini uygulamak, işyeri koşullarını iyileştirmek ve tükenmişlik ve stresi yönetme konusunda özel eğitim sağlamak çok önemlidir. İşgücü yönetimi uygulamalarında tükenmişliği tanımak ve hedefe yönelik müdahaleler geliştirmek, hemşirelik personeli arasındaki işten ayrılma oranını azaltmaya yardımcı olabilir. Bu derlemede stres ve tükenmişlik kavramlarını birbirinden ayırmakta, tükenmişliğe bireysel ve çevresel katkıda bulunanları araştırmakta ve hemşire iyi oluşunu desteklemek için kanıta dayalı stratejiler önerilmektedir.

Anahtar Kelimeler: Tükenmişlik, stres yönetimi, hemşirelik, mesleki iyi oluş.

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INTRODUCTION

Nurses are integral to the healthcare system and directly impact human health. However, challenging working conditions, long hours, heavy workloads, and stressors may lead to burnout and increased stress levels among nurses (1, 2). These adverse working conditions are a factor that threatens the physical and psychological health of nurses (3). These factors can result in job dissatisfaction, emotional exhaustion, and compassion fatigue. Moreover, wage disparities and organizational policy deficiencies exacerbate these conditions (4). As healthcare demand increases, so does the stress placed on nurses, leading to potential errors in patient care (5). However, nurses' job security and access to a supportive work environment play a critical role in reducing burnout levels (6).

The high levels of burnout pose significant challenges for healthcare personnel management. Nurse shortages and inadequate staffing policies result in higher turnover rates and reduced job engagement (7). The insufficient number of nurses increases the workload of nurses and increases burnout rates (8). Compared to other healthcare professionals, nurses are more susceptible to work-related stress, burnout, and secondary traumatic stress. They are frequently exposed to distressing situations such as patient deaths, violence, emergencies, and suffering (9). This situation reduces the professional satisfaction of nurses and increases the turnover rate (10). These events are often beyond nurses' control but are perceived as inherent aspects of their job (11).

Job stress is defined as the imbalance between job demands, personal needs, and available resources, leading to various physical and emotional responses (12). It is possible that work stress negatively affects the professional performance of nurses and increases the symptoms of burnout (3). Prolonged exposure to stress can result in symptoms that affect one's professional life (13). Burnout, first described by Herbert Freudenberger in 1974 (1, 4), refers to the depletion of internal resources, leading to feelings of failure, helplessness, and fatigue. According to Maslach's broader definition, burnout is a syndrome characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment (14). This syndrome is particularly common in professions with high emotional demands and can negatively affect nurses' motivation and personal achievements (15). This syndrome particularly affects professions with high emotional demands, diminishing motivation, emotional vitality, and personal achievement, ultimately impacting nurses' behavior, mood, and physical health (16).

Stress and burnout significantly impact nurses' emotional states, impairing job performance. Stress disrupts the balance between individuals and their work environments, reducing motivation, and productivity. Maintaining a balanced work-life balance is critical for nurses to prevent burnout and reduce turnover rates (10). Individual differences, job conditions, and environmental factors contribute to varying levels of perceived job stress (17).

Examination of burnout and stress in nurses

Research consistently shows that nurses are at significant risk for psychological strain, particularly in the form of burnout and stress. The Maslach Burnout Inventory (MBI), developed by Maslach and Jackson, remains the most widely used tool globally to assess burnout among nurses (18). Burnout is defined as a three-dimensional syndrome, encompassing emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion occurs when nurses feel drained and depleted from continuous exposure to emotional demands. Depersonalization manifests as a cynical and detached attitude toward patients, often resulting in diminished empathy. Lastly, reduced personal accomplishment refers to a sense of ineffectiveness and a decline in motivation and work efficacy (19). This aligns with the findings from Ghahramani et al. (2021), who emphasized that emotional exhaustion is often the first stage of burnout, especially in high-demand healthcare settings (20).

