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# Factors Contributing to Burnout among Nurses in Malaysia Public Hospital

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**Abstract**
The study examined the issue of nurses burden in a public hospital setting, to determine the relationship between demographic factors and burnout. The objective was to provide insights into the triggers of burnout, aiding nurses in mitigating mental health challenges. Using a quantitative approach, data from 282 nurses was collected through a structured questionnaire using a convenience sampling technique. Results showed a connection between demographic factors and burnout, with the duration of working experience and department significantly influencing the likelihood of burnout. The study revealed the importance of a supportive work environment for nurses, promoting well-being and enhancing patient care.

Keywords: nurse, burnout, factors

## 1.0 Introduction
Burnout, characterized by fatigue, cynicism, and inefficacy due to prolonged job pressures, is pervasive among healthcare professionals, exceptionally certified registered nurses (Leiter & Maslach, 2004, as cited by Suzuki et al., 2021). In nursing, burnout is marked by emotional exhaustion, depersonalization, and decreased personal achievement (Zavala et al., 2022). This research is focused on exploring the relationship between demographic factors contributing to burnout among nurses in Malaysia Public Hospital, addressing a critical concern that impacts both individual well-being and the quality of patient care. The World Health Organization (WHO) defines *burnout* as a syndrome resulting from chronic workplace stress, characterized by energy depletion, increased mental distance from one's job, and diminished professional efficacy (Diehl et al., 2021). The consequences of burnout on organizations are substantial, affecting concentration, time management, productivity, collaboration, and overall job satisfaction (Bakker, 2008, as cited by Kumareswaran et al., 2022).

In Malaysia, public hospitals are a significant component of the healthcare system, serving a large portion of the population. Nurses play a crucial role in these hospitals, providing direct patient care, assisting physicians, administering medications, and coordinating treatment plans (Zakaria et al., 2022). A study by Cheah et al. (2020) stated that Malaysian healthcare professionals are at an elevated risk of experiencing burnout, primarily attributed to extended work hours, inadequate familial support, and challenging work environments, all of which contribute to heightened levels of job dissatisfaction and a notable trend of workforce migration to foreign countries.

Contributing factors to burnout encompass organizational demographic variables, role stresses, and work-related stressors such as high workloads and a lack of control over work-related conditions (Vidotti et al., 2018; Schaufeli & Bakker, 2004; Kumareswaran et al., 2022). Empirical data strongly suggests that burnout is prevalent among nurses worldwide, ranging from 10% to 24.4%. Various demographic characteristics, including age, marital status, and shift work, have been found to influence the probability of experiencing burnout (Woo et al., 2020; Zakaria et al., 2022). A 12% increase in nurse turnover per unit and an increase in emotional exhaustion were indicators of a significant relationship between nurse burnout and organizational turnover in a study by Kelly et al. (2021). Francisco et al. (2020) emphasize the grave nature of the situation by demonstrating that a significant number of primary care nurses experience high emotional tiredness (38.2%), depersonalization (23.8%), and low personal accomplishment (7.7%). This underscores the urgent need to address burnout among these nurses. The issue is complex, encompassing the complicated interaction of demographic factors that contribute to burnout among nurses in one of the public hospitals in Malaysia. The current body of literature has thoroughly investigated burnout in the nursing field and emphasized its correlation with workload. However, more research is needed on the specific intricacies of this relationship with demographic factors, particularly within the distinct settings of Malaysian public hospitals. Therefore, the study aims to investigate the prevalence of burnout and its correlation with demographic factors among nurses working in a Malaysian public hospital. The study's objectives are to determine the workload and burnout levels among nurses while identifying the factors that contribute to these phenomena.

## 2.0 Literature Review

### 2.1 Factors influencing nurses workload
Hartini et al. (2022) defined workload as the combination of task quantity and complexity, encompassing the utilization of physical, mental, and time resources. This definition aligns with the broader perspective of workload as a complex interplay of demands on nursing professionals. Efforts have been dedicated to exploring the relationship between the volume of work and workload, emphasizing the importance of understanding the perceived connection between employees' capabilities and the required workload (Macphee et al., 2017). This substantial workload holds significant implications for the healthcare system, impacting nurse-patient ratios and serving as a crucial aspect of nursing literature associated with nurse and patient outcomes, as well as the overall quality of care (Idowu et al., 2022).

