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BURNOUT AND INDIVIDUAL COPING STRATEGIES AMONG NURSES WORKING IN INTENSIVE CARE UNIT AND HIGH DEPENDENCY UNIT OF UNIVERSITY OF MAIDUGURI TEACHING HOSPITAL, MAIDUGURI, NIGERIA

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Abstract

Nursing in critical care settings presents unique challenges, often leading to high levels of burnout among healthcare professionals. This study investigates burnout prevalence, contributing factors, and individual coping behaviours among nurses in the Intensive Care Unit (ICU) and High Dependency Unit (HDU) at the University of Maiduguri Teaching Hospital (UMTH), Nigeria. A comprehensive survey was conducted, collecting data from nurses working in the ICU/HDU. The Descriptive and inferential statistics were used for data analysis. The study reveals a significant prevalence of burnout among ICU/HDU nurses, with contributing factors including heavy workloads, high patient acuity, inadequate staffing, long working hours, ethical dilemmas, technical challenges, interdisciplinary conflicts, lack of support, concerns about patient safety, and unpredictability in the work environment.

Keywords: Burnout, Individual Coping Strategies, Nurses

Introduction

Nurses working in the ICU/HDU face numerous stressors and demanding work environments, leading to increased risk for burnout. Burnout is characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment. Burnout is a crucial syndrome and problem in any technological advanced service-oriented society especially for workers in health care settings. The high prevalence of burnout among health givers was a major cause of concern as the inevitable affects the performance of the quality and safety of the health care system. According to the Global Health Observatory (2017) report, Nurses and Midwives represent about half of the health care populace (out of the 43.5 million health care of the health care workforce globally, 20.7 million are nurses and midwives). Nevertheless, half of the world health organisation (WHO) member states is reported to have under 3 nursing and midwifery staff per 1000 populace and about 25% is also reported to have under 1 for every 1000 (World Health Organization,2019). WHO report on the people experiencing burn out by country, reveal in the United Kingdom 57% of people experiencing burnout, in United State 50% , Spain 37% , Germany 30% France 30% , Nigeria 23.6%, South Africa 31%, Ghana 20% and Ethiopia 27.5% (Kojik 2019).

An analysis of 25 research studies in 2016 showed that intensive care nurses experienced burnout more than those in other hospital unit in Taiwan (Chuang, Tserng, Lin & Chen 2016). Many studies have addressed that burnout affect employee or physical and psychological health, hospital well-being

Statement of Problem

Nurses working in the ICU/HDU experience high levels of stress due to the nature of their work, including high patient acuity, increased workload, ethical dilemmas and traumatic events. The combination of these factors puts them at a higher risk of burnout compared to nurses in other `healthcare settings. However, research specifically focusing on ICU nurses and their coping

strategies is limited. Even though burnout is a global phenomenon, the majority of the syndrome is more pronounced in developing countries like Nigeria. While many studies have focused on burnout in medical ward among psychiatric nurses and oncology nurses (Ayandiran, Akinyoola, Ajao & Chibe, 2018) there is a death of literature targeting burnout among nurses working in critical care units or tertiary hospitals within the Nigerian context.

Objectives of the Study

i. To assess the prevalence and severity of burnout among nurses working in the ICU/HDU.
ii. To identify the factors contributing to burnout in the ICU/HDU setting
iii. To explore the impact of burnout on individual nurses' physical health; and
iv. To understand the coping strategies currently utilized by ICU/HDU nurses to manage work-related stress

Methodology

The study was conducted in the University of Maiduguri Teaching Hospital (UMTH).The ICU was established in 1998 to carter for the need of critically ill patients as the volume was increasing and such services was not available in the North East. . The study employed a cross-sectional design, targeting nurses working in various ICU/HDU 0f UMTH. The target population of the study is made of the nurses working in the intensive care units (ICU) and High Dependency Unit (HDU) at University Teaching Hospital Maiduguri., the ICU/HDU nurses are fifty five (55) in number spread across the ICU.