Stress is frequently identified as the primary antecedent of burnout, and effective coping mechanisms are critical to preventing its escalation. As West et al. (2018) highlight, nurses benefit from setting realistic goals, reevaluating personal expectations, and improving communication and role clarity within healthcare organizations (21). Research indicates that workplace social support—particularly from colleagues and supervisors—plays a crucial role in reducing stress and improving job satisfaction. Laschinger et al. (2013) found that nurses who feel supported by their

supervisors report significantly lower levels of burnout and higher levels of psychological well-being (22).

The health consequences of burnout are well-documented, ranging from mild symptoms such as headaches and fatigue to more serious long-term conditions such as depression, cardiovascular disease, and diabetes (23). Burnout not only affects nurses' health but also has direct implications for patient safety and care quality, as Hall et al. (2016), have shown that nurses experiencing burnout are more likely to make errors and deliver lower-quality care (24).

The contributing factors to burnout are multifaceted and include both individual characteristics (such as age, coping abilities, and health status) and organizational factors (such as role ambiguity, insufficient social support, and long working hours) (6). For example, Aydın et al. (2021) found that nurses who experience more negative emotions associated with their work are at higher risk of burnout, while those with positive emotional experiences are less likely to suffer from stress and burnout (2). Similarly, Kılıç and İnci (2018) identified a direct correlation between increased working hours and heightened burnout levels, with nurses working extended shifts more prone to emotional exhaustion and depersonalization (7).

Studies such as Camci and Kavuran (2021) point out that nurses with associate and bachelor's degrees report higher stress levels compared to their more educated counterparts (1). This suggests that lower educational levels may make it more

difficult for nurses to meet institutional expectations or effectively cope with workplace demands. Interestingly, while education is generally considered to enhance problem-solving skills and stress resilience, Camci and Kavuran found no statistically significant relationship between education level and burnout scores. This implies that while education might help in managing stress, other factors such as workplace environment and organizational support play a more decisive role in mitigating burnout.

Age also appears to be a significant factor in burnout, with older nurses reporting higher burnout scores, potentially due to cumulative exposure to stress over the course of their careers (2). Koroğlu and Bahar (2021) further demonstrated that increasing levels of burnout positively correlate with nurses' intentions to leave their jobs, highlighting the importance of addressing burnout not only for individual well-being but also for healthcare workforce retention (11).

Mitigation strategies proposed by scholars include stress management programs, workplace improvements, and fostering supportive environments where nurses feel valued and heard. In particular, leadership development programs aimed at improving nurse managers' abilities to provide emotional support and constructive feedback have shown to reduce burnout levels (25). Additionally, regular mental health screenings, providing access to counseling services, and creating opportunities for professional development are recommended as effective measures to reduce stress and prevent burnout.

In conclusion, burnout and stress among nurses are complex issues that are influenced by both individual and systemic factors. Addressing them requires a multifaceted approach that includes organizational support, leadership development, and stress management interventions. Ensuring that nurses have access to resources that foster their emotional well-being and professional growth is essential in maintaining a healthy, satisfied workforce and ensuring the delivery of high-quality patient care.

In a study conducted by Başkale et al. (2016), it was found that nurses with 21 years or more of experience exhibited significantly lower levels of burnout compared to those who had been working for shorter periods (26). This finding suggests that experienced nurses may have developed more effective coping strategies for managing job-related stress over time. It highlights the importance of recognizing and leveraging the skills and resilience of long-tenured nurses. To maintain their well-being, it is recommended that experienced nurses should not be assigned workloads as high as their younger counterparts and should be given positions that reflect their expertise and seniority (26).

The impact of the COVID-19 pandemic on healthcare professionals has been profound, particularly among nurses working in high-stress environments like emergency departments. A study in Brazil (2021) revealed that nurses working during the pandemic experienced significant physical, mental, and psychosocial changes. Physical issues included disrupted eating habits, fatigue, and increased smoking. Mentally,

they faced elevated levels of anxiety, sleep disturbances, fear, and stress. Psychosocially, many reported feelings of social isolation, loneliness, and societal stigma due to their involvement in COVID-19 care (27). These findings underscore the critical need for targeted interventions, such as mental health support and workplace adjustments, to mitigate the psychosocial effects of working during a health crisis.