The nursing profession, known for its demanding nature, encounters unpredictable events such as patient emergencies, which significantly influence nursing workload (Fagerström & Vainikainen, 2014, as cited by Ivziku et al., 2022). Patient overload contributes to high nurse workload, resulting in fatigue and challenges in meeting their responsibilities (Pamungkas et al., 2022). The multifaceted nature of workload is further emphasized by research indicating that increased workload is linked to lower nurse performance, psychological stress, mental distraction, and fatigue, particularly during night shifts (Yosiana et al., 2020). This underscores the importance of considering temporal variations in workload and their impact on nursing outcomes.

Quantitative demands, which encompass excessive workloads and time pressure, are identified as significant factors influencing nurse workload according to the study by Diehl et al. (2021). Organizational factors, including staffing levels and resource availability, play a crucial role in shaping the workload experienced by nurses (Diehl et al., 2021). The increasing number of elderly patients and the escalating complexity of care significantly contribute to the challenges faced by nurses in managing their workload (Diehl et al., 2021). Diehl et al. (2021) stated palliative care has emerged as a distinctive factor influencing nurse workload, particularly in non-specialized settings like hospitals and nursing homes.

Ivziku et al. (2022) mentioned that both patient-related and workflow-related elements have a significant impact on nurses' perceived workload, highlighting the intricate dynamics involved. The study identifies several key elements influencing nursing workload, including patient acuity, staffing resources, patient transfers, documentation, patient isolation, unscheduled activities, and patient specializations (Ivziku et al., 2022). These findings underscore the complex interaction between determinants related to patients and those associated with workflow.

### 2.2 Burnout among nurses worldwide
Burnout is defined by emotional exhaustion, detachment from others, and diminished personal accomplishments. By embracing a worldwide viewpoint, we can establish the groundwork for a meticulous analysis of burnout within the particular framework of Malaysia. Nurse burnout is a pervasive issue that affects the physical and mental well-being of nurses worldwide. Teo et al. (2021) highlighted a notable prevalence of burnout, with 67.4% of advanced healthcare staff in Singapore reporting suffering burnout.

According to a study by Aiken et al. (2011) as cited by Udho and Kabunga (2022), 15% to 60% of nurses experience burnout. This is a critical concern in the field of global public health. Zavala et al. (2022) found that nurses are extremely prone to experiencing burnout. In Malaysia, Zakaria et al. (2022) conducted a significant study that unveiled a burnout prevalence of 24.4% among nurses employed in the Ministry of Health. Demographic factors, such as age, marital status, and job schedule, significantly influence the likelihood of suffering burnout. Particularly, nurses who are younger, single, and without children are more vulnerable to this issue (Zakaria et al., 2022).

Recent WHO classification of burnout as an "occupational occurrence" highlights its significance, with one-tenth of nurses globally experiencing severe burnout symptoms (Woo et al., 2020). Despite numerous studies explaining the detrimental effects of burnout on the nursing profession, particularly in the context of persistent work-related stress leading to exhaustion, cynicism, and diminished effectiveness (Leiter &Maslach, 2004; Suzuki et al., 2021), limited research has explored into the precise relationship between workload

and burnout impacting nurses performance (Diehl et al., 2021). Quantitative demands on workload have been linked to heightened burnout symptoms, resulting in adverse health outcomes for nurses (Diehl et al., 2021). Nurse burnout is a pervasive issue in healthcare systems worldwide, with implications for both the well-being of nurses and the quality of patient care. While numerous studies have explored burnout among nurses in various countries, there remains a need to examine this phenomenon within the specific context of Malaysian public hospitals (Cheah et al., 2020; Woo et al., 2020; Zakaria et al., 2022; Zavala et al., 2022).

Cheah et al. (2018) conducted a study examining burnout among nurses in Malaysian public hospitals and found that high workload and job stress were significant predictors of burnout. Additionally, cultural factors such as familial expectations and societal pressures may exacerbate burnout among Malaysian nurses (Abdullah et al., 2019). Despite these challenges, there remains a gap in the literature regarding the specific contextual factors influencing nurse burnout in Malaysia, highlighting the need for further research in this area.

## 3.0 Methodology

### 3.1 Setting and Design
The research was conducted at one of a Malaysian public hospital in Johor Bahru, specifically chosen for its dynamic environment and wide array of departments. The selection of this hospital as the research location is predicated on its extensive array of medical departments. Researchers have the opportunity to perform comprehensive studies inseveral areas of medicine, fostering cooperation across diverse domains and enhancing comprehension of healthcare challenges. The hospital had a workforce of more than 600 nurses whose grades were between U29 and U44. The hospital was selected based on factors such as ease of access, obtaining ethical approval, and the necessity of doing on-site data collection. The study employed a cross-sectional design and a structured questionnaire to investigate the correlation between the current workload and burnout among nurses within a specific period. This methodology facilitated a methodical examination of demographic attributes and their influence on burnout. Survey questionnaires were disseminated to all eligible nurses at the hospital to gather data.

