

QUALITATIVE STUDY ON THE EFFECT OF MINDFULNESS BASED INTERVENTION ON BURNOUT, COMPASSION FATIGUE, AND WORK ENGAGEMENT AMONG STAFF NURSES IN QATAR

Sharin Koshy Varghese¹, Shiju K K²

1. Research scholar, Martin Luther Christian University, Shillong, India, ORCID id: 0000-0001-7942-2684, sharinkvarghese@gmail.com

2. Research Guide, Guest faculty, Centre for Yoga and Naturopathy, Mahatma Gandhi University, Kerala, shijukkhere@gmail.com

Corresponding author: Mr. Sharin Koshy Varghese, Research scholar, Martin Luther Christian University, Shillong, India, sharinkvarghese@gmail.com

KEYWORDS

Mindfulness-based intervention, burnout, compassion fatigue, work engagement

ABSTRACT

Burnout, compassion fatigue, and reduced work engagement are common issues among healthcare professionals, particularly staff nurses, who endure high levels of emotional and physical stress. These challenges impact the nurses' well-being and influence patient care and overall healthcare outcomes. Mindfulness-Based Interventions (MBIs) have emerged as effective strategies for enhancing emotional regulation and reducing stress across various populations. This study aims to evaluate the effectiveness of MBIs in mitigating burnout, and compassion fatigue, and improving work engagement among staff nurses, highlighting their role in promoting emotional well-being and enhancing job performance in a high-pressure healthcare environment. The study involved 10 staff nurses, aged 25 to 51, from Heart Hospital at Hamad Medical Corporation, Doha, Qatar. Participants were selected through simple random sampling. Data was collected using semi-structured interviews. Thematic content analysis was used to interpret the data. Qualitative findings further suggest that MBIs play a crucial role in alleviating burnout, mitigating compassion fatigue, and enhancing emotional well-being and work engagement in staff nurses. By fostering emotional resilience and work engagement, MBIs offer valuable tools to address the intense demands of nursing, contributing to a healthier workforce, reducing burnout, and enhancing overall job satisfaction.

Introduction

A healthcare professional providing direct or indirect patient care is called a staff nurse. The role of a staff nurse involves conducting assessments, addressing patient needs, implementing necessary care plans, and collaborating with other healthcare professionals. To fulfill these responsibilities effectively, a staff nurse must possess critical thinking abilities, sound decision-making skills, effective communication, and the capacity to care for patients with compassion (AAMCN, n.d.).

Burnout, a state of physical and mental exhaustion, results from prolonged exposure to stress (White-Gibson, 2021). Sources of burnout include various aspects of life such as work, parenting, romantic relationships, and caregiving, with workplace stress being a primary contributor. Depression, cynicism, and lethargy are hallmark symptoms of burnout, often emerging when individuals feel a lack of control over their responsibilities, whether at work or at home. Burnout can also arise when tasks and duties are misaligned with a person's values

and sense of self (PsychologyToday, n.d.). For nurses, burnout can have severe negative impacts, affecting both their professional and personal lives (Gillespie & Melby, 2003).

Compassion fatigue, on the other hand, occurs when constant exposure to others' stress and trauma leads to emotional and physical exhaustion, diminishing a person's ability to empathize. It can result in feelings of helplessness and, ultimately, burnout due to the high emotional demand required to support suffering individuals. Healthcare workers—especially nurses, doctors, and therapists—are particularly vulnerable to compassion fatigue. Common symptoms include emotional numbness, irritability, sadness, helplessness, detachment, and apathy (Cherry, 2023). Nurses who frequently engage in direct patient care are at significant risk of compassion fatigue (Yoder, 2010).

Work engagement, in contrast, is a positive, affective-motivational state where individuals experience high energy levels, dedication, and concentration in their work. High work engagement is associated with enhanced performance, creativity, and organizational citizenship behavior (Bakker & Albrecht, 2018). In nursing, increased work engagement improves the quality of patient care. Factors like optimism, self-efficacy, social support, and structural empowerment contribute to heightened engagement levels (Gracia-Sierra, 2015).