Similarly, a 2023 study emphasized that emotional burnout levels increased among nurses who cared for infected patients during the pandemic. This rise in burnout was associated with an increase in workload, coupled with the emotional strain of caring for critically ill patients in a time of uncertainty (28). The research highlights the importance of providing psychosocial support to healthcare workers in high-stress environments, particularly during global health emergencies.

In another study by Özsoylu et al. (2017), it was observed that intensive care nurses exhibited lower sensitivity levels compared to ward nurses (1). This may be attributed to the fact that intensive care nurses work with patients who often have more severe health conditions, which may require a certain level of emotional detachment to cope with the constant exposure to critical and life-threatening situations. Additionally, the high mortality rates in intensive care units can contribute to feelings of inadequacy and helplessness, potentially leading to emotional burnout (16). This aligns with findings by Yılmaz and Durmaz (2019), who reported that pediatric nurses with 6-9 years of experience showed higher scores in the depersonalization sub-dimension of

burnout, indicating a greater tendency to emotionally detach from their patients over time (29).

The study conducted by Çelik and Kılıç (2019) offers additional insights into how job roles and work settings influence burnout and job satisfaction among nurses (30). Their findings indicate that nurses working in specialized areas, such as blood collection, EKG, and outpatient clinics, experience higher job satisfaction and lower burnout levels compared to those working in inpatient units. In contrast, nurses working in intensive care, operating rooms, and emergency departments reported higher job satisfaction despite working in high-stress environments, potentially due to the perceived importance and critical nature of their roles. However, nurses working regular day shifts or in non-supervisory roles tend to report lower job satisfaction and higher burnout (30).

These findings highlight the complex nature of burnout and job satisfaction in nursing, suggesting that workplace dynamics, role responsibilities, and career development opportunities play critical roles in shaping nurses' professional experiences. Tailored interventions aimed at improving job satisfaction, reducing burnout, and supporting professional development are essential in fostering a resilient nursing workforce.

Night shifts have been consistently linked to lower job satisfaction and higher levels of professional burnout among nurses (31). Nurses working these shifts often face physical and mental fatigue due to inadequate rest and limited social lives. Conversely, nurses in managerial positions

enjoy more fixed working hours, fewer responsibilities in direct patient care, and no weekend work obligations, which may contribute to their higher job satisfaction and lower burnout rates (32). Nurses in high-risk units such as emergency or intensive care departments, where workloads are often high, tend to experience stress-related burnout due to the demands of patient care, lack of recovery time, and the need for quick decision-making under pressure (31).

Research also shows that mindfulness-based interventions can significantly reduce burnout levels. In a study by Karo et al. (2023), nurses who underwent mindfulness-based training showed large reductions in emotional exhaustion, depersonalization, and increased personal accomplishment. This training not only helped reduce burnout but also improved the nurses' overall mindfulness and self-compassion scores, providing them with tools to better manage workplace stress (33). These findings emphasize the importance of incorporating such interventions into regular stress management programs in healthcare institutions.

The relationship between self-sacrifice and burnout is another emerging topic in the literature. According to Eder and Meyer (2023), excessive self-sacrifice among nurses can lead to self-hostility, further exacerbating burnout. Their study highlights the need for healthcare systems to implement policies that prevent excessive workload and promote a balanced approach to professional responsibilities. Addressing these factors may improve both

job satisfaction and retention rates in the nursing workforce (34).

During the COVID-19 pandemic, the increasing demand for healthcare workers forced hospitals to promote inexperienced nurses to managerial positions, often without adequate support. Chen et al. (2023) found that these newly appointed nurse managers experienced increased levels of anxiety and depression, which not only affected their work performance but also had negative consequences on their personal lives and family responsibilities. The lack of psychological support and managerial training for these nurses further compounded their stress, leading to burnout. The study emphasizes the need for strong support systems and mentorship programs to help new nurse managers adjust to their roles and avoid the negative psychological effects associated with these high-responsibility positions (35).

