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**Original Research**

# Individual Characteristics and Locus of Control as Factors Related to Burnout in Nurses

**Antonius Ngadiran[1*], Mona Rentalui[2], Roselina Tambunan[3], Dalia Novita Sari[4], Rosmawati Napitupulu[5], Kristoforus Triantono[6], Pangindenan Sinuraya[7]**

[1,3] Immanuel Health Institute, Bandung, Indonesia
[2,4,5,6] Immanuel Hospital, Bandung, Indonesia
[7] Bayukarta Hospital, Karawang, Indonesia

**ABSTRACT**

***Background:*** *Burnout is a condition of extreme fatigue and exhaustion that is widely experienced by workers. Nurses who work on the front line for 24 hours are at high risk of burnout, which can jeopardise their wellbeing as well as patient safety and quality of care. This study aims to identify the dominant factors, including individual characteristics, work environment, locus of control, and work experience, that influence burnout among hospital nurses.*

***Methods:*** *The study used a cross-sectional study was conducted to evaluate the level of burnout. The sample was 431 nurses who was selected from the hospital using stratified random sampling to ensure the representation of different work units or departments. Date analysis was performed using Structured Equation Modelling (SEM) to examine the complex relationships between the variables.*

***Results:*** *The results of the bivariate analysis indicate that there is a relationship between respondent characteristics and nurse burnout incidence. A significant negative relationship was found between the work environment and burnout occurrence, as well as a relationship between years of work experience and burnout incidence. Meanwhile, the results of the multivariate analysis showed that characteristics, work environment, locus of control, and work experience influence burnout by 10.9%.*

***Conclusion:*** *This study shows that the variables of characteristics, work environment, locus of control, and work experience account for 10.9% of the burnout. This study recommends improving the work environment, strengthening locus of control, and providing mentoring for nurses with low experience to prevent burnout.*

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**CONTACT**
Antonius Ngadiran
✉
antoniusngadiran@yahoo.co.id
Immanuel Health Institute. Kopo No.161 Street Bandung City, Weast Java, Indonesia.

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## INTRODUCTION

Burnout is a work-related stress syndrome that arises from chronic exposure to job stress. It is characterized by emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment, all of which contribute to decreased effectiveness at work. Nurses, particularly perioperative clinicians, are especially at risk for experiencing burnout (De Hert, 2020).

Based on research results in Japan, it was found that of 126 nurses, 46.8% experienced burnout; of 22 radiology technologists, 36.4% experienced burnout; and of 19 pharmacists, 36.8% experienced burnout (Matsuo et al., 2020). Burnout is associated with several problems, not only for individual providers, but also for their employer organizations, patients, and the healthcare system as a whole. Many factors can influence the incidence of burnout for health workers in Indonesia (Papathanasiou et al., 2025).

Nurses are healthcare workers who accompany patients 24 hours a day, making them highly susceptible to burnout (Matsuo et al., 2020). Burnout in nurses can have serious consequences for patients. This condition affects the physical and mental health of nurses and can lead to a lack of motivation, absenteeism, and decreased work enthusiasm. Ultimately, burnout contributes to a decline in the quality of nursing care (Jalili et al., 2021).

Burnout can lead to a decline in the quality of care provided to patients because nurses lose focus at work. This condition also reduces work effectiveness, resulting in tasks not being completed optimally. In addition, burnout can weaken social relationships and disrupt cooperation among colleagues in the hospital environment. Nurses experiencing burnout tend to withdraw from social interaction with their team. This ultimately affects work dynamics and the work environment (Matsuo et al., 2020).

In more severe cases, burnout can even cause a strong desire to quit one's job. The impact of burnout is also characterised by prolonged emotional exhaustion that makes nurses feel helpless. They can become apathetic towards their work and lose their enthusiasm.

In addition, burnout can cause mood swings, sensitivity to small things, and frequent boredom. Negative attitudes towards others also emerge, disrupting interpersonal relationships. Not infrequently, this condition is accompanied by a decreased interest in work that was previously enjoyed. Ultimately, all of these factors will lead to a decline in the quality and productivity of nurses' work (Weikel & Fisher, 2022).

Burnout can lead to decreased productivity and work effectiveness. This condition also contributes to a decline in employee job satisfaction. In the long term, burnout can reduce a person's commitment to their work. Another impact is the emergence of boredom, which has a negative effect on performance. Burnout can also lead to negative attitudes and decreased engagement in work. In addition, this condition can trigger conflicts with both colleagues and superiors (Harju et al., 2023).