Research findings underscore the prevalence of burnout and compassion fatigue among nurses, as well as their impact on engagement levels. For instance, Lasebikan and Oyetunde (2012) reported that 39.1% of nurses experience high burnout levels, while Zhang et al. (2018) noted that 51.98% of nurses experience burnout and 52.55% face compassion fatigue. Albazon et al. (2023) found that 17% of healthcare professionals in Qatar experience burnout. While in UAE Sam et al. (2023) reported that 61% of nursing staffs experience moderate-high levels of compassion satisfaction while 38.1% reported high levels. Diab and Nagar (2019) found that 60% of nurses exhibit low work engagement, with only 2% reporting higher engagement. Studies also indicate that mindfulness can effectively reduce burnout and enhance emotional regulation and compassion satisfaction (Green & Kinchen, 2021). Furthermore, mindfulness has shown effectiveness in mitigating compassion fatigue and burnout (Duarte & Pinto-Gouveia, 2016), while positively influencing engagement (Perez-Fuentes et al., 2020).

Mindfulness-based interventions (MBIs) aim to cultivate mindfulness, helping individuals become attentive and present in a non-judgmental way (Shapero et al., 2018). This practice fosters qualities like curiosity, openness, kindness, and acceptance (Zang et al., 2021). Research indicates that MBI sessions lead to reduced burnout and compassion fatigue, along with increased engagement (Sarazine et al., 2021; Tripathi & Mulkey, 2023; Tulucu et al., 2022).

Given the high levels of stress, emotional exhaustion, and occupational hazards nurses face, a study on the Effect of Mindfulness based intervention on Burnout, Compassion Fatigue, and Work Engagement among Staff Nurses in Qatar is crucial. Nurses often experience burnout and compassion fatigue due to prolonged exposure to patient suffering, which can reduce work engagement and compromise both mental health and patient care quality. Mindfulness interventions have shown promise in reducing burnout and compassion fatigue while enhancing work engagement. Investigating the benefits of mindfulness specifically for staff nurses may yield practical insights for alleviating burnout and compassion fatigue, fostering a supportive work environment, and improving engagement.

Methodology

In this qualitative study, thematic content analysis was employed as the methodology. Ten staff nurses, aged 25 to 51, from Heart Hospital at Hamad Medical Corporation in Doha, Qatar, were interviewed using a semi-structured format in English with 10 predetermined questions. Each interview, lasting between 15 minutes and 1 hour, was recorded by the principal investigator (PI), who ensured confidentiality. The PI transcribed the recordings and securely

stored them, with access limited solely to the PI. Data analysis was then conducted using thematic content analysis to identify key patterns and themes.

The tool developed for the interview was a self-prepared questionnaire. It contains ten questions. The tool was validated by experts: Dr. Bindu, Psychologist, Hamad Medical Cooperation (HMC), Doha; Shuji Kalayil, Mental Health CNS, HMC, Doha; Sannet Thomas, Consultant Psychologist, Dept. of Applied Psychology, VBS Purvanchal University, Jaunpur.

In the pretest stage, data was collected using the Copenhagen Burnout Inventory (CBI) (Kristensen, et al., 2005), the Professional Quality of Life Scale: Compassion Satisfaction and Fatigue Version (Stamm, 2010), Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2003). The Mindfulness-Based Intervention Plan lasted for 8 weeks. On the 1st of every week, there is a client-therapist interactive session that lasts for 30 minutes. The first component of the intervention, that is, the 'Mindful Actions' to be practiced for 30 minutes every day for the following week by the client at home is introduced to the client after the interactive session. Different exercises are given in each week. As part of the second component of the intervention, that is, 'Reflection' the clients are also instructed to maintain an MBI Diary throughout therapy and to write down their questions, suggestions, experiences, and improvements daily. During the post-assessment phase, the Principal Investigator (PI) once more gathers data using the identical procedure applied during the pre-assessment phase.

Results

The thematic analysis was based on the data obtained from semi-structured interviews with the 10 staff nurses. The major themes and the subthemes derived based on the identified keywords are in below table 1.