### 3.2 Study Tools
In this study, two questionnaires will be used as research instruments: one adapted from NASA (2006) on the NASA-TLX workload index, which has been used in numerous studies since its inception, and one adapted from Kristensen et al. (2005) on the title The Copenhagen Burnout Inventory: A New Measurement Tool for Burnout.

### 3.3 Data Collection
Prior to commencing data collection, a pilot study involving 29 participants was carried out by the researchers. The pilot study, which encompassed 29 participants, represented a proportion of 10% of the total population being examined. The same research techniques and instruments were used in the preliminary investigation to maintain consistency in data collection methods. The analysis of Cronbach's alpha for the questionnaire yielded a value of $\alpha = 0.779$, indicating good internal consistency. The study received ethical approval from the UiTM Research Ethics Committee (REC) and Medical Research Ethics Committee (MREC), Ministry of Health, Malaysia. The researcher approached potential participants who met the specific research criteria and expressed willingness to participate. Detailed information about the research was provided to the eligible participants, and their consent was obtained. The questionnaire, requiring approximately 10 to 15 minutes for completion, was distributed to participants. Upon completion, the researcher collected the questionnaires from the participants.

### 3.4 Data Analysis
The gathered data underwent analysis through IBM Statistical Package for the Social Sciences (SPSS), version 28.0 software. Descriptive statistics were employed to examine participant characteristics in frequency and percentage. Meanwhile, nurses burnout factors were scrutinized using frequency, percentage, and mean scores.

## 4.0 Findings

### 4.1 Nurses demographic's data
Table 1 displayed the frequency of participants' demographics, including gender, education level, years of experience, and working department. The majority of the participants were female (n=206, 69.8%), and the remaining 89 (30.2%) were male gender. The majority (n=202, 68.5%) of the participants were Diploma holders, following Advance Diploma holders (n=65, 22.0%), while the remaining 9.5% (n=28) were Degree holders. The majority (n=106, 35.9%) of the participants had 5 to 10 years of working experience, followed by 10 to 15 years of working experience (n=85, 28.8%) and 1 to 5 years of working experience (n=83, 28.1%), while the least participants were having working experience more than 15 years (n=21, 7.1%). 16.9% (n=50) participants were working at the Anesthesiology and Operation Theatre department respectively; 11.9% (n=35) participants were working at the Medical, Surgical, Pediatric, Orthopedics, and Obstetrics and Gynecology department respectively; and 3.4% (n=10) participants were working at Otorhinolaryngology and Emergency Department respectively.

Table 1 Frequencies of Nurse's Demographic Data

| Demographic | Frequency (n) | Percentage (%) |
|---|---|---|
| **Gender** | | |
| Male | 89 | 30.2 |
| Female | 206 | 69.8 |
| **Education level** | | |
| Diploma | 202 | 68.5 |
| Advance Diploma | 65 | 22.0 |
| Degree | 28 | 9.5 |
| **Year of experience** | | |
| 1 to 5 years | 83 | 28.1 |
| 5 to 10 years | 106 | 35.9 |
| 10 to 15 years | 85 | 28.8 |
| More than 15 years | 21 | 7.1 |
| **Department** | | |
| Anesthesiology | 50 | 16.9 |
| Operation Theatre | 50 | 16.9 |
| Medical | 35 | 11.9 |
| Surgical | 35 | 11.9 |
| Pediatric | 35 | 11.9 |
| Orthopedics | 35 | 11.9 |
| Obstetrics and Gynecology | 35 | 11.9 |
| Otorhinolaryngology | 10 | 3.4 |
| Emergency Department | 10 | 3.4 |

*4.2 Factors related to burnout among nurses.*

Factors contributing to burnout among nurses were presented in Table 2 which displayed the level of personal, work-related, patient-related, and overall burnout in frequency, mean, minimum, and maximum scores. The overall burnout score was derived by computing the average score across 19 questions. Subsequently, the burnout level was categorized into three distinct ranges: scores ≤ 25 were indicative of no burnout, scores falling within the 26-50 range were classified as moderate burnout, and scores surpassing 50 indicated a high level of burnout (Majeed et al., 2022).This comprehensive scoring and classification system provided a nuanced and insightful evaluation of burnout levels based on participants' responses to the questionnaire. For emotional burnout, the minimum score was 10.0, the maximum score was 30.0, and the mean score was 20.5 (average level). Most participants' scores for personal burnout were above average and averaged 41.7% (n=123) and 41.1% (n=121), respectively, while the minor participants scored below average 17.2% (n=51).

