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The Influence of Personality and Emotional Intelligence on Work Fatigue with Nurse Performance as a Mediating Variable in Intensive Care Nurses at Gunung Jati Hospital, Cirebon City

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Abstract

Background. Work fatigue is a problem that is often experienced by nurses, especially nurses who work in units with high levels of work pressure.
Purpose. This study aims to analyze the influence of personality and emotional intelligence on nurses' work burnout and the role of nurses' performance in moderating these relationships.
Method. This study uses a quantitative approach with a survey method, involving nurses who work at Gunung Jati Hospital, Cirebon City as respondents. Data was collected through questionnaires and analyzed using Structural Equation Modeling (SEM)-based path analysis techniques.
Results. The results of the study showed that personality and emotional intelligence had a significant effect on nurses' work fatigue. In addition, nurse performance has been shown to play a role as a moderation variable that is able to weaken the negative influence of psychological factors on work fatigue.
Conclusion. These findings affirm the importance of managing psychological aspects and improving nurse performance as a strategic effort to reduce the rate of work fatigue and improve the quality of health services.

Keywords: personality, emotional intelligence, work fatigue, nurse performance.

INTRODUCTION

Nursing is an important part of the healthcare system in many countries, especially in hospitals that serve patients who exhibit a high level of clinical complexity. On a global scale, reports from the World Health Organization show that nurses are faced with increased workloads, emotional tensions, and increasingly complicated professional obligations,

especially in intensive care settings. This situation contributes to the increasing incidence of burnout and burnout among nursing professionals, which can adversely affect not only the health and well-being of individuals but also jeopardize patient safety and the overall quality of healthcare services. Various international studies reveal that burnout in nurses is at an alarming level. Cañadas-De la Fuente et al. (2014) reported that the nursing profession has a higher risk of burnout than other health professions due to exposure to chronic work stress, emotional demands, and limited resources. This phenomenon is increasingly pronounced in nurses working in intensive care units, where work stress is persistent and clinically high-risk.

In Indonesia, the phenomenon of burnout among nursing professionals shows a comparable pattern. A number of national investigations have shown that nurses experience physical and psychological burnout as a consequence of increased workloads, shift arrangements, and constraints in the healthcare workforce. Studies conducted by Pujiarti and Idealistiana (2023) and Baharuddin et al. (2025) prove that workload is a factor that contributes significantly to the onset of burnout among nursing staff in hospital settings.

Nurses assigned to intensive care units face more demanding work characteristics compared to their counterparts in other units, including high decision-making intensity, proximity to patients in critical conditions, and requirements for precision and precision in their actions. This context makes ICU nurses particularly vulnerable to chronic work burnout. Garrosa et al. (2011) established that role-related stress and limitations in personal resources are the dominant factors that trigger burnout among nurses operating in high-stress work environments.

Table 1. Percentage of Attendance List of Employees of Gunung Jati Hospital, Cirebon City

Year	Number of Nurses	Present	Pain	Permission	Alpha	Percentage
2021	482	3.840	1.176	504	264	100 %
2022	534	4.008	1.440	636	324	100 %
2023	622	4.428	1.824	804	408	100 %
2024	718	4.956	2.208	948	504	100 %
2025	760	5.124	2.400	1.032	564	100 %

Source : RSD Gunung Jati Cirebon City 2026

In addition to organizational factors, the literature emphasizes the importance of individual factors in explaining variations in work burnout responses between nurses. Personality is seen as a psychological predisposition that affects the way individuals assess and respond to work stress. On the other hand, emotional intelligence acts as the ability to identify, control, and use emotions adaptively in stressful work situations, thus potentially suppressing the negative impact of stress and work fatigue (Maslach et al., 1996).

Empirical investigations show that emotional intelligence shows a negative correlation with work burnout and burnout among nursing professionals. Research by Szczygieł and Mikolajczak (2018) convincingly states that emotional intelligence serves as a protective factor that reduces the adverse emotional impact on the incidence of fatigue. This conclusion is further evidenced by the studies of Nurhalisa and Supriyadi (2020), Putra et al. (2023), and Sharma et al. (2025), which revealed that nurses who have a high level of emotional intelligence are generally more proficient in managing work-related fatigue.

Most studies position nurse performance as a dependent variable affected by burnout and work burnout. However, some cutting-edge studies suggest that performance is also closely related to an individual's psychological resources. Wong and Law (2002) and Cheraghi et al. (2025) found that emotional intelligence contributes to improved nurse performance, either directly or through other psychological mechanisms such as work stress.

Although the literature on burnout, emotional intelligence, and nurse performance is quite extensive, most research is still linear and partial. National research generally only examines the direct influence of emotional intelligence or workload on burnout (Karim & Purba, 2021; Rezeki et al., 2024), without considering the interaction between variables. On the other hand, international research uses more mediating approaches than moderation, so the role of nurse performance as a contextual factor is still rarely studied.

Based on this study, there is a significant research gap, namely the lack of studies that place nurse performance as a moderation variable in the relationship between personality and emotional intelligence to work fatigue, especially in intensive care nurses in Indonesia. In fact, theoretically, performance can serve as a buffer that weakens or as an amplifier that amplifies the impact of individual factors on work fatigue, depending on the context and characteristics of the individual.

With the increasing demands of health care and the risk of burnout in intensive care workers, research that integrates nurses' personality, emotional intelligence, and performance in one empirical model is becoming more urgent. This research is expected not only to enrich

the development of organizational behavior science and work psychology in the field of nursing, but also provide an empirical basis for hospital management in designing more adaptive and sustainable HR management strategies. Therefore, further research on this theme is crucial to answer practical and theoretical challenges that have not been answered in previous studies.

LITERATURE REVIEW

Personality Theory

Personality is conceptualized as a relatively enduring configuration of psychological traits that significantly affect an individual's cognitive processes, emotional responses, and behavioral patterns in diverse work contexts. In the nursing domain, personality serves as a psychological predisposition that regulates an individual's susceptibility to occupational stressors and burnout phenomena. Nurses who have certain personality traits are at increased risk of facing emotional turmoil as a consequence of the increased demands of the job, especially in high-intensity care settings.