Subthemes	Major Theme
- Emotional Management - Present Moment Awareness - Coping Strategies - Transformative Experience - Consistency and Commitment	Alleviation of Burnout through Mindfulness-Based Intervention
- Awareness and Recognition of Compassion Fatigue - Emotional Regulation and Boundary Setting - Cultivating Self-Compassion - Restoration of Emotional Energy and Resilience - Community and Shared Experience	Mitigation of Compassion Fatigue through Mindfulness Practices
- Reconnection with Purpose - Increased Focus and Presence - Emotional Connection to Work - Reduction of Stress and Mental Clutter - Sustained Engagement Over Time	Enhanced Work Engagement through Mindfulness-Based Intervention
- Transformative Personal Experience. - Practical and Accessible Tools - Universal Application Across Contexts - Encouragement to Address Early Signs of Stress - Community and Shared Experience	Advocacy for Mindfulness-Based Intervention as a Tool for Emotional Resilience
- Emotional Stability and Balance - Mental Clarity and Focus - Cognitive Control and Awareness - Behavioral Changes and Coping Mechanisms	Holistic Transformation Through Mindfulness-Based Intervention (MBI)

• Importance of Consistency • Preventing Regression • Personal Growth and Skills Development • Adaptation to Lifestyle	Sustaining Mindfulness Practice for Personal Growth and Stability
• Mindfulness Techniques and Practices: • Emotional Awareness and Regulation: • Self-Compassion and Personal Care: • Stress Management and Resilience:	Transformative Learning Through Mindfulness for Emotional and Stress Management
• Immediate Emotional Relief. • Supportive Group Environment. • Practicality of Techniques. • Curiosity and Desire for Growth. • Positive Feedback and Encouragement	Immediate Benefits and Supportive Community
• Value of Practical Tools: • Continuous Practice and Reinforcement: • Sustainable Stress Management: • Positive Impact on Well-Being: • Importance in High-Stress Professions:	Optimistic Perspective and Sustained Action
• Enrichment and Empowerment • Safe and Supportive Environment • Cumulative Positive Impact • Practical and Tailored Techniques • Interactive Learning and Shared Insight	Impactful Learning and Collaborative Growth

Alleviation of Burnout through Mindfulness-Based Intervention (MBI)

The theme of alleviation of burnout through Mindfulness-Based Intervention (MBI) includes sub-themes of emotional management, present-moment awareness, coping strategies, transformative experiences, and commitment. MBI helped staff nurses become aware of and regulate their emotional responses to job stressors. Participants reported reduced anxiety and mental clutter, feeling more present and approaching tasks with clarity and calmness. Mindfulness strategies like deep breathing and guided meditation provided immediate relief and equipped them to handle future stressors. Over several sessions, participants experienced a cumulative, impactful shift, with consistent practice deepening their understanding and reinforcing mindfulness's effectiveness in managing stress and preventing burnout.

The findings align closely with the study results by Chiappetta et al. (2018) who identified burnout as a prevalent issue in healthcare settings and highlighted that MBI effectively reduces both burnout and stress levels. Similarly, Mohamed et al. (2021) found that MBI not only reduces burnout but also positively influences emotional regulation and enhances the overall quality of work life.

Mitigation of Compassion Fatigue through Mindfulness Practices

The theme of mitigation of compassion fatigue through MBI includes the sub-themes of awareness and recognition of compassion fatigue, emotional regulation and boundary setting, cultivating self-compassion, restoration of emotional energy and resilience, and community and shared experiences. Many participants initially lacked awareness of their compassion fatigue, but MBI helped them recognize early signs and proactively address these challenges. MBI enabled them to set emotional boundaries, manage patient care without feeling overwhelmed, and maintain empathy with a healthy detachment. Through prioritizing self-care, participants could replenish emotional reserves, enhancing their resilience and ability to offer

compassionate care. The communal MBI sessions provided a sense of belonging and validation among participants.

Hayajneh et al. (2024) reinforces this notion, showing a significant reduction in compassion fatigue through the application of MBI. Hevezi et al. (2016) echo these findings, noting that mindfulness not only decreased compassion fatigue and burnout but also enhanced relaxation and well-being.

Enhanced Work Engagement through Mindfulness-Based Intervention

The theme of enhanced work engagement through MBI includes the sub-themes of reconnection with purpose, increased focus and presence, emotional connection to work, reduction of stress and mental clutter, and sustained engagement over time. MBI helped participants rediscover the significance of their roles, turning daily tasks into meaningful activities that boosted job satisfaction and motivation. They reported fewer distractions, greater focus, and a stronger presence in high-pressure situations. By staying present, caregivers felt more effective and fulfilled, fostering deeper connections and understanding others' needs, which created a supportive work environment. Regular mindfulness practice helped them prioritize tasks, feel less overwhelmed, and experience a cumulative improvement in engagement and satisfaction.

