

The Influence of Mindfulness Therapy on Nurse Stress in Hospitals

Letti Kumajas^{1*}, Shanti Wardaningsih¹

¹ Universitas Muhammadiyah Yogyakarta, Indonesia.

Received: July 17, 2024

Revised: October 04, 2024

Accepted: November 25, 2024

Published: November 30, 2024

Corresponding Author:

Letti Kumajas

kumajasletti7@gmail.com

DOI: [10.29303/jppipa.v10i11.9339](https://doi.org/10.29303/jppipa.v10i11.9339)

© 2024 The Authors. This open access article is distributed under a (CC-BY License)



Abstract: The increasing workload, attributed to a high number of patients and limited human resources, is a major cause of stress among nurses. This stress can lead to burnout syndrome, characterized by emotional exhaustion, depersonalization, and a decrease in personal accomplishment, ultimately affecting the quality of nursing care provided to patients. Instances of nurse stress are not confined to a single country but are prevalent in various countries such as China, Australia, India, and Dubai. Elevated levels of stress among nurses can result in serious consequences, including physical and mental disorders like anxiety, depression, sleep disturbances, and other health issues, potentially escalating to suicide risk. The aim of this research is to determine the outcomes of a literature review concerning the utilization of Mindfulness therapy in managing nurse stress in hospitals. This study entails a literature review sourced from the PubMed, Scopus, and Proquest databases. Articles were selected based on inclusion and exclusion criteria, where inclusion criteria spanned from 2018 to 2023. The search yielded 6 articles filtered using PRISMA guidelines. This research aimed to identify articles on stress management methods for nurses that met the inclusion criteria. Mindfulness therapy proves to be beneficial for reducing stress among nurses in hospital settings and offers motivation to consider its incorporation into clinical practice and health programs within healthcare institutions.

Keywords: Mindfulness therapy; Nurse; Stress level

Introduction

The hospital is an institution that provides healthcare services, serving as a comprehensive provider of individual healthcare services, including inpatient, outpatient, and emergency care. In fulfilling this function, the institution must be supported by a good human resource, and nurses are one of the workforces contributing significantly to healthcare services in hospitals. Management elements within the hospital are part of the hospital organization that supports the performance of nurses in providing nursing care to improve hospital organization performance (Janerka et al., 2023).

Performance as the result of individual or group activities within an organization is crucial, indicating the success of management systems implementation. Successful performance will demonstrate the quality of nursing care provided by nurses to patients (Iannazzo et al., 2019). However, when the high number of patients leads to an increased workload for nurses, this will result in stress on the nurses. High workload can lead to the emergence of stress or burnout syndrome among nurses, with burnout syndrome being viewed as a three-dimensional syndrome causing emotional exhaustion, depersonalization, and a decrease in personal achievement (Janerka et al., 2023; Soto-Castellón et al., 2023).

How to Cite:

Kumajas, L., & Wardhaningsih, S. (2024). The Influence of Mindfulness Therapy on Nurse Stress in Hospitals. *Jurnal Penelitian Pendidikan IPA*, 10(11), 799–805. <https://doi.org/10.29303/jppipa.v10i11.9339>

Emotional exhaustion is a state of feeling drained and emotionally depleted due to accumulated stress from personal or work life challenges. Depersonalization is a psychological experience where one feels detached from oneself or perceives oneself or one's experiences as unreal, strange, or foreign, leading to the development of cynical attitudes and reactions, accompanied by easily getting offended and decreased motivation (Mahamud & Ludin, 2021). Decreased personal achievement occurs when someone has negative views about themselves, with a lack of satisfaction and a feeling that their work is not appreciated, thus leading to a decrease in the quality of nurses in providing nursing care to patients (Wei et al., 2022).

The percentage of nurses worldwide suffering from stress is quite high (9.20% - 68.0%); specifically, 20% to 40% of nurses suffer from WRS. In nurses from 41 hospitals in Shanghai, China, 74.8% of nurses suffer from WRS. Nearly three-quarters of nurses in Australia report "very high" or "quite high" levels of stress. In India, 87.6% of nurses experience stress, and 2.1% report severe stress. In Dubai, 95% of nurses experience various levels of stress, and 86% of them are under 36 years old (Al-Yaqoubi, 2023).