The novelty of this study lies in its comprehensive analysis combining individual characteristics, work environment, locus of control, and work experience in explaining burnout among nurses. Previous studies have generally highlighted only one or two factors separately, while this study attempts to look at the relationship as a whole (Harju et al., 2023). This approach provides a new understanding of the complexity of the causes of burnout in the nursing context. Thus, this study can make a scientific and

practical contribution to the prevention and treatment of burnout in the nursing profession.

This study focuses on understanding the relationship between psychological detachment from work and the emergence of interpersonal conflicts in the context of burnout. This study aims to provide a deeper understanding of the long-term effects of burnout and offer practical insights for organisations in creating a more supportive work environment and improving conflict resolution strategies. This study also aims to identify the dominant factors that influence the occurrence of burnout among nurses in hospitals, including individual characteristics, work environment, locus of control, and work experience.

## MATERIALS AND METHOD

The study used a cross-sectional study was conducted to evaluate the level of burnout. This design was chosen because it is efficient for assessing the prevalence of a condition (burnout) in a specific population (nurses) at a single point in time. It allows for the collection of data on multiple variables simultaneously, making it suitable for exploring the relationships between various factors and the outcome (Polit & Beck, 2018).

This research was conducted in 2024 at a private hospital the under management of the Pasundan Christian Church Foundation in Bandung city. The population in this study was nurses worked in hospital the under management of Christian Church Foundation is 1.500 nurses, the sample using the Slovin's formula calculation with a minimum sample size of 316, but the researcher used a sample size of 431 nurses. A sample of 431 nurses was selected from the hospital using stratified random sampling to ensure the representation of different work units or departments. In this method, the population is divided into strata based on work units, then samples are taken proportionally from each stratum. This approach is used to minimise sampling bias and ensure that each unit is well represented in the study (Dahlan, 2020, 2021).

The variable in this study is the indepent variable: level of burnout and the dependent variabel: characteristics of responden (gender, age, education, work period, marriage status, profesision, locus of control, physical enviroment, nonphysical environment). The Maslach Burnout Inventory has demonstrated strong validity and a high level of reliability, with a Cronbach's alpha of 0.916 (Yslado Méndez et al., 2023). Participants completed self-report questionnaires on professional health care and burnout. The Maslach Burnout Inventory (MBI) is a self-report questionnaire designed to measure burnout across three primary dimensions. Comprised of 22 items, the instrument's final results are categorized into three levels: low, moderate, and high.

For this study, the univariate analysis uses a frequency distribution formula, while the bivariate and multivariate analysis use structured equation modeling (SEM). (Rex B. Kline, 2023). This data analysis will primarily be carried out using the Smart PLS 3 software. This research obtained research ethics permission from the Research Ethics Committee at Immanuel Hospital Bandung, number: No. 22/A01/EC/VII/2024. Ethical approval ensures that the research is conducted in accordance with the standards applicable to research involving human subjects. All respondents were given an explanation of the purpose of the research and gave their consent before participating.

## RESULTS

The results of this study describe the relationship between various factors and the level of burnout among nurses. An analysis was conducted to examine the contribution of each factor to the occurrence of burnout. The findings of the study are presented as follows.

**Table 1.** Demographic and Professional Characteristics of Nurse Respondents (n = 431)

| Characteristic | Frequency (n) | Percentage (%) | p-Value* |
|---|---|---|---|
| **Gender** | | | |
| Male | 111 | 25.75 | 0.001 |
| Female | 320 | 74.25 | |
| **Total** | **431** | **100** | |
| **Age** | | | |
| 23 – 35 years | 241 | 55.92 | 0.001 |
| 36 – 78 years | 190 | 44.08 | |
| **Total** | **431** | **100** | |
| **Education** | | | |
| Diploma III in Nursing (D3) | 110 | 25.52 | |
| Profession (Ners) | 313 | 72.62 | 0.001 |
| Master of Nursing | 8 | 1.86 | |
| **Total** | **431** | **100** | |
| **Work Period** | | | |
| < 5 years | 98 | 22.74 | 0.001 |
| > 5 years | 333 | 77.26 | |
| **Total** | **431** | **100** | |
| **Marriage Status** | | | |
| Marriage | 313 | 72.62 | 0.001 |
| Non- Marriage | 118 | 27.38 | |
| **Total** | **431** | **100** | |
| **Professional Status** | | | |
| Profession | 388 | 90.02 | 0.001 |
| Vocational | 43 | 9.98 | |
| **Total** | **431** | **100** | |

*Structured Equation Modeling (SEM)

Based on the demographic data, the results of this study (Table 1) show that 74.25% female gender. As many as 55.92% of the respondents are in the age range of 23-35 years, which is considered a very young and productive age. The majority of respondents, 72.62%, have a professional education level. In terms of work experience, 77.26% of the respondents have been working for more than 5 years. Regarding marital status, most of the respondents, 72.62%, are married.

