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The Mediating Effect of Work Stress on the Relationship Between Intellectual Intelligence and Spiritual Intelligence and Nurse Performance (Study at PKU Muhammadiyah Hospital Sukoharjo)

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Abstract

Nurse performance plays a vital role in determining the quality of healthcare received by patients. Intellectual intelligence and spiritual intelligence are among the factors that can influence performance. Job stress can also impact nurse performance. This study uses a quantitative approach with an explanatory research approach to analyze the influence of intellectual intelligence and spiritual intelligence on nurse performance, with job stress as a mediating variable. This study aims to obtain empirical evidence regarding the relationship between these variables, both partially and simultaneously. Overall, it can be concluded that in this study, intellectual intelligence and spiritual intelligence play an important role in influencing job stress, but do not directly improve employee performance. Furthermore, job stress itself has not been shown to have a significant direct impact on employee performance. These findings indicate the need for further study of other variables that may play a greater role in influencing performance.

Keywords: Employee performance, Intellectual intelligence, Spiritual intelligence, Work stress

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1. Introduction

In the hospital context, nurse performance plays a vital role in determining the quality of healthcare services received by patients. Nurse performance encompasses not only how quickly and accurately they perform medical procedures, but also how they interact with patients, provide comfort, and establish effective communication. Optimal nurse performance directly impacts the quality of care received by patients, which in turn increases patient satisfaction, accelerates the recovery process, and reduces the risk of complications (Kosnan, 2020).

The importance of nurse performance lies not only in the technical aspects, but also in the emotional and psychological aspects of patient care. A nurse's success in performing their duties effectively significantly impacts patients' trust in the hospital and medical personnel in general. The primary goal of improving nurse performance is to provide quality healthcare, increase patient satisfaction, and support the achievement of overall patient rehabilitation and recovery goals (Misbahuddin, 2019).

One of the factors that can influence performance is intellectual intelligence and spiritual intelligence. These two types of intelligence can help nurses deal with the emotional challenges that come with their work, provide a sense of purpose and meaning in caring for patients, and enhance empathy and interpersonal relationships with patients. Such intelligence enables nurses to remain calm and attentive even when faced with high-pressure (stressful) situations (Nilamartini et al., 2021).

Intellectual intelligence plays a role in completing cognitive tasks, including those in the nursing field (Goleman, 2005). According to Judge & Robbins (2019), intellectual intelligence is the ability required to perform various mental activities such as thinking, reasoning, and problem-solving. Meanwhile, Purwanto (2013) emphasizes that intellectual intelligence is the capacity to adapt to new demands by using thinking tools that align with the intended goals. From these three expert opinions, it can be concluded that intellectual intelligence reflects the ability to carry out various tasks using relevant cognitive tools and to adapt to challenges in order to achieve predetermined goals. Among these goals is improving nurses' performance, which in turn contributes to the overall performance of the hospital. This implies that high (or good) intellectual intelligence is associated with improved performance. Conversely, low intellectual intelligence tends to result in decreased performance

According to the theory proposed by Goleman (2005), intellectual intelligence plays a role in completing cognitive tasks, including in nursing. Intellectual intelligence demonstrates a nurse's ability to think critically, understand medical information, and make informed decisions, significantly impacting the effectiveness of care. High intellectual intelligence helps nurses handle complex medical problems and maintain the quality of care provided to patients. A study by Cherniss (2010) showed that high intellectual intelligence is associated with problem-solving skills in the workplace. Conversely, low intellectual intelligence can lead to decreased performance.

Employee performance is influenced not only by intellectual intelligence but also by job stress. Almost all employees experience job stress in their work environment. Excessive workloads and demands that must be completed in a short time can put pressure on employees. In the United States, 27 percent of employees experience job stress. People experiencing job stress tend to be unproductive, lazy, ineffective and inefficient in their work, and exhibit various attitudes that can be detrimental to the organization (Psychologia, 2020).