Based on field observations of increasing stress among nurses or burnout syndrome due to high workload, this high workload is caused by the high number of patients and inadequate human resources, requiring more performance in handling these patients (Khamisa et al., 2015). In addition, stress occurs due to personal problems that are reluctant to be communicated or shared, thus affecting the quality of nursing care provided to patients (Ghezalje et al., 2021; Kwame & Petrucka, 2021). Some of them become quiet, sensitive, and easily irritable. Addressing nurse stress in performing their duties requires attention from hospital management in reducing stress levels among nurses (Babapour et al., 2022; Yang et al., 2021).

Healthcare professionals encounter challenges in their roles that pose risks to their physical and mental well-being. Stress can lead to various issues, including anxiety, depression, substance abuse, sleep disturbances, strained personal relationships, reckless behavior, stress-related health complications, and potentially suicide. Persistent stress can result in fatigue, characterized by emotional exhaustion, depersonalization, and a decline in personal fulfillment. The combination of stress and fatigue among healthcare workers may diminish job performance, reduce job satisfaction, lower patient satisfaction, and compromise the quality of patient care (Ameli et al., 2020; Atalaya et al., 2021).

Mindfulness is the ability or skill used to remain focused and aware of an experience (Thera, 2024). At the

individual level, mindfulness-based interventions, among other benefits, have gained recognition as an effective method for reducing stress, anxiety, and fatigue. In facing the complex challenges of stress in the workplace, especially for nurses in hospitals, it is important to consider effective intervention strategies. Through this research, we have explored the positive impact of Mindfulness Therapy as a tool for managing stress among nurses.

The background description above indicates that the implementation of Mindfulness Therapy can significantly reduce the level of stress experienced by nurses in the hospital environment. By focusing on self-awareness and breathing regulation, nurses can experience an increase in their ability to manage the daily pressures associated with their duties. As researchers, we emphasize the importance of conducting studies on "The Influence of Mindfulness Therapy on Nurse Stress in Hospitals" to further explore and implement strategies like Mindfulness Therapy in efforts to improve nurse well-being and support optimal performance in providing quality healthcare to their patients. The aim of this study is to investigate the influence of Mindfulness therapy on nurse stress in hospitals, enabling nurses to comprehend the effectiveness of Mindfulness therapy in reducing stress in hospital environments.

Method

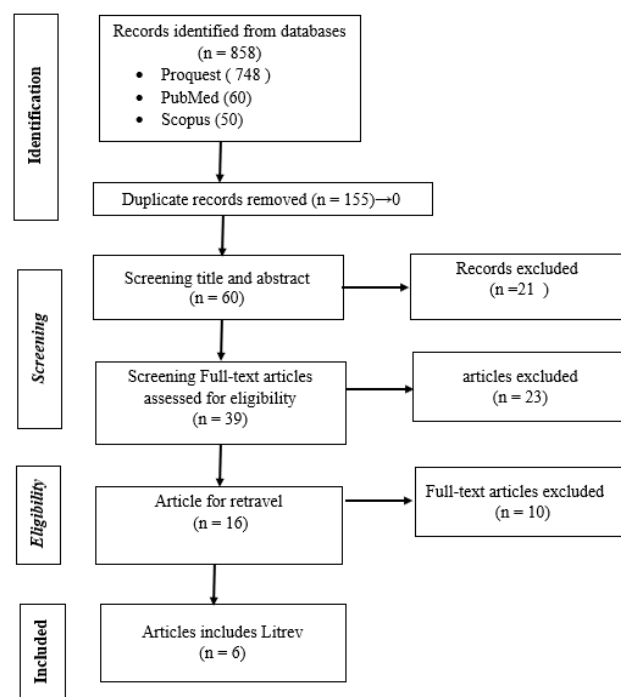


Figure 1. Diagram prisma

We used a literature review approach to describe the influence of mindfulness therapy on nurse stress in

hospitals. The search strategy involved seeking articles related to mindfulness therapy to reduce stress levels among nurses. Databases utilized were Proquest, PubMed, and Scopus using "AND" as the connector. With various approaches and methods of mindfulness training, the research results generally indicated a significant decrease in nurse stress levels in the hospital environment.