Empirical research shows that personal characteristics contribute to the appearance of burnout and burnout in nurses. Cañadas-De la Fuente *et al.* (2014) emphasized that individual factors, including psychological character, are important determinants in explaining the variation in burnout in the nursing profession. This literature is corroborated by Garrosa *et al.* (2011), which states that role stress and limited personal resources interact with individual characters in triggering burnout.

Conceptually, personality serves as a psychological filter that influences the way nurses interpret workload and emotional distress. Therefore, relevant personality was positioned as an independent variable that had an effect on work fatigue in this study.

Emotional Intelligence Theory

Emotional intelligence refers to a person's ability to recognize, understand, control, and utilize emotions adaptively in the face of the demands of the work environment. In the nursing profession, emotional intelligence is an important psychological resource because nurses are required to manage their own emotions while responding to the emotional state of patients and patients' families.

A number of empirical investigations provide evidence that emotional intelligence is significantly correlated with burnout and burnout. Szczygieł and Mikolajczak (2018) show that emotional intelligence serves as a mitigating factor that attenuates the detrimental impact of emotions on burnout among nursing professionals. Nurses who show increased levels of emotional intelligence are generally more adept at managing negative emotions, thus preventing their escalation into chronic work burnout.

Comparable findings were observed in a variety of national contexts. Nurhalisa and Supriyadi (2020) together with Putra et al. (2023) established that emotional intelligence showed a substantial correlation with nurses' job burnout, suggesting that increased emotional intelligence was associated with reduced levels of burnout. Furthermore, Karim and Purba (2021) determined that emotional intelligence affects fatigue either directly or indirectly through other psychological mechanisms.

Thus, emotional intelligence in this study was positioned as the main independent variable influencing the work fatigue of intensive section nurses.

Work Fatigue Theory

Work burnout is a state of physical, emotional, and cognitive exhaustion that arises from prolonged engagement with work-related demands. In the field of nursing, the phenomenon of burnout often escalates into a more severe form of burnout when work-related stressors are not compensated for by adequate personal and institutional resources.

Maslach et al. (1996) explain that the phenomenon of burnout includes a state of emotional exhaustion, a sense of depersonalization, and a decrease in personal achievement. In an empirical investigation, Cañadas-De la Fuente et al. (2014) documented that the incidence of burnout among nursing professionals is categorized as an increase and is influenced by the confluence of organizational and individual determinants. In the Indonesian context, Pujiarti and Idealistiana (2023) together with Baharuddin et al. (2025) emphasized that work fatigue is a significant challenge faced by nurses, caused by a substantial workload and pressure on the work environment.

Work fatigue in this study is positioned as a dependent variable because it represents the psychological consequences of the interaction between individual characteristics and work demands.

Nurse Performance

Nurse performance relates to the level of achievement demonstrated by the nursing professional in carrying out the assigned duties and obligations in accordance with recognized service benchmarks. Performance includes not only workforce outcomes but also quality of service, professional accountability, and the capacity for collaborative engagement within healthcare teams. Most empirical research efforts operationalize performance as a dependent variable influenced by fatigue constructs. However, the scientific contribution of Wong and Law (2002) explains that emotional intelligence shows a favorable correlation with individual performance metrics, job attitudes, and overall effectiveness. This empirical observation is further corroborated by Cheraghi et al. (2025), who prove that emotional intelligence influences nursing performance, either directly or indirectly through the mediated impact of work-induced stress.

In the context of this study, nurse performance is not only seen as an outcome, but as a variable that can affect the dynamics of the relationship between individual factors and work burnout. High-performance nurses have the potential to have different adaptive mechanisms in the face of work pressure than low-performing nurses.

The Relationship of Personality to Work Fatigue

Work fatigue arises from the interaction of work demands and personal capacity. Because personality shapes the way individuals perceive work demands and manage stress, personality has the potential to affect burnout risk. This argument is in line with the findings that burnout is influenced by individual factors and personal resources (Cañadas-De la Fuente et al., 2014; Garrosa et al., 2011). Logically, dimensions such as neuroticism increase vulnerability, while conscientiousness and openness can increase adaptation.

The Relationship of Emotional Intelligence to Work Fatigue

Emotional intelligence (EI) serves as a significant psychological asset that facilitates individuals in the regulation of adverse emotional states, the preservation of motivation, and the maintenance of job efficacy in the midst of increasing stress levels. Strong empirical evidence suggests that EI reduces the impact of negative emotions on the phenomenon of fatigue (Szczygieł & Mikolajczak, 2018). In Indonesia's socio-cultural framework, EI shows a

correlation with work fatigue (Nurhalisa & Supriyadi, 2020; Putra et al., 2023; Rezeki et al., 2024). These findings support a theoretical causal framework that states that increased EI levels are associated with reduced fatigue.

The Impact of Emotional Intelligence on Nurse Performance

EI is concerned with performance through the ability to manage emotions, build working relationships, and act effectively under pressure. Wong and Law (2002) show that EI is related to performance and work attitude. Cheraghi et al. (2025) reinforce that EI influences nurse performance, including through work stress as a psychological mechanism. National findings also support the influence of EI on performance (Reski et al., 2023; Aprilia et al., 2025).

The Role of Performance as Moderation

Performance as a moderator means that performance changes the strength and weakness of personality and EI influences burnout. The logic is this: high-performance nurses are likely to have more effective competence, work control, and work strategies so that work pressure doesn't always lead to burnout. Conversely, high performance can also be a "burden" if it signifies high demands and perfectionism, so the personality/EI relationship to burnout can differ by performance level. Empirical support for linking EI–stress–performance is available in Cheraghi et al. (2025), as well as evidence that EI serves as a buffer against burnout (Szczygieł & Mikolajczak, 2018). So, performance moderation is not an empty idea, but has the foundation of a psychological mechanism.

Research Hypothesis

H1 : The Influence of Personality (X1) on Nurse Performance (Z) in Intensive Care Nurses at Gunung Jati Hospital, Cirebon City.