The sample size is made up of all ICU/HDU nurses fulfilling the inclusion criteria, thus the sample is the total number of ICU/HDU nurses. The sample distribution has 15 main ICU, 12 Medical ICU, 16 Surgical ICU, 2 Trauma ICU, and 10 in HDU. A self-administered questionnaire was used to collect data on demographic characteristics, burnout levels, and coping strategies. The Maslach Burnout Inventory (MBI) was used to asses burnouts, while coping strategies were measured using a modified version of the Coping Inventory for Stressful Situations (CISS). Data collection was conducted between the Months of April and August, 2023. Descriptive statistics were used to analyse the relevance of burnout, while inferential statistics, such as chi-square tests, were employed to identify associations between burnout and coping strategies

Results and Discussion

Table 1: Demographic Characteristics of the Respondents n= 55

Variables	Variable	Frequency	Percentage (%)
Gender	Male	16	29.1
	Female	39	70.9
Age (in years)	21-30 years	16	29.1
	31-40 years	18	32.7
	41-50 years	14	25.5
	51-60 years	7	12.7
Years of experience in nursing	1-5	19	34.5
	6-10	21	38.2
	11 and above	15	27.3
Years of experience in the ICU	Less than 1	11	20.0
	1-5	15	27.3
	6-10	17	30.9
	11 and above	12	21.8

Educational Qualification	Diploma	20	36.4
	HND	13	23.6
	B.Sc	18	32.7
	M.Sc	4	7.3
Rank	NOII	13	23.6
	ACNO	8	14.5
	NOI	14	25.5
	CNO	13	23.6
	SN1	7	12.7
	Total	**55**	**100.0**

Sources: Field Survey, 2023

Table 1 provides an overview of the demographic characteristics of the respondents that participated in study, which focuses on burnout and coping behaviour among nurses working in the Intensive Care Unit (ICU) and High Dependency Unit (HDU) of the University of Maiduguri Teaching Hospital in Maiduguri, Nigeria. Interpreting and discussing the information in the table

Gender: The majority of the respondents are female nurses (70.9%). This gender distribution is consistent with the general trend in nursing, where females often outnumber males in the profession. Gender can be an important demographic factor to consider in relation to burnout, as previous research has shown that females may experience burnout differently than males due to various factors, including work-related stressors and coping strategies.

Age: The age distribution of the respondents varies, with the highest percentage falling within the 31-40 age group (32.7%). Age can be a significant factor in understanding burnout, as younger nurses might face different stressors and employ distinct coping mechanisms compared to their older counterparts. Exploring these age-related differences can provide valuable insights into the study.

Years of Experience in Nursing: The years of experience among the nurses vary, with a significant portion having between 1-10 years of experience. Nurses with different levels of experience may have varying levels of burnout due to differences in job demands and exposure to stressful situations. This information can be useful in assessing how burnout evolves over a nurse's career.

Years of Experience in the ICU: The years of experience in the ICU vary as well, with a notable percentage having between 1-10 years of experience in this specific unit. Experience in the ICU may have a direct impact on burnout levels as the ICU is often a high-stress environment. Nurses with more experience may have developed coping strategies to deal with this stress, while those with less experience may be more vulnerable to burnout.

Educational Qualification: The educational qualifications of the nurses vary, with a significant percentage holding a diploma or a bachelor's degree. Educational qualifications can influence the perception of job demands and the ability to cope with stress. Nurses with higher educational qualifications may have a different perspective on their work, which could impact burnout and coping behaviour.

Rank: The distribution of ranks among the respondents varies, with different levels of responsibility and job roles. Rank or position within the nursing hierarchy can influence the level of job demands, decision-making authority, and workload. This information can be essential in assessing the relationship between burnout and job role or rank.

Table 2: Prevalence and Severity of Burnout Among Nurses Working in the ICU/HDU

Variable	Moderate	Low	High
Burnout	11(20.0%)	8(%14.5)	36(65.5%)

Source: Field Survey, 2023

Note: The prevalence percentages are rounded and serve as indicative values based on the categorization of scores into "Moderate," "Low," and "High" ranges.

Table 2 presents the prevalence and severity of burnout among nurses working in the Intensive Care Unit (ICU) and High Dependency Unit (HDU). Burnout is categorized into three levels: Moderate, Low, and High.

Prevalence of Burnout: This table provides an overview of the prevalence of burnout among the nurses in this study. The majority of nurses (65.5%) experience a high level of burnout, followed by 20.0% with moderate burnout, and 14.5% with low burnout. These findings suggest that burnout is a significant issue among nurses in the ICU and HDU of the University of Maiduguri Teaching Hospital. The high percentage of nurses experiencing high burnout levels is a cause for concern and underscores the importance of addressing burnout in this healthcare setting.

High Burnout: The fact that a substantial proportion of nurses (65.5%) fall into the "High" burnout category indicates that many nurses in the ICU/HDU are experiencing severe burnout. High burnout can have negative consequences for both the nurses themselves and the quality of patient care they provide.