De Simone et al. (2018) emphasizes that MBIs increase job satisfaction, self-efficacy, work engagement, and agentic capabilities of the nurses. Similarly, Tulucu et al. (2022) found that mindfulness plays a key role in enhancing engagement, indicating that mental practices such as mindfulness may create more engaged and resilient workers.

Advocacy for Mindfulness-Based Intervention as a Tool for Emotional Resilience

The theme of advocacy for MBI as a tool for emotional resilience includes the sub-themes of transformative personal experience, practical and accessible tools, universal application across contexts, encouragement to address early signs of stress, and community and shared experience. Participants described MBI as life-changing, prompting them to recommend it to others. They valued the easy integration of tools like deep breathing and grounding exercises, which require minimal time or resources. MBI's universal applicability makes it effective across various high-stress settings, enhancing resilience in both personal and professional contexts. Participants advocated for MBI as a proactive approach to prevent burnout by promoting awareness and self-care, and they felt a sense of community that encouraged shared healing and support.

Foureur et al. (2014) advocated for the integration of mindfulness practices within nursing environments, emphasizing that such practices can contribute to building resilience not only in individual nurses but also within the workplace as a whole. In line with these findings, Guillaumie (2017) concluded that mindfulness practices can enhance the health of nurses by improving their mental well-being within the workplace.

Holistic Transformation Through Mindfulness-Based Intervention (MBI)

The theme of holistic transformation through MBI includes the sub-themes of emotional stability and balance, mental clarity and focus, cognitive control and awareness, and behavioral changes and coping mechanisms. MBI helped participants respond to stress with greater emotional balance, fostering improved interactions and a positive work environment. Reduced mental clutter enabled better task prioritization, boosting productivity and job satisfaction. This mental clarity also influenced personal decisions, enhancing overall well-being. Participants reported heightened awareness of thought patterns, allowing them to manage and interrupt negative spirals effectively. MBI encouraged healthier routines and coping strategies, with mindful actions promoting reduced stress and a sense of fulfillment across personal and professional areas.

White (2014) found that mindfulness practice enabled participants to experience a greater sense of presence, accompanied by heightened attention, acceptance, and awareness. Similarly, Coster et al. (2020) identified positive outcomes following mindfulness training, with participants reporting reduced stress at their workplaces and an enhanced ability to focus on patient care.

Sustaining Mindfulness Practice for Personal Growth and Stability

The theme of sustaining mindfulness practice for personal growth and stability includes the sub-themes, namely, the importance of consistency, preventing regression, personal growth and skill development, and adaptation to lifestyle. Participants noted that consistent MBI practice is essential for staying grounded and focused. Periodic sessions help reinforce commitment and reduce the risk of reverting to less beneficial behaviors. Most view mindfulness as a lifelong practice that supports emotional and mental well-being. They recognize the need to integrate mindfulness into busy lifestyles, aiming to make it a sustainable part of their self-care strategy.

Kopp (2020) identified a positive correlation between the frequency of MBI and increased levels of resilience, suggesting that individuals who regularly engage in mindfulness practices are better equipped to manage adversity. In a related study, Coster et al. (2020) highlighted that the effectiveness of mindfulness interventions was contingent upon the participants' completion of the program, emphasizing the importance of consistent mindful practice.

Transformative Learning Through Mindfulness for Emotional and Stress Management

The major theme of transformative learning through MBI for emotional and stress management includes the sub-themes of mindfulness techniques and practices, emotional awareness and regulation, self-compassion and personal care, and stress management and resilience. Participants found practices like breath awareness, body scans, and loving-kindness meditation helpful for staying present. They noted that observing rather than being consumed by thoughts and emotions allowed for proactive management and a more balanced approach to life. Participants recognized the importance of self-care, which improved their resilience and ability to support others without neglecting themselves. They acquired practical stress management skills, such as specific breathing and body scanning techniques, to cope with immediate stress and build long-term resilience.

Guillaumie (2017) suggests that mindfulness practice leads to improvements in nurses' internal sense of calm, enthusiasm, and awareness, which positively impacts overall work performance. Complementing this, Ribeiro et al. (2018) highlight specific mindfulness techniques—such as body scans, breathing exercises, and sitting meditation—as effective tools for enhancing well-being. Further supporting this link, Janssen et al. (2020) found a positive correlation between mindfulness and empathetic care, job engagement, and overall work performance, while observing a negative correlation between mindfulness and emotional exhaustion.