Moreover, the relationship between fatigue and burnout remains critical. Alzailai et al. (2023) identified that fatigue among intensive care nurses is influenced by several factors, including years of service, work unit characteristics, and inadequate health management policies. The study showed a strong positive correlation between severe fatigue and higher burnout levels, suggesting that fatigue management is an essential component of preventing burnout in high-stress units (36). Ensuring that nurses in these units receive sufficient rest and psychological support is crucial for their well-being and for maintaining a stable healthcare workforce.

Methods used to alleviate burnout and stress

Measuring job satisfaction regularly is crucial in healthcare organizations for increasing employee satisfaction and reducing turnover intentions. Studies suggest that healthcare organizations' success is significantly tied to the satisfaction and performance of their employees, particularly nurses, who are in frequent contact with patients and their families (28). Qualified and talented healthcare professionals are essential for organizational success, and managers must assess their employees' intent to leave and take appropriate actions when necessary (37).

Nurses often face difficult situations that can lower job satisfaction, which in turn increases their turnover intentions. Research has shown that low job satisfaction is closely linked to increased turnover, leading to a potential decrease in the quality of patient care (35). Therefore, healthcare managers must prioritize the well-being and satisfaction of their staff to not only retain qualified employees but also to ensure high-quality healthcare services. Additionally, nurses' exposure to compassion fatigue—which arises from their capacity to empathize with patients' suffering and traumatic experiences—further exacerbates job dissatisfaction and burnout (38).

Compassion fatigue is often seen as a natural consequence of prolonged exposure to trauma and suffering in healthcare settings, particularly among nurses who are frontline workers. Factors such as long working hours, emotional strain from

dealing with terminally ill patients, and occasional conflicts with patients and their families can all contribute to compassion fatigue (34). Compassion fatigue can lead to desensitization and increased turnover rates if not addressed promptly.

To prevent and cope with compassion fatigue, nurses can adopt several strategies. Personal self-care is key, including practicing mindfulness, engaging in deep breathing exercises, and maintaining a healthy lifestyle through physical activity and proper nutrition (39). Strengthening social support systems, engaging in spiritual practices like prayer or meditation, and participating in artistic activities can also help nurses mitigate the effects of compassion fatigue (35). Awareness of the early signs of burnout, combined with mindfulness-based stress reduction (MBSR) programs, has proven effective in alleviating emotional exhaustion and improving well-being (39). Furthermore, psycho-educational interventions offer valuable support for nurses experiencing compassion fatigue. These interventions include relaxation techniques, guided visualization, and active coping strategies, which promote resilience and personal growth in the face of occupational stress (40). Nurses can benefit from structured programs that offer a comprehensive approach to emotional and mental well-being, leading to sustained job satisfaction and enhanced professional performance.

According to Quill and Williamson's stress management framework, strategies for managing stress among nurses can be divided into five categories:

1. Individual Time Management: Activities such as meditation, psychotherapy, or educational pursuits (40).
2. Encouraging Emotional Expression: Engaging in group activities both within and outside of healthcare, and spending quality time with family and friends (28).
3. Meeting Physical and Emotional Needs: Creating suitable shift schedules, taking regular vacations, and ensuring that healthcare workers have regular medical check-ups (37).
4. Developing Personal Philosophical Thinking: Setting realistic short- and long-term goals and implementing effective time management practices (38).
5. Stress Management Training: Organizing training sessions to build awareness of stress management techniques (34).

By fostering a workplace culture that promotes mental health, self-care, and social support, healthcare organizations can reduce the incidence of burnout and compassion fatigue among nurses, leading to improved job satisfaction and better patient outcomes.

Precautions to Be Taken to Prevent Burnout

- Improving Working Environments and Providing Safe Conditions: A good working environment reduces the risk of burnout by increasing nurses' job satisfaction. Research shows that nurses' access to physical safety and emotional support at work improves job performance (41). Reducing the stress factors faced by

nurses positively affects the quality of patient care.