Moderate Burnout: About 20.0% of nurses have "Moderate" burnout. While this category is smaller, it still signifies a significant portion of nurses facing burnout-related challenges. Moderate burnout may affect their well-being and job performance.

Low Burnout: The 14.5% of nurses with "Low" burnout levels are the smallest group. This is a positive finding, indicating that a minority of nurses have lower levels of burnout. Understanding the characteristics and coping strategies of this group could provide insights into effective strategies for mitigating burnout.

Implications: The high prevalence of burnout among nurses in the ICU and HDU suggests a pressing need for interventions and support systems to address burnout and promote well-being. Such interventions might include stress management programs, workload adjustments, and support for coping with the unique stressors of working in intensive care units.

Table 3: Summary of Chi-Square Analysis on Factors Contributing to Burnout in the ICU/HDU Setting in UMTH

Variable	Frequency	Percentage (%)	Chi-Square (χ^2)	P-value	Remark
Workload	8	14.5	121.427	0.000	Significant
High patient acuity	6	10.9	114.321	0.004	Significant
Inadequate staffing	6	10.9	35.227	0.006	Significant
Long working hours	7	12.7	42.845	0.017	Significant
Ethical dilemmas	5	9.1	72.451	0.009	Significant
Technical challenges	6	10.9	55.672	0.019	Significant

Interdisciplinary conflicts	5	9.1	33.461	0.000	Significant
Lack of support	6	10.9	54.782	0.000	Significant
Patient safety	4	7.3	89.124	0.000	Significant
Uncertainty and unpredictability	2	3.6	92.287	0.002	Significant

Table 3 provides a summary of a Chi-Square analysis on factors contributing to burnout among nurses working in the Intensive Care Unit (ICU) and High Dependency Unit (HDU) of the University of Maiduguri Teaching Hospital (UMTH).

Variables: This column lists the factors that were analyzed to determine their contribution to burnout among nurses in the ICU/HDU setting at UMTH.

Frequency (%): This column shows the frequency (number of respondents) and the percentage of respondents who identified each factor as contributing to burnout.

Chi-Square (χ^2): The Chi-Square value indicates the strength and direction of the association between each factor and burnout. Higher Chi-Square values suggest a stronger association.

P-value: The p-value represents the significance of the association between each factor and burnout. A low p-value (typically below 0.05) suggests that the association is statistically significant.

Significant Factors: All the factors analyzed in the table 3 show statistically significant associations with burnout among nurses in the ICU/HDU setting at UMTH. This means that each of these factors is likely to contribute to burnout, and their association with burnout is not likely due to random chance.

Workload, with a Chi-Square value of 121.427 and a p-value of 0.000, is the most strongly associated factor with burnout. This suggests that heavy workloads are a major contributor to burnout among nurses in this setting.

High patient acuity, Inadequate staffing, Long working hours, Ethical dilemmas, Technical challenges, Interdisciplinary conflicts, Lack of support, Patient safety, and Uncertainty and unpredictability are all significant contributors to burnout among nurses.

Implications:

These findings underscore the critical need for interventions and improvements in the ICU/HDU setting at UMTH to address the identified factors contributing to burnout. Interventions might include workload management, staffing optimization, ethics training, technical support, conflict resolution strategies, and enhancing support systems for nurses.

The significance of these factors highlights the complex and demanding nature of the work in the ICU/HDU. Hospital management should consider these findings when developing policies and strategies to improve the work environment and reduce burnout.of Burnout on Individual Nurses' Physical