Immediate Benefits and Supportive Community

The major theme of immediate benefit and supportive community includes the sub-themes of immediate emotional relief, supportive group environment, practicality of techniques, curiosity, desire for growth, and positive feedback and encouragement. Participants felt calm and relaxed after the first session, motivating them to continue. The group environment fostered understanding and encouragement, creating a sense of community as they connected with others facing similar challenges. The practicality of mindfulness tools enabled immediate mood improvement and stress management, making integration into daily life easier. Experiencing the benefits sparked a desire for deeper exploration and personal growth, while support from therapists and peers reinforced their commitment to the process.

Wang (2024) provided evidence that mindfulness training fosters a supportive group environment, which in turn helps reduce work pressures, improve overall well-being, and encourage the sharing of positive experiences among nurses. Lycke et al. (2023) expanded on these benefits by observing that nurses were able to sense heightened awareness and internal changes not only within themselves but also among their colleagues and patients.

Optimistic Perspective and Sustained Action

The theme of optimistic perspective and sustained action includes the sub-themes of the value of practical tools, continuous practice and reinforcement, sustainable stress management, positive impact on well-being, and importance in high-stress professions. MBI tools, such as breathing exercises and emotional regulation strategies, were practical and effective, motivating participants to continue therapy. They saw mindfulness as an ongoing practice that fosters growth and mastery over time. Participants valued MBI as a long-term solution for stress management, reporting increased calmness, better emotional regulation, and greater life satisfaction. There is also recognition of MBI's essential role in managing the demands of high-stress fields like nursing.

Beddoe et al. (2004) emphasized that regular mindfulness practice contributed to enhanced well-being and the development of effective coping strategies among participants, notably reducing stress and personal distress associated with empathy fatigue. This finding highlights the importance of consistency in mindfulness practice for sustainable psychological benefits. Montanari et al. (2018) found that the majority of participants who engaged in MBI sessions expressed a strong interest in attending similar interventions in the future, suggesting both the acceptability and perceived effectiveness of mindfulness programs.

Impactful learning and Collaborative growth

The theme of impactful learning and collaborative growth includes sub-themes of enrichment, empowerment, supportive environment, cumulative impact, tailored techniques, and shared learning. Participants found MBI sessions empowering, providing practical tools for emotional regulation and self-care. The non-judgmental, supportive atmosphere fostered open expression, promoting effective healing. Structured sessions led to progressive learning, deepening understanding and integrating techniques into daily life. Participants appreciated the simplicity and applicability of MBI in demanding work environments. The collaborative nature of the sessions encouraged interactive learning, where participants shared insights, reflected on challenges, and celebrated successes together.

Montanari et al. (2018) reported that participants found mindfulness practices to be both relaxing and nourishing, enabling them to refocus their energies and attention. This aligns with Halm's (2017) assertion that the rapidly evolving healthcare landscape poses significant challenges to nurses' self-care practices, often leading to detrimental outcomes. Thus, fostering supportive environments through practices such as MBIs can be instrumental in enhancing self-care, restoring resilience, and ultimately improving patient care.

Conclusion

The qualitative findings indicate that Mindfulness-Based Interventions (MBI) are effective in reducing burnout, mitigating compassion fatigue, and enhancing work engagement among staff nurses. Nurses reported significant emotional and psychological benefits, leading to a renewed sense of balance and well-being in both their personal and professional lives. MBI helped nurses develop essential emotional management skills, enabling them to navigate the complexities of their roles with greater resilience and clarity. They noted improved emotional regulation, better recognition of compassion fatigue, and the cultivation of self-compassion, which not only protected their well-being but also enhanced their capacity to provide empathetic care.

The focus on present-moment awareness allowed nurses to reconnect with the purpose of their work, significantly boosting job satisfaction and emotional engagement. Consistent mindfulness practice led to reduced stress and mental clutter, empowering nurses to approach their responsibilities with renewed energy and commitment. The communal aspect of MBI sessions provided a vital support network, alleviating feelings of isolation and reinforcing shared experiences.

In conclusion, the transformative impact of mindfulness practices highlights their value as effective interventions for nurses. By fostering emotional well-being and work engagement, MBIs are crucial tools for addressing the high demands of nursing, ultimately reducing burnout and compassion fatigue while enhancing job satisfaction.