Articles were selected based on inclusion and exclusion criteria, where inclusion criteria spanned from 2018 to 2023, in English, and the respondents were professional healthcare workers, including nurses. Duplicate articles were checked to remove duplicates, screened based on title and abstract, and then proceeded to full-text article screening. Articles meeting the criteria were selected, while exclusion criteria included articles with incomplete or unclear research methodology or articles presented only in abstract form. Article sorting was done using the PRISMA flowchart in Figure 1.

Result and Discussion

Table 1. Data Extraction

Title	Autor (Years)	Purpose	Method	Result
Comparison of mindfulness interventions for healthcare professionals: A mixed-methods study	Morrow et al. (2022)	To investigate the influence of Mindfulness intervention on fatigue, perceived stress, and healthcare professionals.	Desain: Metode Campuran Sampel: 86 health care workers termasuk perawat Intervensi: Program Intervensi Berbasis Kesadaran (MBI) selama 8 minggu	The mindfulness intervention (MBI) in this study is effective in reducing fatigue and stress..
The Effect of a Mindfulness-Based Intervention on Nurses in Kelantan, Malaysia	Fadzil et al. (2021)	To explore the effectiveness of mindfulness-based interventions in reducing perceived stress, anxiety, and depression among nurses in general hospital settings.	Design: Quantitative (Pre-post test) Sample: 35 Nurses Intervention: A one-day MBI workshop followed by 1-hour group practice sessions over a period of 3 months.	Mindfulness-Based Intervention (MBI) is effective in reducing perceived stress and anxiety among nurses.
Effects of Mindfulness-Based Stress Reduction Training on Healthcare Professionals' Mental Health: Results from a Pilot Study Testing Its Predictive Validity in a Specialized Hospital Setting	Janssen et al. (2020)	To evaluate the feasibility and acceptance of Mindfulness-Based Stress Reduction (MBSR) training and to test mental health variables focusing on both positive and negative symptoms.	Design: Non-randomized pre-post intervention pilot study. Sample: 30 healthcare professionals, including nurses. Intervention: Mindfulness-Based Stress Reduction (MBSR) training. Consists of 8 sessions of 2.5 hours each and one full-day silent retreat during working hours. Participants are also required to engage in 45 minutes of daily home practice, six days per week, with guided CD support	Mindfulness-Based Stress Reduction (MBSR) can help improve the mental health of healthcare professionals.

The articles generated from the three databases amounted to 858 articles. The results indicated that 6 articles were reviewed using mindfulness therapy to reduce stress levels. The total participants were 308 from all articles, comprising nursing and other medical staff. Nurses and other medical staff have received mindfulness therapy.

The research demonstrates that Mindfulness therapy has benefits in reducing nurse stress levels (Green & Kinchen, 2021; Ruiz-Fernández et al., 2020; Wexler & Schellinger, 2023). Some articles highlight consistency in results supporting the efficacy of mindfulness therapy. It was found that mindfulness interventions for healthcare workers resulted in increased effectiveness in reducing perceived stress and fatigue, with various aspects of full attention and varied durations of mindfulness intervention (four weeks or eight weeks). The importance of nurse stress management will positively impact performance, job satisfaction, and the quality of care provided to patients.

Title	Autor (Years)	Purpose	Method	Result
Effect of a Brief Mindfulness-Based Program on Stress in Health Care Professionals at a US Biomedical Research Hospital A Randomized Clinical Trial	Ameli et al., 2020)	The aim of this study is to evaluate the effectiveness of mindfulness-based interventions (MBIs) in reducing stress, anxiety, and fatigue among healthcare professionals, particularly nurses.	Design: Randomized Controlled Trial (RCT) Sample: 33 in the MBSC group and 35 in the control group. Intervention: MBSC with 5 training sessions per week, each lasting 1.5 hours.	Mindfulness-Based Stress Cognitive (MBSC) is effective in reducing stress among healthcare professionals.
Effectiveness of a Mindfulness and Self-Compassion Standard Training Program versus an Abbreviated Training Program on Stress in Tutors and Resident Intern Specialists of Family and Community Medicine and Nursing in Spain	Atalaya et al. (2021)	To compare the effectiveness of a 4-week abbreviated Mindfulness-Based Self-Care (MBSC) program with a standard 8-week program in reducing stress levels among healthcare professionals.	Design: Study using controlled and randomized clinical trial design Sample: 112 consisting of tutors, resident trainees, Family and Community Medicine, and Nursing in Spain. Intervention: Involves two different mindfulness-based self-care training programs (MBSC): a standard 8-week program and a abbreviated 4-week program.	Standard 8-week Mindfulness-Based Stress Reduction (MBSR) training results in significant improvement in stress levels compared to brief interventions.
Mindful Self-Compassion Training and Nephrology Nurses' Self-Reported Levels of Self-Compassion, Burnout, and Resilience: A Mixed Methods Study	Crandall et al. (2022)	The aim of this study is to explore the effects of Mindful Self-Compassion (MSC) training on levels of self-compassion, fatigue, and resilience among nephrology nurses, and to determine whether the MSC training program could be an effective therapy for sustaining the health of nursing staff.	Design: Studi metode campuran (Mix methods study) Sample: 12 Nephrology Nurses Intervention: An 8-week Mindful Self-Compassion (MSC) program (Kabat-Zinn), consisting of a one-day workshop and 1-hour group breathing exercises.	The 8-week Mindful Self-Compassion (MSC) program is effective in increasing levels of self-compassion, attention, and resilience among nephrology nurses.