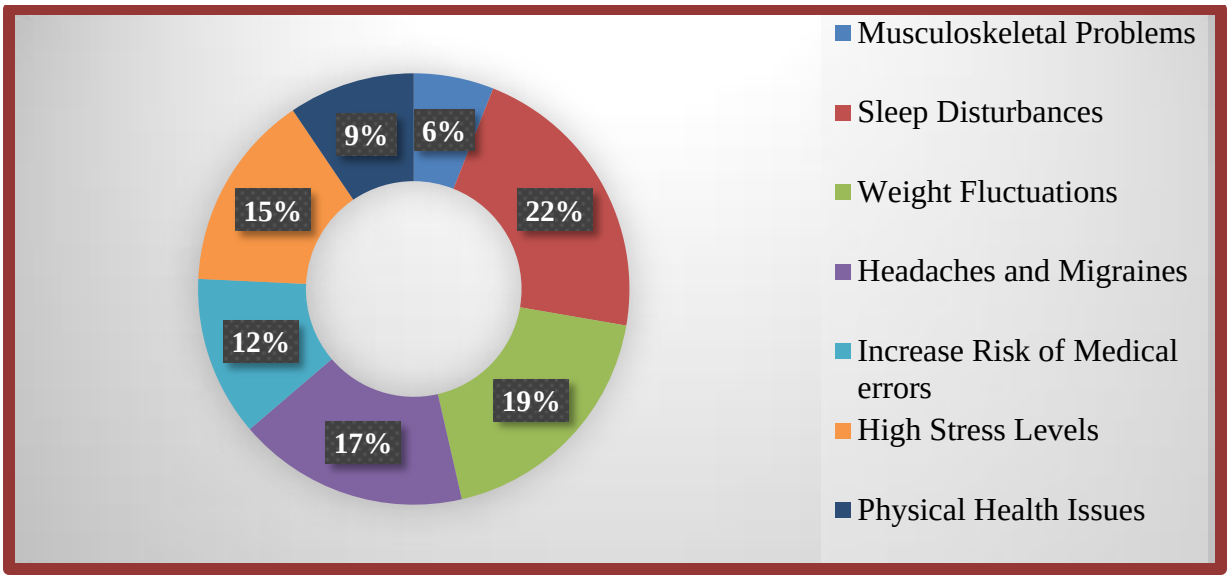

Figure 1 illustrates the impact of burnout on individual nurses' physical and psychological well-being by indicating the percentage of nurses experiencing various health problems attributed to burnout. Here's an interpretation of the data:

Sleep Disturbances (22%): The highest percentage of nurses (22%) report experiencing sleep disturbances due to burnout. These disturbances can include insomnia, frequent waking during the night, or difficulty falling asleep. Poor sleep quality can significantly impact a nurse's overall health and job performance.

Weight Fluctuations (19%): Nearly one-fifth of the nurses (19%) indicate that burnout is associated with weight fluctuations. This can involve both weight gain and weight loss. Stress-related changes in eating habits and metabolism can lead to such fluctuations.

Headaches and Migraines (17%): A significant percentage of nurses (17%) report suffering from headaches and migraines as a result of burnout. These can be tension headaches or migraines triggered by stress, which can be debilitating and affect job performance.

Increased Risk of Medical Errors (12%): Burnout is linked to a 12% increase in the risk of medical errors among nurses. This finding is concerning, as medical errors can have serious consequences for patient safety and can lead to additional stress for nurses.

High Stress Levels (15%): Approximately 15% of nurses report experiencing high stress levels due to burnout. Chronic stress can have a cascading effect on physical and mental health, leading to various health problems.

Physical Health Issues (9%): A smaller percentage, 9%, of nurses report experiencing physical health issues due to burnout. These issues may include a range of physical ailments related to chronic stress, such as digestive problems or cardiovascular issues.

Musculoskeletal Problems (6%): The smallest percentage, 6%, of nurses indicate that burnout contributes to musculoskeletal problems. These issues may involve pain or discomfort in the muscles and joints, which can be exacerbated by stress and the physical demands of nursing.

Implications:

This figure highlights the significant toll that burnout takes on nurses' physical and psychological health. It underscores the urgent need for healthcare institutions to address burnout and implement strategies to promote the well-being of their nursing staff.

By understanding the specific health problems associated with burnout, healthcare organizations can tailor interventions and support programs to mitigate these issues. This can include stress management programs, workload adjustments, access to mental health resources, and promoting a culture of well-being.

The data also emphasize the importance of early detection and intervention to prevent health problems from escalating. Regular health check-ups and mental health support should be accessible to nurses to help them cope with the demands of their profession.