Reference

- AAMCN. (n. d.). *Staff Nurse Overview*. American Association of Managed Care Nurses. <https://careers.aamcn.org/career/staff-nurse>
- Albazoon, F., Khogali, F., Burjaq, R., Chandra, P., Alabdulla, M., Abdulaziz, M., & Hammoudeh, S. (2023). Burnout among healthcare professionals in Qatar: A systematic review. *Asian Journal of Psychiatry*, 85, 103601.
- Bakker, A. B., & Albrecht, S. (2018). Work engagement: current trends. *Career Development International*, 23(1), 4-11.
- Beddoe, A. E., & Murphy, S. O. (2004). Does mindfulness decrease stress and foster empathy among nursing students?. *Journal of nursing education*, 43(7), 305-312.
- Cherry, K. (2023). *Compassion Fatigue: The Toll of Caring Too Much*. Verywellmind. <https://www.verywellmind.com/compassion-fatigue-the-toll-of-caring-too-much-7377301>
- Chiappetta, M., D'Egidio, V., Sestili, C., Cocchiara, R. A., & La Torre, G. (2018). Stress management interventions among healthcare workers using mindfulness: A systematic review. *Senses and Sciences*, 5(2).
- Coster, S., Gould, R. L., Coulson, M., & Norman, I. J. (2020). An online mindfulness intervention to enhance compassion in nursing practice: A feasibility and acceptability study with nursing students. *International Journal of Nursing Studies Advances*, 2, 100004.
- De Simone, S., Planta, A., & Cicotto, G. (2018). The role of job satisfaction, work engagement, self-efficacy and agentic capacities on nurses' turnover intention and patient satisfaction. *Applied Nursing Research*, 39, 130-140.
- Diab, G. M., & Elnagar, M. (2019). Work Engagement of Staff Nurses and its Relation to Psychological Work Stress. *Journal of Nursing and Health Science*, 8(2), 72-84.
- Duarte, J., & Pinto-Gouveia, J. (2016). Effectiveness of a mindfulness-based intervention on oncology nurses' burnout and compassion fatigue symptoms: A non-randomized study. *International journal of nursing studies*, 64, 98-107.
- Foureur, M., Besley, K., Burton, G., Yu, N., & Crisp, J. (2013). Enhancing the resilience of nurses and midwives: Pilot of a mindfulness based program for increased health, sense of coherence and decreased depression, anxiety and stress. *Contemporary nurse*, 45(1), 114-125.
- García-Sierra, R., Fernández-Castro, J., & Martínez-Zaragoza, F. (2016). Work engagement in nursing: an integrative review of the literature. *Journal of nursing management*, 24(2), E101-E111.
- Gillespie, M., & Melby, V. (2003). Burnout among nursing staff in accident and emergency and acute medicine: a comparative study. *Journal of clinical nursing*, 12(6), 842-851.
- 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.