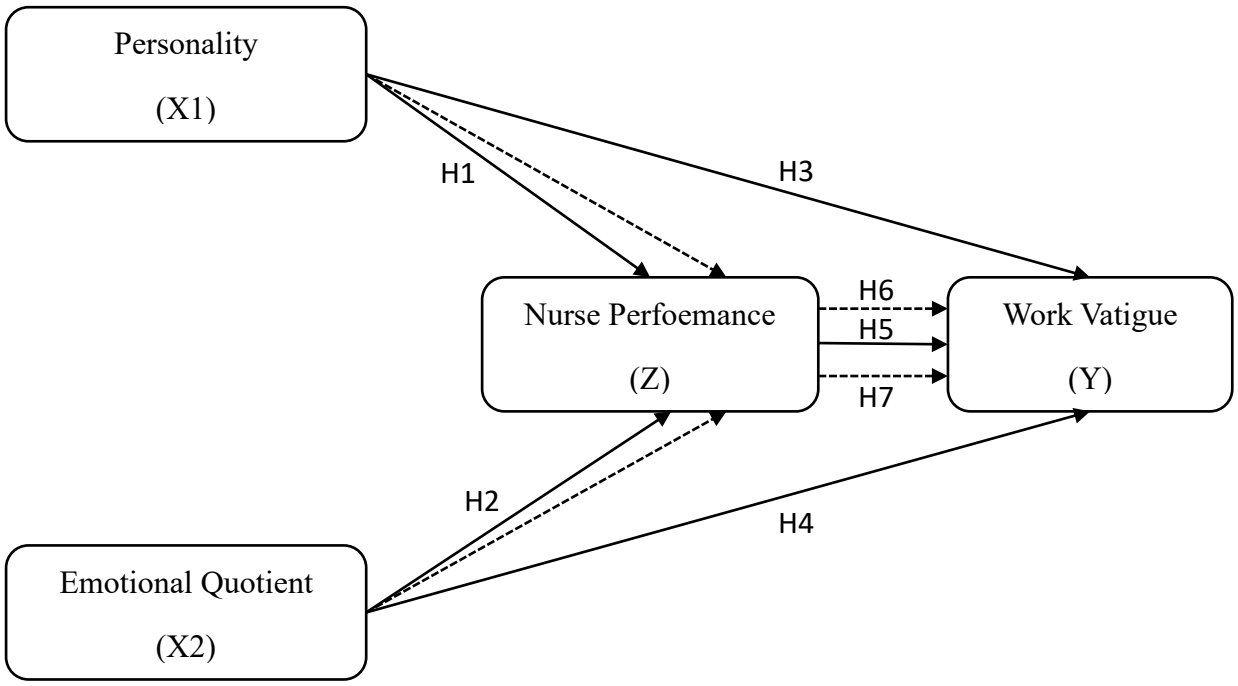
H2 : The Effect of Emotional Intelligence (X2) on Performance Fatigue (Z) in Intensive Care Nurses at Gunung Jati Hospital, Cirebon City.

H3 : The Effect of Personality (X1) on Performance Work Fatigue (Y) in Intensive Care Nurses at Gunung Jati Hospital, Cirebon City.

H4 : The Effect of Emotional Intelligence (X2) on Performance Fatigue (Y) in Intensive Care Nurses at Gunung Jati Hospital, Cirebon City.

H5 : The Effect of Nurse Performance (Z) on Performance Work Fatigue (Y) in Intensive Care Nurses at Gunung Jati Hospital, Cirebon City.
H6: Nurse Performance (Z) is suspected to mediate the influence of personality (X1) on Work Fatigue (Y).
H7 : Nurse Performance (Z) is suspected to mediate Emotional Intelligence (X2) against Work Fatigue (Y).

Frame of Mind



METHODS

Research Design

Associative quantitative research is a distinct part of quantitative inquiry that seeks to explain the relationship or influence between two or more variables through the application of numerical data and comprehensive statistical surveillance. The main focus is not only on the characterization of phenomena; Instead, it centers on quantifying the existence and intensity of relationships between variables, as well as explaining the dynamics of cause-and-effect in most cases.

As described by Sugiyono (2019), associative research represents an investigation that aims to determine the relationship between two or more variables, encompassing relationships

that may be symmetrical (correlational), causal (cause-effect), or interactive at their core. This particular form of research is categorized as quantitative because the assessment of related variables uses standard instruments, such as questionnaires using the Likert scale, which are then analyzed through statistical techniques including regression analysis, structural equation modeling (SEM), or path analysis. This study adopts an associative quantitative methodology, which is specifically aimed at examining the relationship between the variables Personality (X1), Emotional Intelligence (X2), Work Fatigue (Y), and Nurse Performance (Z).

Population and Sample

Population

The group examined in this investigation consisted of all nursing professionals employed in the intensive care unit of Gunung Jati Regional Hospital Cirebon City, which included ICU nurses, ICCU nurses, NICU nurses, NICU nurses, PICU nurses, and personnel from other critical care units. According to institutional records, the total population of intensive care nurses is 154 people. This particular population was chosen for analysis because of the high workload, substantial emotional demands, and high susceptibility to burnout experienced by intensive care nurses compared to their counterparts in other hospital units.

Sample

The group used in this investigation consisted of a subset of nursing professionals working in the intensive care unit of Gunung Jati Hospital Cirebon City, which includes various critical care divisions such as ICU, ICCU, NICU, PICU, and other critical units. The process of determining the sample size is carried out using the Slovin formula, incorporating the allowable margin of error set at 5%. Given that population numbers are ascertainable (N = 154) and relatively limited, the study was able to implement probability sampling, thus ensuring that each member of the population has a definitive chance of selection, which increases the representativeness of the findings and reduces potential bias (Creswell, 2018; Sugiyono, 2019). The most suitable method for determining sample size is through the application of the Slovin formula with a margin of error of 5%, as it allows researchers to obtain a sample size comparable to the population while maintaining efficiency for field surveys. The expression of the Slovin formula is as follows:

$$n = \frac{N}{1 + N(e^2)}$$

With and , then:$N = 154 e = 0{,}05$

$$n = \frac{154}{1 + 154(0{,}05^2)} = \frac{154}{1 + 154(0{,}0025)} = \frac{154}{1 + 0{,}385} = \frac{154}{1{,}385} \approx 111{,}19$$

Based on the results of the calculation above, the minimum sample number is 111.19 respondents which are rounded to 112 respondents.