- Certification of Nurses in Their Specialty: Certification of nurses in their specialties directly affects the quality of patient care by increasing their knowledge and skills. Certified nurses have been found to be able to manage complex clinical situations more effectively and increase patient satisfaction (42). This also contributes to nurses feeling more self-confident in their profession and increasing their job satisfaction (43).
- Regular Assessment of Burnout Levels and Early Intervention: Regular assessment of burnout levels is important for nurses to monitor their psychological health status in the workplace. Such assessments detect early signs of burnout and enable the necessary measures to be taken (44). In addition, such assessments make nurses feel more valued (45).
- Encouraging Nurses to College Education: Being directed to university education not only increases the knowledge and skills of nurses, but also supports their job satisfaction and career development. Training allows nurses to continuously improve themselves (3).
- Appointment of Qualified Nurse Managers: Qualified managers ensure that nurses feel supported in the work environment. Managers' leadership skills are an important factor influencing nurses' burnout levels (25). Good leadership can increase nurses' motivation and positively affect job satisfaction (46).
- Developing Effective Communication Skills: Effective communication increases collaboration between nurses and reduces stress levels. A good communication environment makes it

easier for nurses to receive emotional support (8).

- **Assignment of Infection Control Nurses and Vaccination Programs:** Infection control reduces the workload of nurses and protects the health of patients. Training nurses on infection control prevents the spread of in-hospital infections and improves patient safety (47).
- **Providing Easy Access to Counseling Services:** Counseling services provide nurses with psychological support. Providing such services to cope with stressful situations can ease the emotional burdens of nurses (48).
- **Nurses Not Being Assigned Outside of Their Preferences:** Nurses' work in their preferred fields increases their job satisfaction. This strengthens nurses' commitment to their work and reduces the risk of burnout (49).
- **Strengthening Social Support Systems:** Social support can reduce nurses' feelings of burnout. Strengthening nurses' social support networks increases their psychological resilience (50).
- **Conducting Regular Health Checkups:** Health checkups are critical for monitoring nurses' physical and psychological health status. Such check-ups protect nurses' overall health by providing opportunities for early intervention (51).

CONCLUSION

Scientifically, research on burnout in nursing indicates that nurses who find their work meaningful, possess high internal motivation, and demonstrate effective interpersonal skills, problem-solving abilities, and conflict management strategies are at a lower risk of burnout.

Additionally, nurses who can increase life satisfaction through their work are better protected from burnout. On the managerial side, it is crucial for nurse managers to adopt creative and courageous approaches when addressing burnout symptoms among nurses. They should promote the use of objective, evidence-based strategies and support systematic research on burnout. Developing retention strategies and policies that are sensitive to the specific needs of nurses at risk of burnout is essential. Leadership training for managerial nurses is important to foster a healthy work environment and to demonstrate empowering leadership behaviors that can help prevent burnout.

Globally, to combat burnout, it is recommended to regulate working hours, increase nurse-to-patient ratios, expand educational opportunities, and implement reward systems. Regular assessment of nurses' motivation and special interventions for those at higher risk are also crucial. Based on current research findings, providing training on stress management and coping with burnout, as well as conducting unit meetings to promote effective communication among staff, can offer practical solutions. Additionally, allowing nurses to work in their preferred units, offering rewards to employees in high-risk or high-workload departments, and planning regular unit changes are other important considerations for preventing burnout.