Table 2 Burnout among nurses

| Burnout | Level of burnout | | | Minimum (score) | Maximum (score) | Mean (score) |
|---|---|---|---|---|---|---|
| | Below average n (%) | Average n (%) | Above average n (%) | | | |
| **Personal Burnout** | 51 (17.2) | 121 (41.1) | 123 (41.7) | 10 | 30 | 20.5 |
| **Work related burnout** | 68 (23.0) | 116 (39.3) | 111 (37.7) | 11 | 35 | 23.2 |
| **Patient related burnout** | 93 (31.5) | 124 (42.0) | 78 (26.6) | 6 | 30 | 17.4 |
| **Overall burnout** | 49 (16.6) | 149 (50.4) | 97 (33.0) | 31 | 91 | 61.1 |

For work-related burnout, the minimum score was 11.0, while the maximum score was 35.0, and the mean score was 23.2 (average level). Most of the participants' scores for personal burnout were average and above average, 39.3% (n=116) and 37.3% (n=111), respectively, while the minor participants scored below intermediate work-related burnout level, 23.0% (n=68).

For patient-related burnout, the minimum score was 6.0, while the maximum score was 30.0, and the mean score was 17.4 (average level). The majority of the participants' scores for personal burnout were at a moderate level of 42.0% (n=124), followed by below an average level of 31.5% (n=93). In comparison, the minor participants scored above average of 26.6% (n=78).

In term of the overall level of burnout, the minimum score was 33.0, the maximum score was 91.0, and the mean score was 61.1 (average level). The majority of the participants' overall burnout score was at a moderate level of 50.4% (n=149), followed by an above-average level of 33.0% (n=97), while most minor participants scored below-average level of 16.6%(n=49).

## 6.0 Discussion

The findings of our study shed light on several crucial aspects related to burnout among nurses at a Malaysian public hospital. Through a comprehensive analysis, we explored the influence of various demographic factors on burnout levels among nurses.

Firstly, the study did not find a significant association between gender and education level with burnout, suggesting that these variables may not serve as strong predictors of burnout in the workplace within our context. This finding is consistent with the broader literature, which has highlighted the multifaceted nature of burnout and the complex interplay of factors contributing to its occurrence (Rohita et al., 2022).

Moreover, the study observed a weak positive relationship between working experience and burnout, indicating that as nurses accumulate more years in the workforce, they may be more susceptible to experiencing burnout. This aligns with previous research that has identified increasing workloads and job stress as significant contributors to burnout among healthcare professionals (Jun et al., 2021; Zakaria et al., 2022).

The study revealed a significant distribution among the nurses, with the majority reporting a substantial burden categorized as a high workload. Moreover, a minority faced an even more demanding scenario characterized by an extremely high workload. This diversity in workload experiences among the nurses underscores the complex challenges they navigate daily. The occurrence of such varied workloads could be attributed to several factors, including the dynamic nature of patient care, diverse patient acuity levels, and the intricacies of healthcare service delivery within the hospital. The unpredictable occurrences, such as patient emergencies, significantly contribute to the challenges nurses face in this public hospital, impacting their workload (Fagerström &amp; Vainikainen, 2014, as cited by Ivziku et al., 2022). These factors create a dynamic and often demanding work environment, influencing the variations in workload experiences among the nurses.