Types of Data Sources

Primary Data

Primary data is data obtained directly from respondents through the distribution of structured questionnaires to intensive care unit nurses at Gunung Jati Hospital, Cirebon City. This data includes information about personality, emotional intelligence, burnout, and nurse performance. Primary data was chosen because it was able to describe the actual condition of the respondents according to the research objectives (Sugiyono, 2017; Creswell, 2014).

Secondary Data

Secondary data refers to information indirectly obtained from pre-existing sources, including hospital profiles, staffing reports, scientific journals, textbooks, and other related official documents related to the research variable. This information is used to strengthen, fortify, and triangulate with primary data (Sekaran & Bougie, 2016).

Data Collection Techniques

The methodological approach to data collection used in this study uses a closed-ended questionnaire that uses the Likert scale as the main instrument for measurement. The application of the Likert scale facilitates the assessment of respondents' attitudes, perceptions, and opinions regarding personality variables, emotional intelligence, work fatigue (fatigue), and nursing performance. This particular scale was chosen because of its efficacy in converting qualitative data into measurable metrics that can be analyzed statistically (Sugiyono, 2017; Sekaran & Bougie, 2016).

Participants are required to respond to each statement by selecting one of the following options:

Strongly Disagree (STS) = 1

Disagree (TS) = 2

Neutral (N) = 3

Agree (S) = 4

Strongly Agree (SS) = 5

The questionnaire instruments were compiled based on standardized theories and instruments, namely *the Big Five Personality* model for personality variables, *the Wong and Law Emotional Intelligence Scale* (WLEIS) for emotional intelligence, *the Maslach Burnout Inventory* (MBI) for work burnout, and performance indicators from Bernardin & Russell. Each statement is designed according to the indicators of each variable in order to have good construct validity (Creswell, 2014; Maslach et al., 1996; Wong & Law, 2002).

The data acquisition process is carried out through the direct distribution of questionnaires in offline format or through online platforms to intensive care unit nursing staff at the Gunung Jati Regional Hospital, Cirebon City. The reason for using this dual methodology is to increase response rates and facilitate the independent completion of questionnaires by respondents.

Variable Operations

Table 2. Variable Operations

Variable	Dimensions	Indicator	Scale
Personality (X1) Garrosa et al. (2011)	*Openness to Experience*	1) Openness to new ideas 2) Flexibility in the way you think and work Interest in new experiences or work methods	Likert 1-5
	Conscientiousness	1) Precision in work 2) Discipline and regularity 3) Responsibility to the task Orientation on achievement and quality of work	
	Extraversion	1) Energy and enthusiasm for work 2) Convenience in social interaction Activeness in communicating with colleagues	
	Agreeableness	1) Cooperative attitude 2) Concern for others 3) Willingness to help colleagues Empathetic and tolerant attitude	
	Neuroticism	1) Tendency to feel anxious 2) Easily stressed in work situations Emotional instability when faced with stress	
Emotional Intelligence (X2) Wong & Law (2002)	*Self-Emotion Appraisal (SEA)*	1) Ability to recognize one's own emotions 2) Awareness of the feelings being experienced Understanding the causes of the appearance of personal emotions	Likert 1-5
	Others-Emotion Appraisal (OEA)	1) Ability to understand the emotions of others 2) Sensitivity to co-worker/patient emotional expressions	

		Ability to read the emotional atmosphere of the work environment	
	Use of Emotion (UOE)	1) Utilization of emotions to increase work motivation 2) Use of positive emotions to complete tasks Ability to direct emotions to achieve work goals	
	Regulation of Emotion (ROE)	1) Ability to control negative emotions 2) Emotional resilience in stressful work situations Ability to stay calm in the face of conflict or stress	
Burnout (Y) Maslach, Jackson, & Leiter (1996)	*Emotional Exhaustion*	1) Feeling emotionally exhausted 2) Running out of energy due to work Feeling psychologically drained	Likert 1-5
	Depersonalization	1) Cynical attitude towards work 2) Decreased concern for patients Maintaining emotional distance from the work environment	
	Reduced Personal Accomplishment	1) Feelings of incompetence at work 2) Negative evaluations of self-achievement Decreased pride in work results	
Nurse Performance (Z) Cheraghi et al. (2025)	*Quality* (Work Quality)	1) Accuracy of work results 2) Conformance to professional standards Minimal errors in work	Likert 1-5
	Quantity	1) Volume of work completed Ability to meet work targets	
	Timeliness (Timeliness)	1) Task completion on schedule Time efficiency in work	
	Effectiveness	1) Ability to achieve optimal results Proper use of resources	
	Independence	1) Ability to work without strict supervision Initiative in completing tasks	
	Commitment	1) Loyalty to the organization 2) Seriousness in carrying out duties Compliance with professional rules and responsibilities	

Source : Previous research

Data Analysis Techniques

In this investigation, hypothesis testing was carried out using structural models (inner models) in the SmartPLS software environment. After validation and assessment of the reliability of the measurement model (outside model), the researchers used the PLS algorithm along with the bootstrap technique to obtain the necessary statistical metrics. SmartPLS is able to generate path coefficient values that explain the direction and magnitude of the influence exerted between latent variables, simultaneously presenting t-statistical values and p-values that serve as basic criteria for hypothesis testing decision-making (Hair et al., 2021).