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REFERENCES

1. Camci GB, Kavuran E. Hemşirelerin iş stresi ve tükenmişlik düzeyleri ile meslek ve yaşam doyumu düzeyleri arasındaki ilişkinin belirlenmesi. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*, 2021; 24(2): 274- 283.
2. Çetin Aydın G, Aytaç S, Şanlı Y. İşe ilişkin duygular, iş stresi ve tükenmişliğin işten ayrılma niyeti üzerindeki etkisi: hemşireler üzerinde bir araştırma. *Journal of Social Policy Conferences*. 2021(80):1-35.
3. Labrague LJ, McEnroe-Petitte DM, Leocadio MC, Van Bogaert P, Cummings GG. Stress and ways of coping among nurse managers: An integrative review. *J Clin Nurs*. 2018;27(7-8):1346-1359. doi:10.1111/jocn.14165
4. Kapucu S. Hemodiyaliz hemşirelerinde tükenmişlik ve önlemler. *Bozok Tıp Derg*. 2017;7(1):80-87.
5. Hiçdurmaz D, Üzar-Özçetin YS. COVID-19 pandemisinde ön safta çalışan hemşirelerin ruhsal sağlığının korunması ve ruhsal travmanın önlenmesi. *HUHEMFAD*. 2020;7(Özel Sayı):1-7.
6. Dyrbye LN, Shanafelt TD, Sinsky C. Burnout among health care professionals: A call to explore and address this underrecognized threat to safe, high-quality care. *NAM Perspect*. 2017;7(7).
7. Kılıç S. Devlet hastanesinde çalışan hemşirelerde travmatik stres belirtileri, mesleki tatmin, tükenmişlik ve eş duyum yorgunluğunun incelenmesi [Yüksek Lisans Tezi]. Nevşehir: Nevşehir Hacı Bektaş Veli Üniversitesi Fen Bilimleri Enstitüsü; 2018. s.6-20. (Tez Danışmanı: Doç. Dr. Figen İnci).
8. Wong CA, Cummings GG, Ducharme L. The relationship between nursing leadership and patient outcomes: a systematic review update. *J Nurs Manag*. 2013;21(5):709-724. doi:10.1111/jonm.12116
9. Aydın T, Ağaçdiken S. COVID-19 pandemi sürecinde hemşirelerde meslektaş dayanışması ve tükenmişlik durumu. *JSHS*. 2021;6(1):11-22.
10. Jun J, Ojemeni MM, Kalamani R, Tong J, Crecelius ML. Relationship between nurse burnout, patient and organizational outcomes: Systematic review. *Int J Nurs Stud*. 2021;119:103933. doi:10.1016/j.ijnurstu.2021.103933
11. Köroğlu Ö, Bahar E. Sağlık kurumlarında çalışan hemşirelerin tükenmişlik algılarının işten ayrılma niyetlerine etkisi. *İşletme Araştırmaları Derg*. 2021;13(4):3453-3464.
12. de Paiva LG, Dos Santos WM, Dalmolin GL. The impact of the SARS-CoV-2 pandemic on sickness absenteeism among hospital workers. *Rev Bras Med Trab*. 2022;20(1):65-71. doi:10.47626/1679-4435-2022-787
13. Puto G, Serafin L, Musiał Z, Zurzycka P, Kamińska A, Gniadek A. Professional challenges of nurses working during the SARS-CoV-2 virus pandemic. *Int J Occup Med Environ Health*. 2023;36(1):112-124. doi:10.13075/ijomeh.1896.02028
14. Dikmen Y, Aydın Y. Hemşirelerde merhamet yorgunluğu: Ne? Nasıl? Ne Yapmalı?. *J Hum Rhythm*. 2016;2(1):14-21.
15. Parker G, Tavella G, Eysers K. *Burnout: A Guide to Identifying Burnout and Pathways to Recovery*. 1st ed. Routledge; 2022.
16. Özsoylu S, Akyıldız B, Dursun A. Bir üniversite hastanesinde çalışan hemşirelerin tükenmişlik düzeyi ve etkileyen faktörler. *Çocuk Acil ve Yoğun Bakım Derg*. 2017;4(3):104-109.
17. Günüşen NP. Hemşirelerin ruh sağlığının korunması ve güçlendirilmesi. *Türkiye Klinikleri J Psychiatr Nurs-Special Topics*. 2017;3(1):12-88.
18. Maslach C, Jackson SE. The measurement of experienced burnout. *J Organ Behav*. 1981;2(2):99-113. doi:10.1002/job.4030020205
19. American Thoracic Society. What is burnout syndrome (BOS)? *Am J Respir Crit Care Med*. 2016;194.