The overall mean workload score, aggregating responses from the nurses, positioned the workload perception above the average threshold. Comparisons with Sobhani et al. (2023), who reported an average score using the NASA-TLX methodology, and Javier et al. (2021), who found high workload levels in the Philippines, highlighted that the workload perception among HSI nurses is notably higher. The elevated workload scores could be attributed to factors unique to this study, such as patient demographics, the hospitals caseload, or specific policies and procedures. These factors contribute to the nuanced understanding required to address the distinctive challenges faced within this healthcare setting. Diving into the workload dimensions, the study emphasized the significance of effort as a significant contributor, aligning with Mohd Balwi et al. (2021), who provided mean levels for various workload dimensions in Malaysia. As a linchpin element, the effort indicates the intense physical and mental engagement required in the nursing profession in this hospital. Contributing factors may include the complexity of patient cases, the need for critical decision-making, and the responsibility associated with diverse tasks. The imperative of tailoring interventions and strategies to address the unique challenges posed by the local work environment at this study setting is evident. The multifaceted nature of the workload, intricately linked to nurses efforts, performance, frustration, temporal demands, and mental demands, underscores the need for targeted and context-specific interventions. Factors such as patient acuity, staffing resources, patient transfers, documentation, patient isolation, unscheduled activities, and patient specializations (Ivziku et al., 2022) contribute to the intricate dynamics of workload experiences by the nurses in this study, necessitating tailored strategies to address these specific challenges.

The positive association between workload and burnout emphasized in the literature (Hartini et al., 2022; Diehl et al., 2021) resonates with our findings. The demanding nature of the nursing profession and a high workload can lead to emotional exhaustion, depersonalization, and reduced personal accomplishment, contributing to burnout. Jun et al. (2021) found that a high workload contributes to lower job satisfaction and higher intentions to leave among nurses in a hospital. The pervasive impact of workload on nurse well-being and job-related outcomes among HSI nurses aligns with these findings, suggesting that addressing workload is crucial for preventing burnout and enhancing overall job satisfaction. Recognizing and addressing these nuances is essential for fostering a more effective and tailored approach to nurse well-being and performance. The multifaceted nature of workload experiences requires a holistic understanding, considering factors such as patient demographics, hospital policies, and the dynamic nature of patient care.

The utilization of the NASA TLX in assessing in this study has noteworthy implications for both practical implementation and future study. Identifying the specific workload elements that contribute to burnout might help organizations develop initiatives to improve nurses work conditions and decrease burnout rates. Utilizing a tested tool like the NASA TLX also ensures the accuracy and dependability of workload assessments, making it easier to precisely measure and contrast the amount of work needed at different times. Additionally, this study revealed a marginally positive relationship between the working department and burnout. This suggests that the department in which nurses are employed may influence their likelihood of experiencing burnout. Understanding the unique challenges and dynamics within each department can provide valuable insights for developing targeted interventions to mitigate burnout and promote well-being among healthcare professionals (Jun et al., 2021; Zakaria et al., 2022).

## 7.0 Conclusion & Recommendation

In conclusion, this study highlights the nuanced interplay of demographic and occupational factors contributing to nurse burnout. While gender and education level may not strongly predict burnout, tenure in the workforce and departmental affiliation show potential associations. Future research should delve deeper into department-specific stressors and explore interventions tailored to mitigate burnout risks. Longitudinal studies are warranted to track burnout trajectories over time, allowing for the assessment of the effectiveness of interventions. Addressing burnout comprehensively is imperative for fostering a supportive work environment and enhancing both nurse well-being and patient care outcomes.

Our findings contribute to the broader literature on burnout among nurses, both globally and within the Malaysian context. By integrating insights from previous research, we contextualize our findings within the larger discourse on burnout in healthcare settings. This underscores the importance of considering both organizational and individual factors in addressing burnout and fostering a

supportive work environment for healthcare professionals. Moving forward, as this current study focus only in one public hospital, our research opens avenues for further investigation into the specific challenges faced by nurses in other public hospital in Malaysia. By delving deeper into the intricacies of nurses' experiences in this setting, we can develop tailored interventions to enhance workplace well-being and improve patient care outcomes.

From a managerial perspective, the findings of this study have several implications for healthcare organizations and policymakers in Malaysia. First and foremost, addressing the workload and job stressors identified in our study is paramount for preventing and managing nurse burnout. Healthcare leaders should consider strategies to optimize staffing levels, redistribute tasks, and provide adequate resources to support nurses in their roles. By addressing the factors contributing to nurse burnout and fostering a supportive work environment, healthcare organizations can promote the well-being of their staff and enhance the quality of patient care. Future studies could explore how interventions targeting these factors may buffer the negative impact of workload and stress on nurse well-being, drawing from theories such as the Conservation of Resources (COR) theory.

## Acknowledgment

## Paper Contribution to Related Field of Study
The result of this study perhaps could be given the significance of effort as a workload contributor, explore strategies to balance effort and performance demands. The organization should consider to implement efficient task distribution, considering the emphasis on effort as a linchpin element in shaping workload among nurses.

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