Descriptive Statistical Analysis

Descriptive statistical analysis is a systematic methodology that seeks to explain or describe the data obtained during research efforts. Using this analytical framework, the researcher facilitated the provision of a comprehensive representation of the respondents' inherent characteristics, in addition to the dimensions of measurable research variables, in particular Personality (X1), Emotional Intelligence (X2), Nurse Performance (Z), and Work Fatigue (Y). Descriptive data will be presented systematically in the format of average, total, standard deviation, maximum, and minimum (Ghozali, 2018). For each statement item in the questionnaire, a frequency calculation is performed to classify the conditions of each variable. This process is done by determining the length of the class interval to interpret the mean score on each statement item. These interpretation criteria help give meaning to the distribution of the frequency of respondents' answers so that the results can be understood more comprehensively. With this classification, researchers can find out the level of respondents' perception of each research indicator more clearly. The results of the grouping are also the basis for providing an interpretation of the average value obtained by each variable. Here's a formula for determining the interval class:

$$P = \frac{R}{K}$$

Description:

P : Interval class pankang (highest value – lowest value)

R : Value range (5)

K : Number of Classes

$$P = \frac{5 - 1}{5} = 0{,}8$$

Based on the results obtained, the table can be compiled as follows:

Table 3. Score intervals for variable classifications

Yes	Interval	Remarks
1	1,00 – 1,79	Strongly Disagree
2	1,80 – 2,59	Disagree
3	2,60 – 3,39	Disagree

4	3,40 – 4,19	Agree
5	4,20 – 5,00	Strongly agree

Source: Data processed by researchers (2025)

Structural *Equation Modeling – Partial Least Sqaure* (SEM-PLS)

The methodological framework used in this study is Structural Equation Modeling (SEM) using the Partial Least Squares (PLS) approach. Partial Least Squares is a variant-based statistical methodology located within the Structural Equation Modeling (SEM) paradigm, carefully crafted to address a wide range of regression challenges that may arise in a dataset, including but not limited to limited sample sizes, the occurrence of missing values, and multicollinearity issues. PLS signifies variance-based structural equation (SEM) analysis that allows simultaneous assessment of measurement models and structural models. These attributes make SEM-PLS highly flexible for research initiatives in the social science domain, especially in the field of business and consumer behavior (Hair et al., 2021).

To improve the efficiency of data processing, the author uses software specifically designed for data analysis and processing, namely SmartPLS (Smart Partial Least Squares). SmartPLS is a leading statistical tool used for data analysis in flow models. In the context of Structural Equation Modeling using Partial Least Squares (SEM-PLS) analysis, two main submodels are described, which are conventionally called the measurement model (*Outer Model*) and the structural model (*Inner Model*).

Measurement Model (*Outer Model*)

The measurement model, commonly known as the External Model, describes the relationship between each set of indicators and the latent variable of interest. The evaluation of the measurement model was carried out through confirmation factor analysis using the Multi Trait-Multi Method (MTMM) framework, which required a convergent and discriminant validity check. Simultaneously, reliability evaluations were carried out using two different methodologies: Alpha Cronbach and Composite Reliability (Sunyoto et al., 2017).

Convergent Validity

Convergent validity has to do with the degree of correlation observed between the responses of different variables when evaluating the same basic construct. The purpose of convergent validity is to assess the consistency or legitimacy of a construction in the context

of research. Loading factors ranging from 0.5 to 0.6 were considered adequate for the early stages of the study. Conversely, a value equal to or exceeding 0.7 indicates a high level of validity. A construct is considered valid if it achieves an Average Variance Extracted (AVE) value of 0.5 or greater (Sunyoto et al., 2017).

Discriminatory Validity

Discriminant validity serves as a methodological framework to assess the extent to which a construct differs from another. Indicators associated with different constructions should show minimal correlation with each other. The achievement of discriminant validity is confirmed when the square root value of the Average Variance Extracted (AVE) in a latent variable exceeds all correlation coefficients among other variables, according to the Fornell-Larcker criteria (Sunyoto et al., 2017). The evaluation of the discriminant validity measurement model was carried out by examining cross-loading in addition to the heterotrait-monotrait ratio (HTMT) (Ghozali & Latan, 2015). The provisions for the heterotrait-monotrait ratio (HTMT) require it to remain below 0.9 to meet the criteria for assessing discriminant validity (Hair et al., 2021).

Composite Reliability

Evaluation of model parameters is also carried out to assess the reliability of the construction. As stated by Sugiyono (2017), reliability assessment refers to the extent to which repeated measurements of the same entity will result in consistent data. The analytical findings can be used to estimate the reliability of the instruments used. Ghozali and Laten (2015:199) identified two methodologies for measuring construct reliability with reflective indicators in the context of PLS-SEM using SmartPLS 3.0 software, specifically Composite Reliability and Alpha Cronbach. If the composite reliability coefficient and Cronbach's alpha coefficient exceed the 0.70 threshold, the construction is considered reliable.

Structural Model (*Inner Model*)

R-Square

The R-Square serves as a statistical measure to explain the influence of specific exogenous latent variables on endogenous latent variables. The R-Square metric serves as an indicator that evaluates the efficacy of the predictive ability of endogenous latent variables in a given model. A value close to 1 indicates that the model has a strong predictive capacity, while a value of 0 indicates a lack of substantial predictive ability. R-Square can be used to

evaluate a variety of models and apply to future research efforts. (Hair et al., 2021) categorized the strength of the model's preferences into three different classifications: weak, moderate, and strong, corresponding to scores of 0.25, 0.5, and 0.75, respectively.

F-Square

F-Square serves as a metric to ascertain the extent to which the variability of a particular exogenous variable contributes to the variability of endogenous variables. F-Square values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects respectively (Hair et al., 2021). From these F-Square values, one can deduce whether the predictors of latent variables exert a weak, moderate, or substantial influence on the structural level (Ghozali & Laten, 2015).

Hypothesis Test

The hypothesis testing methodology helps to explain the nature of the relationship between the current dependent and independent variables.Hypothesis testing requires a thorough analysis of probability values in addition to t-statistics. In the framework of probability values and p-values at the alpha significance level of 5%, the cutoff is set at <0.05. The critical value derived from the distribution table t corresponding to the alpha significance level of 5% is 1.96; consequently, the criteria of acceptance or rejection of the hypothesis establish that the alternative hypothesis (Ha) is established, while the null (Ho) hypothesis is considered invalid, if the t-statistic exceeds the t-table value of 1.96. To ensure the acceptance or termination of a hypothesis based on probability, an alternative hypothesis (Ha) is adopted when the p-value is <0.05 (Ghozali & Latan, 2015). After the conclusion of hypothesis testing, hypotheses related to mediation models will be subjected to mediation analysis based on a theoretical framework (Hair et al., 2021), in which two different types of mediation are described as follows:

Full Mediation

When the direct influence of independent variables on dependent variables is not statistically significant, and the indirect influence of independent variables on dependent variables through mediating variables is statistically significant, full mediation is recommended.