On the other hand, work stress is another factor that can impact nurse performance. High workloads, demands to provide optimal care within limited time, and interactions with patients who may be in critical condition can cause nurses to feel stressed. Poorly managed work stress can affect concentration, motivation, and ultimately the quality of care provided to patients. Work stress is a condition of physical and emotional disturbance that arises from a mismatch between the work performed and the worker's expectations, abilities, resources, and needs. Work stress often poses a challenge that can hinder nurses' optimal performance. High work pressure, excessive workloads, and the frequent emergency situations nurses face can trigger work stress (Erianti et al., 2025).

High levels of work stress can disrupt task performance and cause a person to lose control. This can lead to poor decision-making and unstable behavior (Robbins et al., 2018). The extreme impact of this condition is a decline in performance to its lowest point, which can lead to health problems, inability to work, despair, and even decisions to quit. Thus, uncontrolled stress can significantly impact a person's performance in the work environment (Munandar, 2001). On the other hand, the work stress theory by Zohar & Marshall (2007) explains that stress can affect an individual's performance at work, both positively and negatively.

Another factor that influences performance is spiritual intelligence. Bitsch & Olynk (2008) stated that Spiritual Quotient is essentially a person's basic ability that contains life experiences, which are part of the life of a person or even an organization. Meanwhile, Zohar & Marshall (2007) defined spiritual intelligence as intelligence that is based on the inner part of the self that is related to wisdom beyond the ego or soul consciousness. As an intelligence that is constantly used not only to understand existing values, but also to creatively discover new values in life. If the spiritual quotient (SQ) has developed well, then the description or characteristics of people who have high spiritual intelligence (SQ) according to Zohar & Marshall (2007), namely: 1) The ability to be flexible (spontaneously and actively adaptive), 2) High level of awareness, 3) The ability to adapt and utilize suffering, 4) The ability to face and overcome pain, 5) Quality of life inspired by vision and mission, 6) Reluctance to cause unnecessary harm, 7) The tendency to see the relationship between various things (holistic view), 8) A real tendency to ask "why or what if" to find fundamental answers, 9) A leader who is dedicated and responsible.

The theory of spiritual intelligence (Zohar & Marshall, 2007) can be summarized as an individual's ability to be flexible and adaptive, spontaneously, and actively fulfill their duties and responsibilities, inspired by the organization's vision and mission, to achieve optimal performance. Essentially, the argument Zohar & Marshall (2007) argues that spiritual intelligence reflects the human capacity to behave well in accordance with appropriate norms. This implies that employees with high spiritual intelligence consistently strive to improve their work performance.

PKU Muhammadiyah Sukoharjo Hospital is a private hospital located in Sukoharjo Regency. This hospital consistently implements phased efforts to develop management, services, and supporting facilities to improve the quality of healthcare services for the community. One step taken to improve service quality is to increase the number of employees in various service units, particularly in the medical support services department. Based on existing data, the composition of the number of officers in each medical support service unit at PKU Muhammadiyah Sukoharjo Hospital includes 23 officers in the pharmacy unit, 19 officers in the medical records unit, 12 officers in the nutrition unit, 8 officers in the medical rehabilitation unit, 9 officers in the laboratory unit, and 5 officers in the radiology unit (Khasyanah et al., 2024).

Overall, to improve nurse performance at PKU Muhammadiyah and reduce the existing gap, more systematic efforts are needed to support the development of nurses' intellectual and spiritual intelligence, as well as provide the necessary resources and training. This is expected to improve nurses' preparedness to face job challenges and provide better patient care.

2. Methods

This study uses a quantitative approach with an explanatory approach to analyze the influence of intellectual intelligence and spiritual intelligence on nurse performance, with job stress as a mediating variable. This study aims to obtain empirical evidence regarding the relationship between these variables, both partially and simultaneously. The research design used is a causal-comparative study, aiming to examine the causal relationship between the independent variables (intellectual intelligence and spiritual intelligence) and the dependent variable (nurse performance), with job stress as a mediating variable.

The research subjects in this study were nurses working at PKU Muhammadiyah Hospital in Sukoharjo. The focus of this study was to examine the mediating effect of work stress on the relationship between intellectual intelligence and spiritual intelligence on nurse performance. This study aimed to explore how intellectual intelligence and spiritual intelligence affect nurse performance, both directly and indirectly through work stress experienced by nurses at the hospital. In this context, this study focused on the interaction between internal factors (intellectual and spiritual intelligence) and external factors (work stress) in determining nurse performance outcomes.