Discussion

The purpose of mindfulness therapy is to evaluate its effectiveness in reducing perceived stress and fatigue levels (Oró et al., 2021; van der Meulen et al., 2021). The description of mindfulness therapy, which is an effective method for reducing stress and fatigue among healthcare workers, involves various aspects of full attention interventions and varied durations of mindfulness intervention. Based on a literature review, mindfulness techniques applied include deep breathing exercises, meditation, yoga, mindful breathing focusing on the breath as a way to anchor attention, body scanning bringing awareness to various parts of the body, observing sensations without judgment, mindful movement engaging in gentle movements with full attention and awareness. Additionally, loving-kindness meditation to cultivate feelings of compassion and kindness towards oneself and others, and techniques teaching individuals to be self-compassionate and

compassionate towards themselves (Kumajas & Wardhaningsih, 2024; Oducado, 2021)

There were no differences in observation outcomes between different mindfulness intervention sessions. Participants in the MBI group showed statistically significant improvements in terms of fatigue and perceived stress in post-course surveys. Several domains of mindfulness also showed statistically significant improvements (awareness, non-reactivity, and observation) (Morrow et al., 2022). There was a statistically significant decrease in perceived stress scores ($P=0.04$) and anxiety ($P=0.04$) post-intervention (Fadzil et al., 2021). Other research using a randomized controlled trial approach indicates that awareness, fatigue, stress levels, sleep quality, positive workplace emotions, negative workplace emotions, self-efficacy, and worry are meaningful mental health variables suitable for large-scale RCTs investigating the impact of MBSR (Janssen et al., 2020). Previous research by

Crandall et al. (2022) using a mixed-methods approach indicates that an 8-week MSC program is an effective intervention for nephrology nurses. The MSC training program significantly increased compassion, attention, and resilience reported by nurses, while reducing work-related stress and fatigue (Ameli et al., 2020).

In a randomized controlled clinical trial, the research results by Atalaya et al. (2021) for a brief training program on stress levels with a comparison of an 8-week standard MBSR training program showed no significant impact of the short training compared to the 8-week MBSR training program.

The effectiveness of the 8-week MBRS program and self-compassion training programs for healthcare workers has been demonstrated in some studies. Atalaya et al. (2021) the effectiveness of these interventions in reducing stress and fatigue levels among primary care practitioners was examined. Despite the limited response to these initiatives, there is a proposal for an increase in mindfulness and self-compassion practices in healthcare settings. Several authors have analyzed the effectiveness of shortened training programs, lasting 3, 4, or 5 weeks, all confirming that these condensed interventions significantly reduce stress levels. There is a critical necessity to expand research on short-term programs that improve the psychological well-being of healthcare professionals, evaluate cost-effectiveness, and incorporate these initiatives into policies to ensure long-term compliance and benefits.