Partial Mediation

When an independent variable has a direct influence on a statistically significant dependent variable, this is called partial mediation. At the same time, the indirect influence of

independent variables on dependent variables through mediation variables remains significant. There are two classifications of partial mediation:

1. *Complementarity Partial Mediation.* In this example, the independent variable affects the dependent variable, which is partially explained by the mediation variable. *Competitive Partial*
2. *Mediation.* In this context, the mediating variables are positioned to reduce or strengthen the impact of the corresponding correlation between the independent variable and the dependent variable.

RESULTS AND DISCUSSION

Model Evaluation (SEM-PLS)

Evaluation of Measurement Models (*Outer Model*)

This assessment seeks to ensure the validity of the questionnaires used in the study. Key aspects include convergent validity, discriminant validity, and reliability. The following presents the results of the validity evaluation of the statements in the research questionnaire.

Validity Test

Convergent Validity

Validity assessments that use convergent validity are based on the correlation coefficient between statement indicators, scores, or score components derived through the SmartPLS 4.0 software package. An indicator is considered to have a high correlation rate if it exceeds the threshold of 0.7 (Hair et al., 2021), where an evaluation of convergent validity can be observed in the following table:

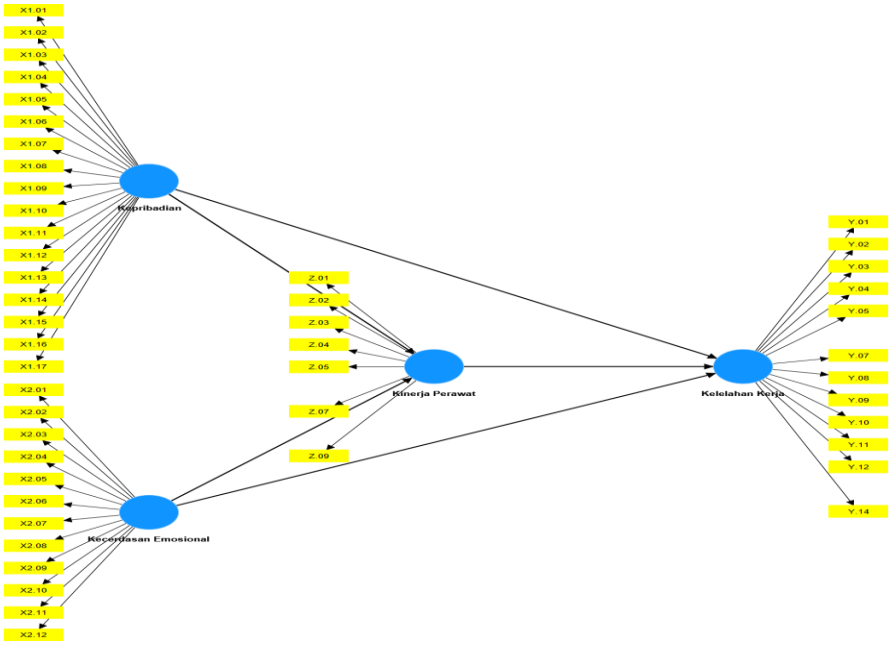


Figure 1. SEM-PLS Algorithm Results

Source : Processed by researchers in 2026

Table 4. Validity test results

	X1	X2	Y	Z
X1.01	0,796			
X1.02	0,915			
X1.03	0,822			
X1.04	0,904			
X1.05	0,872			
X1.06	0,884			
X1.07	0,823			
X1.08	0,825			
X1.09	0,896			
X1.10	0,831			
X1.11	0,903			
X1.12	0,868			
X1.13	0,905			
X1.14	0,895			
X1.15	0,896			
X1.16	0,856			
X1.17	0,803			
X2.01		0,911		
X2.02		0,811		
X2.03		0,877		
X2.04		0,821		
X2.05		0,841		

X2.06		0,821		
X2.07		0,842		
X2.08		0,820		
X2.09		0,862		
X2.10		0,885		
X2.11		0,851		
X2.12		0,816		
Y.01			0,842	
Y.02			0,747	
Y.03			0,712	
Y.04			0,783	
Y.05			0,744	
Y.07			0,780	
Y.08			0,735	
Y.09			0,755	
Y.10			0,780	
Y.11			0,787	
Y.12			0,778	
Y.14			0,746	
Z.01				0,867
Z.02				0,901
Z.03				0,881
Z.04				0,852
Z.05				0,772
Z.07				0,767
Z.09				0,757

Source : Processed by researchers 2026

According to the information presented in the table, the findings from the convergent validity assessment of the variables Personality (X1), Emotional Intelligence (X2), Work Fatigue (Y), and Employee Performance (Y) showed that each indicator had an external loading value exceeding 0.7. As a result, all indicators can be considered appropriate or valid for utilization in measuring the specified variables.

Validity of Discrimination

The discriminant validity test is carried out to ensure that the concept of each latent model is different from the other variables. In this study, the measurement of *heterosite monotrait* ratio (HTMT) is used as a measurement to assess *discriminant validity*, where the HTMT value is < 0.90. Table 4.13 shows the value of *heterosite monotrait* (HTMT).

Table 5. *Heteroitmonotrail ratio* (HTMT) results

	X1	X2	Y	Z
X1				
X2	0,816			
Y	0,802	0,821		
Z	0,826	0,929	0,963	

Source : Processed by researchers 2026

Furthermore, there is an evaluation of the Fornell-Larcker Criterion which suggests that the AVE construct should be compared with other constructs; furthermore, the construct of the model should not be greater than the AVE and can be said to be good or valid with a value of > 0.7. As for table 4.14, it shows *the value of Fornell Larcker.*

Table 6. Fornell *Lacker-Criterion Values*

	X1	X2	Y	Z
X1	0,865			
X2	0,799	0,847		
Y	0,775	0,787	0,766	
Z	0,792	0,887	0,893	0,830

Source : Processed by researchers 2026

According to the table mentioned above, it is shown that the square root of the Average Extracted Variance (AVE) for Personality is 0.865, for Emotional Intelligence is 0.847, for Work Fatigue is 0.766, and for Employee Performance is 0.830. Therefore, it can be concluded that each variable has a square root value of AVE that exceeds the correlation coefficient among the corresponding variables, signaling a benchmark greater than 0.7. As a result, it can be articulated that evaluations that use the Fornell-Larcker criteria for the discriminant validity of all variables are considered adequate and valid.