20. Ghahramani S, Lankarani KB, Yousefi M, Heydari K, Shahabi S, Azmand S. A systematic review and meta-analysis of burnout among healthcare workers during COVID-19. *Front Psychiatry*. 2021;12:758849. doi:10.3389/fpsy.2021.758849
21. West CP, Dyrbye LN, Shanafelt TD. Physician burnout: contributors, consequences and solutions. *J Intern Med*. 2018;283(6):516-529. doi:10.1111/joim.12752
22. Laschinger HK, Wong CA, Grau AL. Authentic leadership, empowerment and burnout: a comparison in new graduates and experienced nurses. *J Nurs Manag*. 2013;21(3):541-552. doi:10.1111/j.1365-2834.2012.01375.x
23. Schlak AE, Aiken LH, Chittams J, Poghosyan L, McHugh M. Leveraging the work environment to minimize the negative impact of nurse burnout on patient outcomes. *Int J Environ Res Public Health*. 2021;18(2):610. doi:10.3390/ijerph18020610
24. Hall LH, Johnson J, Watt I, Tsipa A, O'Connor DB. Healthcare staff wellbeing, burnout, and patient safety: A systematic review. *PLoS One*. 2016;11(7)
25. Niinihuhta M, Häggman-Laitila A. A systematic review of the relationships between nurse leaders' leadership styles and nurses' work-related well-being. *Int J Nurs Pract*. 2022;28(5). doi:10.1111/ijn.13040
26. Başkale H, Günüşen N, Serçekuş P. Bir devlet hastanesinde görev yapan hemşirelerin çalışan yaşam kalitesi düzeylerinin ve etkileyen faktörlerin incelenmesi. *Pamukkale Tıp Dergisi*. 2016;9(2):125-134.
27. Riedel B, Horen SR, Reynolds A, Hamidian Jahromi A. Mental health disorders in nurses during the COVID-19 pandemic: Implications and coping strategies. *Front Public Health*. 2021;9:707358. doi:10.3389/fpubh.2021.707358
28. Xu Y-W, Fan L. Emotional labor and job satisfaction among nurses: The mediating effect of nurse-patient relationship. *Front Psychol*. 2023;14:1094358. doi:10.3389/fpsyg.2023.1094358
29. Yılmaz G, Baran Durmaz G. Pediatri hemşirelerinin empatik eğilim, duygusal emek davranışları ve tükenmişlik düzeyleri arasındaki ilişki. *HUHEMFAD*. 2019;6(2):92-100.
30. Çelik Y, Kılıç İ. Hemşirelerde iş doyumu, mesleki tükenmişlik ve yaşam kalitesi arasındaki ilişkiler. *Kocatepe Tıp Dergisi*. 2019;20(4):230-238. doi:10.18229/kocatepetip.44406
31. Lima A, Moreira MT, Fernandes C, et al. The burnout of nurses in intensive care units and the impact of the SARS-CoV-2 pandemic: A scoping review. *Nurs Rep*. 2023;13(1):230-242. doi:10.3390/nursrep13010022
32. Chen Y, Jiang H, Shen Y, Gu H, Zhou P. Nurse managers' experience during the COVID-19 pandemic in China: A qualitative study. *Nurs Open*. 2023;10(11):7255-7265. doi:10.1002/nop2.1978
33. Karo M, Simorangkir L, Daryanti Saragih I, Suarilah I, Tzeng HM. Effects of mindfulness-based interventions on reducing psychological distress among nurses: A systematic review and meta-analysis of randomized controlled trials. *J Nurs Scholarsh*. 2024;56(2):319-330. doi:10.1111/jnu.12941
34. Eder LL, Meyer B. The role of self-endangering cognitions between long-term care nurses' altruistic job motives and exhaustion. *Front Health Serv*. 2023;3:1100225. doi:10.3389/frhs.2023.1100225
35. Alzailai N, Barriball KL, Alkhatib A, Xyrichis A. Factors that contributed to burnout among intensive care nurses during the COVID-19 pandemic in Saudi Arabia: A constructivist grounded theory. *Aust Crit Care*. 2023;36(1):19-27. doi:10.1016/j.aucc.2022.11.02
36. Gautam P, Gautam D, Bhetuwal R. Work-life balance, job satisfaction and turnover intentions among nurses. 2024;10.1108/IJOA-09-2023-4002.
37. Uslu E, Kendirkıran G. Compassion fatigue and risk factors in nurses in the Covid-19 pandemic. *Dokuz Eylül Üniversitesi Hemşirelik Fakültesi Elektronik Dergisi*. 2022;15(3):298-306.
38. Othman SY, Hassan NI, Mohamed AM. Effectiveness of mindfulness-based interventions on burnout and self-compassion among critical care nurses caring for patients with COVID-19: a quasi-experimental study. *BMC Nurs*. 2023;22(1):305. doi:10.1186/s12912-023-01466-8
39. Balbinot MA, Bordignon M. Strategies for management of stress and burnout among healthcare professionals in Brazil. *Rev Bras Med*