Research by Lin et al. (2019) In this study, a randomized controlled trial (RCT) was conducted, employing both within-group and between-group comparisons, to assess the impact of a modified Mindfulness-Based Stress Reduction (MBSR) program. The findings revealed that this program effectively enhances stress levels, mood, and mental resilience among nurses working in Chinese hospital settings. Moreover, it suggests that the program holds promise in boosting nurses' job satisfaction. While further research is warranted, these findings carry implications for nursing practice and education. Firstly, as a proven method for stress reduction and health enhancement, modified MBSR programs or similar Mindfulness-Based Interventions (MBIs) could be incorporated into short- or long-term health promotion plans for nurses. Secondly, nursing educators should acknowledge the significance of self-awareness and incorporate it into the nursing curriculum, thereby aiding in enhancing mental resilience among nursing students as they transition into clinical settings (Wu et al., 2021).

Several studies have shown that Mindfulness Therapy is effective in reducing stress levels and improving mental well-being. This applies not only to the general population but also to healthcare

professionals such as nurses. By focusing on self-awareness and breath regulation, Mindfulness Therapy helps nurses develop skills to cope with pressure more calmly and effectively. As part of a stressful work environment, nurses often experience high levels of stress due to heavy work demands and stressful situations (Handayani et al., 2021). Mindfulness Therapy provides useful tools for nurses to manage this stress positively. With regular practice, they can learn to respond to stress more flexibly and reduce its negative impact on their well-being. In addition to reducing stress, Mindfulness Therapy has also been shown to improve overall mental well-being. By increasing self-awareness, acceptance, and inner peace, nurses can experience increased job satisfaction, motivation, and mental resilience in facing daily challenges in dynamic work environments (Faridah et al., 2022; Janssen et al., 2020)

One of the main advantages of Mindfulness Therapy is its practical application in everyday life. Nurses can easily integrate mindfulness exercises into their routines, both at work and outside of work. Simple techniques such as breathing meditation or mindful observation can be used as effective tools to alleviate stress whenever needed. While Mindfulness Therapy can be a beneficial tool for nurses in managing stress, it is important to recognize.

Conclusion

Mindfulness Therapy shows significant potential in reducing stress levels among nurses in hospital environments. Various mindfulness techniques, such as meditation, yoga, and breathing exercises, have proven effective in helping nurses better manage stress. Studies indicate that participation in mindfulness therapy programs, such as MBSR (Mindfulness-Based Stress Reduction) or MSC (Mindful Self-Compassion), consistently results in significant reductions in perceived stress and fatigue levels among nurses. Taking all these factors into consideration, it can be concluded that Mindfulness Therapy offers an effective and practical approach to reducing stress and improving the mental well-being of nurses in hospital work environments. Integrating Mindfulness Therapy with appropriate institutional support can help create a healthier and more productive work environment for healthcare professionals.

Acknowledgments

Thank you to all parties who have supported and been involved in this research.

Author Contributions

This article was written by two authors, namely L. K and S. W. All authors worked together at every stage of the writing of this article.

Funding

This research was independently funded by the researchers.

Conflicts of Interest

The authors declare no conflict of interest.