Reliability Test

Reliability tests aim to evaluate measurement models to determine whether an instrument's indicators can be relied upon to take accurate measurements. The construct is declared reliable if the *value of composite reliability* and *cronbach alpha* > 0.7.

The results of the reliability test, which can be seen in the table below:

Table 7. Reliability Test Value

	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)	Remarks
X1	0,979	0,981	0,749	Reliable
X2	0,964	0,968	0,718	Reliable
Y	0,936	0,945	0,587	Reliable
Z	0,924	0,939	0,688	Reliable

Source : Processed by researchers 2026

The Cronbach alpha coefficient for the variables under consideration revealed that the Personality Readiness variable had a value of 0.979, the Emotional Intelligence variable showed a value of 0.964, the Work Fatigue variable showed a value of 0.936, and the Employee Performance variable had a value of 0.924, indicating that all these variables showed commendable reliability and accuracy. In addition, the combined reliability coefficient for the Personality variable was calculated to be 0.981, for the Emotional Intelligence variable it was found to be 0.945, for the Work Fatigue variable it was assessed 0.587, and for the Employee Performance variable it was determined to be 0.939, thus confirming that all these variables are characterized by substantial reliability and accuracy.

Evaluation of Structural Models (*Inner Model)*

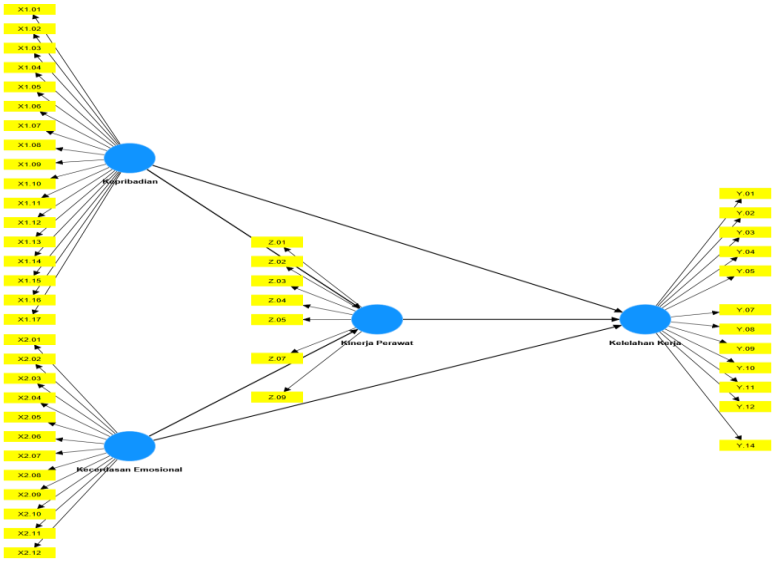


Figure 2.. SEM-PLS Bostropping Test Results

Source : Processed by researchers 2026

The mind model seeks to explain the relationship between latent variables by assessing the level of articulable variance and determining the relevance of p-values. This model serves as an estimate of cause-and-effect relationships (cause-and-effect relationships) between latent variables or constructs that cannot be directly measured. In the context of this analysis, five different types of tests are used, specifically R-squared, F-squared, and Hypothesis tests.

R Square

The determination coefficient, commonly referred to as the R-Square, serves as a quantitative assessment of the relationship between independent variables and dependent variables. A higher R-Square value signifies a more favorable termination rate associated with the variable. In terms of conventional interpretation, an R-Square value close to 0.75 indicates a strong model, a value close to 0.50 indicates a moderate correlation, and a value of around 0.25 indicates a weak predictive power model. The R-Square data can be checked in the table provided below:

Table 8. R Square Value

	R-square	R-square adjusted
Y	0,812	0,807
Z	0,805	0,802

Source : Processed by researchers in 2026

In the representation of the table given above, it is evident that the Work Fatigue variable reaches an R-squared value of 0.812, which corresponds to 81.2%. The findings showed that the Work Fatigue variable was significantly influenced by the variables Personality and Emotional Intelligence, categorized as a moderate influence, while additional factors not covered in the study model also exerted an influence.

F Square

F square is a local influence used to measure the magnitude of the influence between variables and to determine the goodness of the model. The influence that is assessed is an individual influence, not simultaneously. The value on effect size was divided into three categories, namely the small category ($0.02 < F2 < 0.15$), the medium category ($0.15 < F2 < 0.35$), and the large category ($F2 > 0.35$). The value *of F-square* can be seen through the table below:

Table 9. F Square Test Value

	X1	X2	Y	Z
X1			0,080	0,099
X2			0,014	0,913
Y				
Z			0,712	

Source : Processed by researchers 2026

F-square is used to measure the magnitude of the influence of latent variables on the structural level or level. Based on the table above, it shows that obtaining an *F-square* result on the relationship between Personality to Work Fatigue 0.080 which is included in the subcategory. The *F-square value* of the correlation between Personality and Work Fatigue is measured at 0.014, categorizing it in the moderate range. Simultaneously, the F-square statistic relating to the relationship between Employee Performance and Work Fatigue was recorded at 0.0712.

Hypothesis Test

Hypothesis testing is carried out through analysis of direct and indirect effects. Direct effects evaluate the correlation between independent variables and dependent variables, as well as the role of mediating variables. In addition, indirect effects investigate the impact of independent variables on dependent variables through mediated variables. In addition, this analytical process can be carried out by checking the probability value along with t-statistics. For probability values and p-values at the specified 5% alpha level, the critical threshold is set at < 0.05. The critical t-value corresponding to the alpha 5% is 1.96. As a result, the hypothesis acceptance or rejection criteria stipulate that an alternative hypothesis (Ha) is accepted, while a null (Ho) hypothesis is rejected if the t-statistic exceeds the t-table value of 1.96 and the p-value is below 0.05.