The results of the bivariate analysis show that the characteristic variable has an effect value is -0.334 with a p-value of 0.001, indicating that the higher the value of the "Characteristic" variable (which includes gender, education, profession, marital status, and age), the lower the burnout level. Marital status has an outer load of 0.800, meaning it represents the characteristic. Age has an outer load of 0.838, meaning it represents the

characteristic, while gender, education level, and profession do not represent the characteristic (Figure 1).

The bivariate analysis shows that the work environment has an effect value is -0.186 with a p-value of 0.001, indicating that the higher the value of the "Work Environment" variable (which includes both physical and non-physical supportive work environments), the lower the burnout level. The physical work environment has an outer loading of 0.891, meaning the physical aspect represents the work environment. The non-physical work environment has an outer load of 0.919, meaning the non-physical aspect represents the work environment. Meanwhile, the locus of control has an effect value is 0.065 with a p-value of 0.368, indicating that there is no significant effect of locus of control on burnout. Work work experience has an effect value is 0.132 with a p-value of 0.007, indicating that the higher the value of the work experience variable, the higher the burnout level (Figure 1).

Multivariate analysis shows that the variables of Characteristics, Work Environment, Locus of Control, and Work Experience together influence burnout by 10.9%. This means that these four variables only explain a small portion of the variation in burnout. The remaining variation is explained by other factors outside the scope of this study (Figure 1).

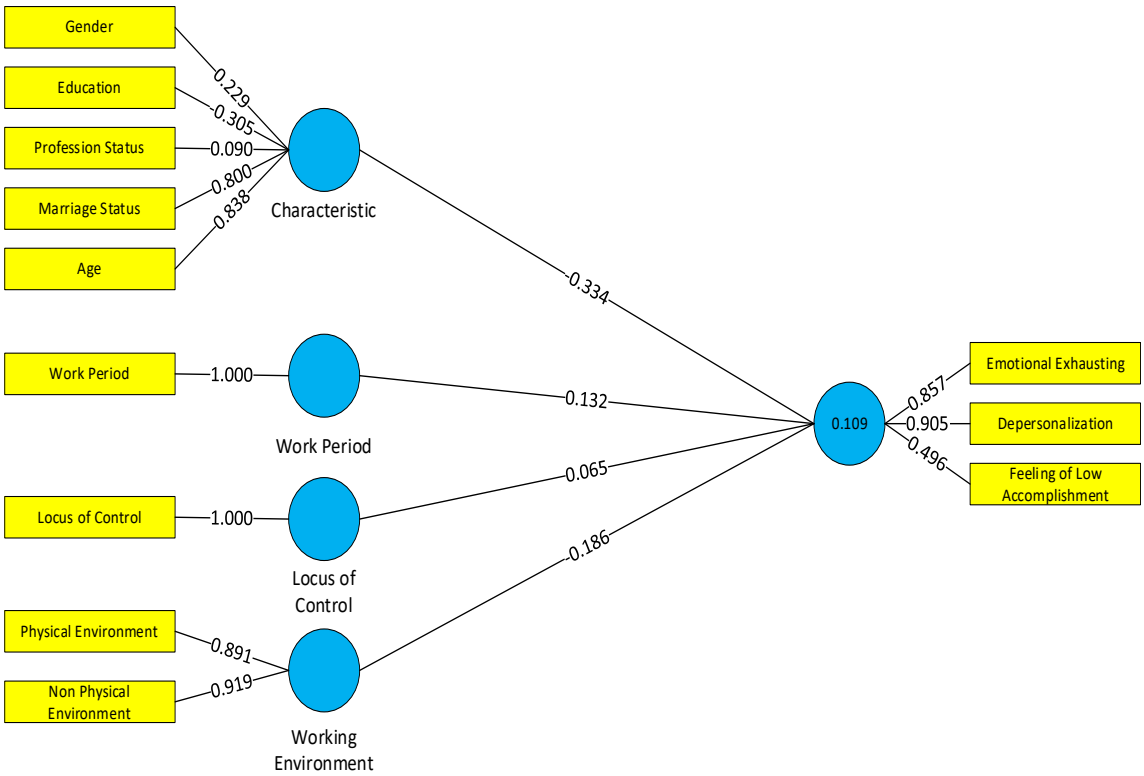


**Figure 1.** Bivariate and Multivariate Analysis

## DISCUSSION

The relationship between respondent characteristics and the occurrence of burnout is inversely proportional. This means that a higher score on the Characteristics variable (which includes gender, education, profession, status, and age) is associated with a lower burnout level. This finding is consistent with previous research, although gender,

education level, and profession do not have a strong relationship with burnout (Mamić et al., 2024; Moses et al., 2023).