References

- Al-Yaqoubi, S. (2023). Exploring Work-Related Stress and Coping Strategies among Omani Nurses Working in Tertiary Governmental Hospitals at Muscat: A Cross-Sectional Study. *Open Journal of Nursing*, 13(06), 368-385. <https://doi.org/10.4236/ojn.2023.136025>
- Ameli, R., Sinaii, N., West, C. P., Luna, M. J., Panahi, S., Zoosman, M., Rusch, H. L., & Berger, A. (2020). Effect of a Brief Mindfulness-Based Program on Stress in Health Care Professionals at a US Biomedical Research Hospital: A Randomized Clinical Trial. *JAMA Network Open*, 3(8), 2013424. <https://doi.org/10.1001/jamanetworkopen.2020.13424>
- Atalaya, J. C. V. M., Pérula-de Torres, L. Á., Lietor-Villajos, N., Bartolomé-Moreno, C., Moreno-Martos, H., Rodríguez, L. A., Grande-Grande, T., Pardo-Hernández, R., León-del-Barco, B., Santamaría-Peláez, M., Mínguez, L. A., González-Santos, J., Soto-Cámara, R., & González-Bernal, J. J. (2021). Effectiveness of a Mindfulness and Self-Compassion Standard Training Program versus an Abbreviated Training Program on Stress in Tutors and Resident Intern Specialists of Family and Community Medicine and Nursing in Spain. *International Journal of Environmental Research and Public Health*, 18(19). <https://doi.org/10.3390/ijerph181910230>
- Babapour, A.-R., Gahassab-Mozaffari, N., & Fathnezhad-Kazemi, A. (2022). Nurses' job stress and its impact on quality of life and caring behaviors: A cross-sectional study. *BMC Nursing*, 21(1), 75. <https://doi.org/10.1186/s12912-022-00852-y>
- Crandall, J., Harwood, L., Wilson, B., & Morano, C. (2022). Mindful Self-Compassion Training and Nephrology Nurses' Self-Reported Levels of Self-Compassion, Burnout, and Resilience: A Mixed Methods Study. *Nephrology Nursing Journal*, 49(5). <https://doi.org/10.37526/1526-744x.2022.49.5.405>
- Fadzil, N. A., Heong, W. O., Kueh, Y. C., & Phang, C. K. (2021). The Effect of a Mindfulness-Based Intervention on Nurses in Kelantan, Malaysia. *The Malaysian Journal of Medical Sciences : MJMS*, 28(6), 121-128. <https://doi.org/10.21315/mjms2021.28.6.12>
- Faridah, I., Afiyanti, Y., Damayanti, T., & Tangerang, S. Y. (2022). Pengaruh Aplikasi Mobile Mindfulness (MM) Terhadap Stres Kerja Perawat Influence of Mobile Mindfulness (MM) App on Nurse's Work Stress. *Nusantara Hasana Journal*, 1(8). Retrieved from <https://www.nusantarahasanaajournal.com/index.php/nhj/article/view/214>
- Ghezalje, T. N., Farahani, M. A., & Ladani, F. K. (2021). Factors affecting nursing error communication in intensive care units: A qualitative study. *Nursing Ethics*, 28(1), 131-144. <https://doi.org/10.1177/0969733020952100>
- 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. <https://doi.org/10.1177/08980101211015818>
- Handayani, P. A., Dwidiyanti, M., & Mu'in, M. (2021). Pengaruh Mindfulness Terhadap Tingkat Stres Pada Ibu Yang Bekerja Sebagai Perawat Critical Care. *Indonesian Journal of Nursing Research (IJNR)*, 4(1), 24. <https://doi.org/10.35473/ijnr.v4i1.879>
- Iannazzo, A., Lorenz, H., & McLaughlin, M. (2019). The Executive Nurse Leader in Service Line Management:: An Experience of a Hospital Health System. *Nurse Leader*, 17(5), 445-450. <https://doi.org/10.1016/j.mnl.2018.12.016>
- Janerka, C., Leslie, G. D., Mellan, M., & Arendts, G. (2023). Review article: Prehospital telehealth for emergency care: A scoping review. *EMA - Emergency Medicine Australasia*, 35(4), 540-552. <https://doi.org/10.1111/1742-6723.14224>
- Janerka, C., Mellan, M., Wright, R., Gill, F. J., & Leslie, G. D. (2023). Nursing and midwifery research priorities for an Australian health service: A priority-setting partnership approach. *Collegian*, 30(5), 693-700. <https://doi.org/10.1016/j.colegn.2023.08.004>
- Janssen, M., Heijden, B., Engels, J., Korzilius, H., Peters, P., & Heerkens, Y. (2020). Effects of mindfulness-based stress reduction training on healthcare professionals' mental health: Results from a pilot study testing its predictive validity in a specialized hospital setting. *International Journal of Environmental Research and Public Health*, 17(24), 1-14. <https://doi.org/10.3390/ijerph17249420>
- Janssen, M., van der Heijden, B., Engels, J., Korzilius, H., Peters, P., & Heerkens, Y. (2020). Effects of mindfulness-based stress reduction training on healthcare professionals' mental health: Results from a pilot study testing its predictive validity in a specialized hospital setting. *International Journal*