Table 10. Hypothesis Test Value

	Original sample (O)	T statistics (|O/STDEV|)	P values	Remarks
X1 -> Y	0,214	2,549	0,011	Significant
X1 -> Z	0,231	1,391	0,164	Insignificant
X2 -> Y	-0,119	0,821	0,411	Insignificant
X2 -> Z	0,702	4,251	0,000	Significant
Z -> Y	0,829	5,973	0,000	Significant
X1 -> Z -> Y	0,191	1,423	0,155	Insignificant

X2 -> Z -> Y	0,582	3,143	0,002	Significant

Source : Processed by researchers 2026

a. H1 is evident because p-value = 0.011 (less than 0.05) and T-statistics = 2.549 (past the general limit of significance). An O value = 0.214 indicates a positive influence, meaning that the higher the Personality, the employee's performance tends to improve. However, because the coefficient is not large (0.214), the effect can be understood as present and significant, but not the most powerful compared to other pathways with higher coefficients.
b. H2 is not proven because p-value = 0.164 (greater than 0.05) and T-statistics = 1.391 (have not reached the general limit of significance). The coefficient O = 0.231 is marked negative. This means that the influence of Emotional Intelligence shows that it does not have a positive effect on Employee Performance.
c. H3 is not proven because p-value = 0.411 (much greater than 0.05) and T-statistics = 0.821. The value of O = -0.119 is indeed a positive sign, but it is very small and insignificant. This means that the influence of Emotional Intelligence does not show a positive influence on Employee Performance.
d. H4 is evident because p-value = 0.000 (less than 0.05) and T-statistics = 4.251 (crossing the general limit of significance). The value of O = 0.702 indicates a positive influence, meaning that the higher the Emotional Intelligence, the Employee Performance tends to increase and is significant.
e. H5 is evident because p-value = 0.000 (less than 0.05) and T-statistics = 5.973 (crossing the general limit of significance). The value of O = 0.829 indicates a positive influence, meaning that the higher the Emotional Intelligence, the Employee Performance tends to increase and is significant.
f. H6 is not proven because p-value = 0.115 > 0.05 and statustic t = 1.423 and O value = 0.191. This means that the influence of personality mediated by work fatigue does not have a positive effect on Employee Performance.
g. H7 is not proven because p-value = 0.002 < 0.05 and statustic t = 3.143 and O value = 0.582. This means that the influence of emotional intelligence mediated by work fatigue shows no positive effect on Employee Performance.

The Influence of Personality on Work Fatigue

The results of the study showed that personality had a significant effect on nurses' work fatigue. This indicates that individual characteristics, such as adaptability, emotional stability, and how to cope with pressure, affect the level of work burnout experienced by nurses. Nurses with adaptive personalities tend to be better able to manage work demands and emotional stress compared to nurses who have a less flexible character.

These findings are in line with the research of Garrosa et al. (2011) which states that personality differences play an important role in determining an individual's response to work stress and the risk of burnout in health workers. In addition, Maslach, Schaufeli, and Leiter (2001) emphasized that personal factors such as personality are the main determinants in the emergence of work fatigue and burnout. Another study by Alarcon, Eschleman, and Bowling (2009) also found that certain personality traits were significantly associated with levels of work burnout and emotional burnout in high-demand professions.

The Effect of Emotional Intelligence on Work Fatigue

The results of the study prove that emotional intelligence has a significant effect on nurses' work fatigue. Nurses who are able to recognize, understand, and manage emotions well tend to have higher psychological resilience in the face of work pressure, so the risk of work fatigue can be reduced.

These findings support the research of Szczygieł and Mikolajczak (2018) who stated that emotional intelligence plays a protective factor against emotional fatigue in health workers. Furthermore, Hanafi (2016) found that emotional intelligence has a negative effect on nurse burnout and has a positive impact on service quality. Research by Hidalgo, Jurado et al. (2023) also confirms that emotional intelligence helps healthcare workers maintain emotional balance and reduce work burnout in high-pressure work environments.

The Role of Nurse Performance as a Moderation Variable

The results showed that nurses' performance mediated the influence of personality and emotional intelligence on work burnout. This means that a good personality and emotional intelligence will encourage improved performance of nurses, which ultimately helps to reduce the level of work burnout. Optimal performance allows nurses to manage tasks more effectively and reduce perceived psychological stress.

These findings are in line with the research of Endarwati et al. (2023) who stated that nurses' performance is influenced by psychological factors and plays a role in dealing with workload. In addition, Roslan (2019) found that nurses' performance is influenced by emotional

intelligence and functions as an adjustment mechanism to work pressure. Research by Garrosa et al. (2011) also confirms that good performance can weaken the impact of stress and work fatigue on health workers.

CONCLUSION

1. Personality has a significant effect on nurses' work fatigue. Differences in individual character and traits affect nurses' ability to deal with work pressure. Nurses with adaptive and emotionally stable personalities tend to experience lower levels of work burnout than nurses with less adaptive personalities.
2. Emotional intelligence has a significant effect on nurses' work fatigue. Nurses who are able to recognize, manage, and control their emotions well have higher psychological resilience, thus being able to reduce the impact of work stress and reduce the level of work fatigue.
3. Nurses' performance is influenced by personality and emotional intelligence. Good personality and high emotional intelligence encourage improved performance of nurses in carrying out their duties and responsibilities, especially in high-pressure work environments.
4. Nurse performance plays a mediating variable in the relationship between personality and emotional intelligence to work fatigue. Optimal performance is able to weaken the negative influence of psychological factors on work fatigue, while low performance tends to strengthen the impact of work fatigue.
5. A nurse's personality, emotional intelligence, and performance are interrelated factors in influencing work burnout. These three variables form a psychological mechanism and work behavior that plays an important role in determining the level of work fatigue of nurses.
6. Human resource management efforts in hospitals need to pay attention to the psychological aspects and performance of nurses. Improving emotional intelligence, developing adaptive personalities, and optimizing nurse performance are strategic steps to reduce work fatigue and improve the quality of health services.

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