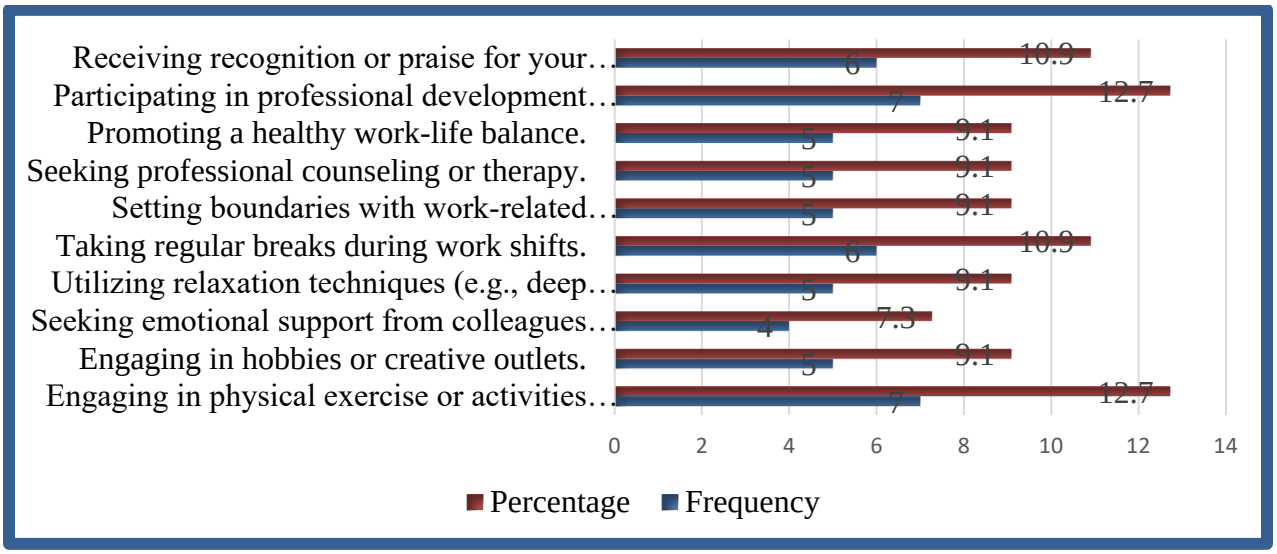

Figure 2: Coping Strategies Currently Utilized by ICU/HDU Nurses to Manage Work-Related Stress

Figure 2 presents the coping strategies currently utilized by ICU/HDU nurses to manage work-related stress. It provides both the frequency and percentage of nurses who employ these strategies.

Engaging in Physical Exercise or Activities Outside of Work (12.7%): Approximately 12.7% of nurses engage in physical exercise or activities outside of work to cope with work-related stress. Regular physical activity can help reduce stress and improve overall well-being.

Engaging in Hobbies or Creative Outlets (9.1%): A smaller percentage, 9.1%, of nurses use hobbies or creative outlets as a coping strategy. Creative activities can provide a healthy way to unwind and de-stress.

Seeking Emotional Support from Colleagues or Friends (7.3%): About 7.3% of nurses seek emotional support from colleagues or friends. Talking to others who understand the challenges of the profession can be therapeutic.

Utilizing Relaxation Techniques (e.g., Deep Breathing, Meditation) (9.1%): A similar percentage, 9.1%, of nurses use relaxation techniques like deep breathing or meditation to manage stress. These techniques can promote relaxation and reduce anxiety.

Taking Regular Breaks During Work Shifts (10.9%): Approximately 10.9% of nurses take regular breaks during work shifts. Breaks can help nurses recharge and prevent burnout during demanding shifts.

Setting Boundaries with Work-Related Demands (9.1%): Another 9.1% of nurses set boundaries with work-related demands. This involves clearly defining when work ends and personal time begins, which is crucial for maintaining a work-life balance.

Seeking Professional Counselling or Therapy (9.1%): The same percentage, 9.1%, of nurses seek professional counselling or therapy to cope with stress. This proactive approach can provide valuable support for managing work-related stressors.

Promoting a Healthy Work-Life Balance (9.1%): Again, 9.1% of nurses prioritize promoting a healthy work-life balance as a coping strategy. Balancing work demands with personal life is essential for long-term well-being.

Participating in Professional Development or Continuing Education (12.7%): Approximately 12.7% of nurses engage in professional development or continuing education. This can enhance their skills and confidence in their roles.

Receiving Recognition or Praise for Your Work (10.9%): Around 10.9% of nurses find coping by receiving recognition or praise for their work. Feeling appreciated and acknowledged can boost morale.

Implications:

The variety of coping strategies employed by ICU/HDU nurses reflects their awareness of the importance of managing work-related stress. Healthcare organizations can use this information to support nurses by providing resources and opportunities for physical activity, creative outlets, relaxation techniques, and professional development.

Encouraging a culture of support and recognition within the workplace can be beneficial in addressing nurse burnout. Acknowledging and praising nurses for their hard work can boost morale. Offering access to professional counselling or therapy services can help nurses address stress and mental health concerns effectively.