- of *Environmental Research and Public Health*, 17(24), 1–14. <https://doi.org/10.3390/ijerph17249420>
- Khamisa, N., Oldenburg, B., Peltzer, K., & Ilic, D. (2015). Work related stress, burnout, job satisfaction and general health of nurses. *International Journal of Environmental Research and Public Health*, 12(1), 652–666. <https://doi.org/10.3390/ijerph120100652>
- Kumajas, L., & Wardhaningsih, S. (2024). The Influence of Mindfulness Therapy on Nurse Stress in Hospitals. *Indonesian Journal of Global Health Research*, 6(5), 2489–2496. Retrieved from <https://jurnal.globalhealthsciencegroup.com/index.php/IJGHR/search/search>
- Kwame, A., & Petrucka, P. M. (2021). A literature-based study of patient-centered care and communication in nurse-patient interactions: barriers, facilitators, and the way forward. *BMC Nursing*, 20(1), 158. <https://doi.org/10.1186/s12912-021-00684-2>
- Lin, L., He, G., Yan, J., Gu, C., & Xie, J. (2019). The Effects of a Modified Mindfulness-Based Stress Reduction Program for Nurses: A Randomized Controlled Trial. *Workplace Health and Safety*, 67(3), 111–122. <https://doi.org/10.1177/2165079918801633>
- Mahamud, N., & Ludin, S. M. (2021). The prevalence of burnout syndrome among critical care nurses in a tertiary hospital in Pahang, Malaysia. *Enfermería Clínica*, 31, S334–S338. <https://doi.org/10.1016/j.enfcli.2020.09.023>
- Morrow, E. H., Mai, T., Choi, B., Gu, L. Y., Thielking, P., Sandweiss, D., & Qeadan, F. (2022). Comparison of mindfulness interventions for healthcare professionals: A mixed-methods study. *Complementary Therapies in Medicine*, 70, 102864. <https://doi.org/10.1016/j.ctim.2022.102864>
- Oducado, R. M. F. (2021). Gender differences in COVID-19 anxiety syndrome among Filipino nursing students. (*JKG*) *Jurnal Keperawatan Global*, 1–8. <https://doi.org/10.37341/jkg.v0i0.170>
- Oró, P., Esquerda, M., Mas, B., Viñas, J., Yuguero, O., & Pifarré, J. (2021). Effectiveness of a mindfulness-based programme on perceived stress, psychopathological symptomatology and burnout in medical students. *Mindfulness*, 12, 1138–1147. <https://doi.org/10.1007/s12671-020-01582-5>
- Ruiz-Fernández, M. D., Ortiz-Amo, R., Ortega-Galán, Á. M., Ibáñez-Masero, O., Rodríguez-Salvador, M. del M., & Ramos-Pichardo, J. D. (2020). Mindfulness therapies on health professionals. *International Journal of Mental Health Nursing*, 29(2), 127–140. <https://doi.org/10.1111/inm.12652>
- Soto-Castellón, M. B., Leal-Costa, C., Pujalte-Jesús, M. J., Soto-Espinosa, J. A., & Díaz-Agea, J. L. (2023). Subjective mental workload in Spanish emergency nurses. A study on predictive factors. *International Emergency Nursing*, 69, 101315. <https://doi.org/10.1016/j.ienj.2023.101315>
- Thera, N. (2024). *The power of mindfulness*. Fivestar.
- van der Meulen, R. T., Valentin, S., Bögels, S. M., & de Bruin, E. I. (2021). Mindfulness and self-compassion as mediators of the Mindful2Work Training on perceived stress and chronic fatigue. *Mindfulness*, 12, 936–946. <https://doi.org/10.1007/s12671-020-01557-6>
- Wei, H., Aucoin, J., Kuntapay, G. R., Justice, A., Jones, A., Zhang, C., Santos, H. P., & Hall, L. A. (2022). The prevalence of nurse burnout and its association with telomere length pre and during the COVID-19 pandemic. *PLoS ONE*, 17(3 March), 1–14. <https://doi.org/10.1371/journal.pone.0263603>
- Wexler, T. M., & Schellinger, J. (2023). Mindfulness-based stress reduction for nurses: an integrative review. *Journal of Holistic Nursing*, 41(1), 40–59. <https://doi.org/10.1177/08980101221079>
- Wu, X., Hayter, M., Lee, A. J., & Zhang, Y. (2021). Nurses' experiences of the effects of mindfulness training: A narrative review and qualitative meta-synthesis. *Nurse Education Today*, 100(October), 104830. <https://doi.org/10.1016/j.nedt.2021.104830>
- Yang, T., Jin, X., Shi, H., Liu, Y., Guo, Y., Gao, Y., & Deng, J. (2021). Occupational stress, distributive justice and turnover intention among public hospital nurses in China: a cross-sectional study. *Applied Nursing Research*, 61, 151481. <https://doi.org/10.1016/j.apnr.2021.151481>