- Guillaumie, L., Boiral, O., & Champagne, J. (2017). A mixed-methods systematic review of the effects of mindfulness on nurses. *Journal of advanced nursing*, 73(5), 1017-1034.
- Halm, M. (2017). The role of mindfulness in enhancing self-care for nurses. *American Journal of Critical Care*, 26(4), 344-348.
- Hayajneh, A. A., Al-Younis, M. O., Rababa, M., & Qahah, I. (2024). Effect of Mindfulness Intervention on Compassion Fatigue Among Nurses: A Randomized Controlled Trial Study. *Holistic Nursing Practice*, 10-1097.
- Hevezi, J. A. (2016). Evaluation of a meditation intervention to reduce the effects of stressors associated with compassion fatigue among nurses. *Journal of Holistic Nursing*, 34(4), 343-350.
<https://psychcentral.com/health/burnout>
- Janssen, E., Van Strydonck, I., Decuyper, A., Decramer, A., & Audenaert, M. (2020). How to foster nurses' well-being and performance in the face of work pressure? The role of mindfulness as personal resource. *Journal of Advanced Nursing*, 76(12), 3495-3505.
- Kopp, E. A. (2020). *Efficacy of a mindfulness-based intervention in reducing burnout and increasing resilience in registered nurses caring for patients with hematologic malignancies*. University of California, Los Angeles.
- Lasebikan, V. O., & Oyetunde, M. O. (2012). Burnout among nurses in a Nigerian general hospital: prevalence and associated factors. *International Scholarly Research Notices*, 2012(1), 402157.
- Lycke, T. S., Airosa, F., & Lundh, L. (2023). Emergency department nurses' experiences of a mindfulness training intervention: a phenomenological exploration. *Journal of Holistic Nursing*, 41(2), 170-184.
- Mohamed, E. A., Zaki, S. M., & Kotb, F. N. (2021). Assessment of Mindfulness among Head Nurses, and its Effect on Staff Nurses' Emotional Regulation and Quality of Work Life. *Assiut Scientific Nursing Journal*, 9(24), 153-165.
- Montanari, K. M., Bowe, C. L., Chesak, S. S., & Cutshall, S. M. (2019). Mindfulness: Assessing the feasibility of a pilot intervention to reduce stress and burnout. *Journal of Holistic Nursing*, 37(2), 175-188.
- Pérez-Fuentes, M. D. C., Gázquez Linares, J. J., Molero Jurado, M. D. M., Simón Márquez, M. D. M., & Martos Martínez, Á. (2020). The mediating role of cognitive and affective empathy in the relationship of mindfulness with engagement in nursing. *BMC Public Health*, 20, 1-10.
- PsychologyToday. (n. d.). *Burnout*. <https://www.psychologytoday.com/us/basics/burnout>
- Ribeiro, L., Atchley, R. M., & Oken, B. S. (2018). Adherence to practice of mindfulness in novice meditators: practices chosen, amount of time practiced, and long-term effects following a mindfulness-based intervention. *Mindfulness*, 9(2), 401-411.
- Sam, S. R., Diabet, O., Villa, B., Philipose, J., & Babu, S. (2023). Prevalence of Compassion Fatigue Among Nursing Staffs Working in High Acuity Clinical Settings, within Dubai Health Authority Hospitals, UAE.
- Sarazine, J., Heitschmidt, M., Vondracek, H., Sarris, S., Marcinkowski, N., & Kleinpell, R. (2021). Mindfulness workshops effects on nurses' burnout, stress, and mindfulness skills. *Holistic Nursing Practice*, 35(1), 10-18.
- Shapero, B. G., Greenberg, J., Pedrelli, P., de Jong, M., & Desbordes, G. (2018). Mindfulness-based interventions in psychiatry. *Focus*, 16(1), 32-39.
- Tripathi, S. K., & Mulkey, D. C. (2023). Implementing Brief Mindfulness-Based Interventions to Reduce Compassion Fatigue. *Critical Care Nurse*, 43(5), 32-40.
- Tulucu, F., Anasori, E., & Kinalli Madanoglu, G. (2022). How does mindfulness boost work engagement and inhibit psychological distress among hospital employees during the

- COVID-19 pandemic? The mediating and moderating role of psychological resilience. *The Service Industries Journal*, 42(3-4), 131-147.
- Tulucu, F., Anasori, E., & Kinali Madanoglu, G. (2022). How does mindfulness boost work engagement and inhibit psychological distress among hospital employees during the COVID-19 pandemic? The mediating and moderating role of psychological resilience. *The Service Industries Journal*, 42(3-4), 131-147.
- Wang, S. C., Shih, S. M., & Kuo, L. C. (2024). Exploring mindfulness interventions for stress resilience in newly graduated nurses: A qualitative study. *Tzu Chi Medical Journal*, 10-4103.
- White, L. (2014). Mindfulness in nursing: an evolutionary concept analysis. *Journal of Advanced Nursing*, 70(2), 282-294.
- White-Gibson, Z. (2021). *All About Burnout*. PsychCentral.
- Yoder, E. A. (2010). Compassion fatigue in nurses. *Applied nursing research*, 23(4), 191-197.
- Zhang, D., Lee, E. K., Mak, E. C., Ho, C. Y., & Wong, S. Y. (2021). Mindfulness-based interventions: an overall review. *British Medical Bulletin*, 138(1), 41-57.
- Zhang, Y. Y., Han, W. L., Qin, W., Yin, H. X., Zhang, C. F., Kong, C., & Wang, Y. L. (2018). Extent of compassion satisfaction, compassion fatigue and burnout in nursing: A meta-analysis. *Journal of Nursing Management*, 26(7), 810-819.