Previous research explains that demographic characteristics such as age and marital status have a significant association with burnout levels among healthcare workers. Older individuals tend to be better able to manage stress, while marital status can provide emotional support that acts as a buffer against the risk of burnout. Conversely, factors such as gender, educational level, and profession do not show a strong relationship with burnout, as their influence is often affected by working conditions and other psychosocial factors. These findings reinforce that not all demographic characteristics play an equal role in explaining burnout, so it is necessary to focus on more dominant factors (Mamić et al., 2024; Moses et al., 2023).

Based on statistical tests, environmental factors have a significant impact on burnout among nurses. This is because most of the respondents are still young, and at this age, they tend to be idealistic about professionalism and life expectations, which significantly affects their activities and performance as nurses (Moses et al., 2023). A higher score on the environmental factor is associated with a lower burnout level. This finding is supported by recent research, which confirms that a healthy work environment plays a vital role in preventing burnout. A poor work environment, including excessive workload, can increase the incidence of burnout (Park & Eo, 2024; Weikel & Fisher, 2022).

The correlation analysis between locus of control and burnout showed no significant relationship. Theoretically, a nurse's locus of control in a hospital is influenced by numerous factors, including the work environment, leadership, roles and responsibilities, support systems, personal factors, training, and organizational culture. This suggests that the complex interplay of these factors may have obscured a direct correlation (Ibrahim et al., 2025; Taranu et al., 2022).

The length of a nurse's work experience plays an important role in adaptation and job performance. Nurses with longer work experience tend to have higher burnout compared to those who are new to the job. This may occur because newly hired nurses are often more enthusiastic and highly motivated (Malta et al., 2024). The multivariate analysis revealed that the four variable characteristics, work environment, locus of control, and work experience—collectively account for 10.9% of the variance in burnout, with the remaining 89.1% influenced by other factors.

This low explanatory power highlights that burnout is a multifactorial phenomenon affected by many elements beyond the scope of this study. Their research shows that individual factors, work environment, and social support only partially explain the variation in burnout. Therefore, most of the risk of burnout is determined by other more complex and interacting elements beyond the scope of the variables studied (Guastello et al., 2024).

This study's findings have several practical implications for hospital management. It is crucial for management to focus on creating a healthier work environment and providing stress management training. From a scientific standpoint, these results reinforce the multifactorial nature of burnout. The low $R^2$ value (0.109) aligns with other studies, confirming that simple models can only explain a small fraction of burnout's variance (Elbus et al., 2024; Guastello et al., 2024; Ibrahim et al., 2025). This research, however, has limitations, such as restricted sample size and the use of a survey method, which may not fully capture the depth of the burnout experience.

Given these limitations, future research should be more specific. It is recommended to focus on psychological factors (e.g., resilience, coping mechanisms) and organizational factors (e.g., specific workloads, management support) to provide a more comprehensive understanding of the issue. Future research should focus on identifying and measuring the psychological factors that influence nurse burnout. Specifically, it is recommended to assess nurse resilience by using standardized scales to measure a nurse's ability to withstand pressure.

Additionally, future studies should analyze nurses' coping mechanisms, distinguishing between adaptive strategies (e.g., seeking social support, time management) and maladaptive strategies (e.g., substance abuse, avoidance). This approach will provide a deeper understanding of how internal psychological factors influence nurses' vulnerability to burnout, which would complement the findings of this study.

## CONCLUSIONS

This study found that four latent variables—Characteristics, Work Environment, Locus of Control, and Work Experience—collectively have a significant influence on burnout. These four factors explain 10.9% of the variance in burnout, while the remaining 89.1% is influenced by other variables not included in this research model. A closer look at the analysis reveals a differing contribution from each variable. Individual Characteristics is the most dominant factor contributing to burnout. This suggests that demographic aspects play the most crucial role in predicting burnout levels in nurses.

Specifically, among the characteristics studied, age has the strongest influence on burnout, followed by marital status, while professional status has the weakest influence. Based on the research results, it is recommended that hospitals pay attention to the individual characteristics of nurses, especially their age and marital status, as important factors in preventing burnout. A supportive work environment, both physically and non-physically, needs to be improved to reduce the risk of burnout.

In addition, management should pay attention to nurses with more work experience as they are at greater risk of burnout. Supportive strategies such as mentoring programmes, stress management training, and increased job satisfaction are also recommended to maintain the well-being of nurses and the quality of service.

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