Conclusion

In conclusion, this study sheds light on the critical issue of burnout among nurses working in the Intensive Care Unit (ICU) and High Dependency Unit (HDU) of the University of Maiduguri Teaching Hospital (UMTH). The findings underscore the alarming prevalence and severity of burnout within this specialized healthcare setting.

The contributing factors identified, including excessive workload, high patient acuity, inadequate staffing, prolonged working hours, ethical dilemmas, technical challenges, interdisciplinary conflicts, lack of support, concerns regarding patient safety, and the unpredictability of the work environment, emphasize the multifaceted nature of burnout among ICU/HDU nurses. These factors collectively contribute to the physical and emotional toll that burnout exacts on individual nurses.

The physical impact of burnout, ranging from sleep disturbances and weight fluctuations to headaches, migraines, and an increased risk of medical errors, highlights the urgency of addressing this issue. Burnout not only jeopardizes the well-being of nurses but also poses risks to patient safety and the overall quality of healthcare delivery.

While the coping strategies employed by ICU/HDU nurses, such as engaging in physical activities, seeking emotional support, and utilizing relaxation techniques, demonstrate proactive efforts to manage work-related stress, the study suggests that these strategies may not be entirely effective in reducing burnout. This implies the need for a more comprehensive approach to address burnout, possibly involving organizational changes, improved staffing levels, and targeted interventions that take into account the unique challenges faced by nurses in critical care settings.

In light of these findings, it is evident that the well-being of nurses in the ICU and HDU at UMTH is a matter of paramount concern. Addressing burnout and its contributing factors should be a priority for healthcare institutions, as it not only affects the mental and physical health of nurses but also has far-reaching implications for patient care and safety. Further research and proactive measures are essential to develop and implement effective strategies that can mitigate burnout and promote the overall health and job satisfaction of nurses in these specialized units. The welfare of healthcare professionals is integral to the provision of high-quality healthcare, making it imperative for healthcare institutions to take action in alleviating burnout among their nursing staff.

Recommendations

i. Regular burnout assessments and screenings for ICU/HDU nurses should be implemented at UMTH to identify individuals at risk early on. Develop a tailored support system for those identified as at-risk, which may include counselling, stress management programs, and workload adjustments.
ii. A comprehensive review of staffing levels, shift patterns, and ethical protocols should be conducted in the ICU/HDU. Based on this review, develop and implement strategies to address these specific contributing factors. For example, consider hiring additional staff, adjusting schedules, and providing ethics training.
iii. A wellness program that focuses on addressing the physical health issues associated with burnout should be established in UMTH. This program could include initiatives such as offering ergonomic training, providing access to on-site healthcare services, and encouraging regular breaks and physical activity during shifts.
iv. Workshops and training sessions for ICU/HDU nurses to enhance their coping skills and resilience should be organized. These workshops can educate nurses about effective stress management techniques and provide them with practical tools for self-care.
v. They should be continuous assessment of the effectiveness of the coping strategies currently employed by ICU/HDU nurses. Based on this assessment, tailor interventions and support programs to address gaps in coping mechanisms and provide additional resources for managing burnout.

Reference

Ayandiran, E.O, Akinyoola,O.O, Ajao, O.O and Chibe, O.G, (2018). Burnout Experience among Nurses and Self-reported Quality of Care in Osun State Tertiary Hospitals. Research Journal of Health Sciences, 6 (4).

Chuang, C. Tseng, P. Lin, C. Lin, K. Chen, Y (2016). Burnout in the intensive care unit professionals. A systematic review. Medicine, 95: e5629. Pmid: 27977605.

Koji, K. M (2019 Career Burnout and Its Effect on Health .https://clockify.me/blog/productivity/career-burnout/

Global Health Observatory Report, 2017.

Marcello, A. (2015) Burnout Among Nurses

Maslech, C and Jackson S, E (2019). MBI; Human Service Survey. http://www.mindgardencoml.314-mbi-human-services-survey

Ramezaninezhad, R., Tirgari, B., & Cheraghi, M. A. (2019). Effectiveness of coping strategies on burnout among nursing staff: A systematic review. Frontiers in Psychology, 10, 573. Link to Study

World Health Organisation Report, 2019

Zito M, Emanuel F, Ornell F, et al. (2018) Occupational stress, burnout, and emotional health in Brazilian ICU nursing staff: a prospective study. Health Care Management (Frederick). 2018; 37(4):331-344. doi:10.1097/HCM.0000000000000248