- Trab. 2023;20(3):487-497. doi:10.47626/1679-4435-2022-653
40. Mihdawi M, Al-Amer R, Darwish R, Randall S, Afaneh T. The influence of nursing work environment on patient safety. *Workplace Health Saf.* 2020;68(8):384-390. doi:10.1177/2165079920901533.
 41. Coelho P. Relationship between nurse certification and clinical patient outcomes: A systematic literature review. *J Nurs Care Qual.* 2020;35(1). doi:10.1097/NCQ.0000000000000397.
 42. Bianchi R, Schonfeld IS, Laurent E. Burnout-depression overlap: a review. *Clin Psychol Rev.* 2015;36:28-41. doi:10.1016/j.cpr.2015.01.004.
 43. Ebrahimi Rigi Z, Mangolian Shahrabaki P, Ahmadi F, Ravari A. Self-sacrifice in a distressful and threatening environment: The consequences of the COVID-19 crisis in intensifying workplace violence. *Front Psychiatry.* 2022;13:848059. Published 2022 May 17. doi:10.3389/fpsyt.2022.848059
 44. Aydogdu ALF. Challenges faced by nurse managers during the COVID-19 pandemic: an integrative review. *J Res Nurs.* 2023;28(1):54-69.
 45. Dewi L, Hamid AYS, Sekarsari R. Experiences of Infection Prevention and Control Nurses (IPCNs) in performing their roles and duties in the Indonesia Army Central Hospital: A qualitative descriptive study. *Belitung Nurs J.* 2023;9(2):145-151. doi:10.33546/bnj.2482
 46. Sutton OR, Norton EA. Psychological needs of critical care staff and barriers to accessing support: A qualitative study. *Nurs Health Sci.* 2022;24(3):652-660. doi:10.1111/nhs.12958
 47. Vevoda J, Navratilova D, Machaczka O, Ambroz P, Vevodova S, Tomietto M. Nurses' job satisfaction identified by personal preferences and perceived saturation divergence: A comparative cross-sectional study in Czech hospitals between 2011 and 2021. *BMC Nurs.* 2023;22(1):422. Published 2023 Nov 10. doi:10.1186/s12912-023-01586-1.
 48. De la Fuente-Solana EI, Pradas-Hernández L, González-Fernández CT, et al. Burnout syndrome in paediatric nurses: A multi-centre study. *Int J Environ Res Public Health.* 2021;18(3):1324. Published 2021 Feb 1. doi:10.3390/ijerph18031324.
 49. National Academies of Sciences, Engineering, and Medicine; National Academy of Medicine; Committee on the Future of Nursing 2020–2030; Flaubert JL, Le Menestrel S, Williams DR, et al., editors. Washington (DC): National Academies Press (US); 2021 May 11.