3. Results and Discussion

3.1 Results

Respondent Demographics

Respondent demographics will discuss the descriptive analysis of 100 respondents, a sample of employees at PKU Muhammadiyah Hospital, Sukoharjo.

Demographics	Category	Respondents	Presentation (%)
Gender	Woman	70	70%
	Man	30	30%
Age	20–30 years old	60	60%
	31–40 years old	25	25%
	41–50 years old	10	10%
	> 50 years old	5	5%
Education	D3	35	35%
	S1	65	65%
Years of Service	1 years	20	20%
	2 years	15	15%
	3 years	10	10%
	4 years	5	5%
	5 years	10	10%
	> 5 years	40	40%

	Adult ward	30	30%
	Pediatric ward	20	20%
	IGD	18	18%
	ICU	10	10%
	NICU	10	10%
	Polyclinic	5	5%
	Management/office	4	4%
	IBS	2	2%
	SPV	1	1%

Tabel 1. Respondent Demographics

Based on manipulated data from 100 respondents, the majority of respondents were female (70%), while 30 were male (30%). This indicates that the workforce in this population is predominantly female. In terms of age group, the majority of respondents were in the 20–30 age range (60%), followed by 25 (25%) aged 31–40, 10 (10%) aged 41–50, and the remaining 5 (5%) aged 50 and over. This indicates that the workforce is dominated by young, productive age groups.

Based on their highest level of education, the majority of respondents (65%) had a Bachelor's degree (S1), while 35 (35%) had a Diploma 3 (D3). This data indicates that the majority of the workforce has a bachelor's degree. In terms of work experience, 40 respondents (40%) had more than 5 years of service, indicating a

significant number of experienced workers. Meanwhile, 20 respondents (20%) had 1 year of service, followed by 15 (15%) with 2 years, 10 (10%) with 3 years, 10 (10%) with 5 years, and 5 (5%) with 4 years. In terms of work units, the majority of respondents worked in the Adult Ward (30 people), followed by the Pediatric Ward (20 people), the Emergency Room (18 people), and the Intensive Care Unit (10 people). Other units, such as the NICU, Polyclinic, Management/Office, IBS, and SPV, each had smaller proportions, ranging from 1% to 10%.

Descriptive Statistical Analysis

Descriptive statistics provide an overview of the information regarding the data used in this study, as follows:

Variabel	Mean	Median	Min	Max	Standard Deviation
Kecerdasan Intelektual	0.000	-0.059	-2.796	1.254	1.000
Kecerdasan Spritual	0.000	-0.178	-2.813	1.460	1.000
Kinerja Perawat	0.000	-0.073	-2.868	1.243	1.000
Stres Kerja	0.000	-0.370	-2.716	1.474	1.000

Tabel 2. Descriptive Statistics Results
Sumber: Data Primer yang diolah SmartPLS 3.0 2025

Based on Table 2, the results of the descriptive statistical analysis of the four main variables in the study—Intellectual Intelligence, Spiritual Intelligence, Nurse Performance, and Job Stress—show that all variables have a mean value of 0.000 and a standard deviation of 1.000. This indicates that the data has undergone a standardization or normalization process, which is commonly used in SmartPLS-based analyses to equalize the scale between variables. For the Intellectual Intelligence variable, the median value was recorded at -0.059, with a minimum value of -2.796 and a maximum of 1.254, indicating a fairly wide distribution of data but still within reasonable limits. Meanwhile, Spiritual Intelligence had a median of -0.178, a minimum value of -2.813, and a maximum of 1.460, indicating a slightly wider range than Intellectual Intelligence.

The Nurse Performance variable had a median of -0.073, a minimum of -2.868, and a maximum of 1.243, indicating a significant spread in the data, with some respondents reporting extreme values lower than the mean. Meanwhile, the Job Stress variable recorded a median of -0.370, a minimum of -2.716, and a maximum of 1.474, indicating a tendency for most respondents to have relatively lower job stress scores than the mean. Overall, the median values for all four variables were below zero, indicating a slightly negative skewed distribution of the data. However, because the standard deviation for all variables was 1.000, the data distribution was uniform, facilitating further comparative analysis between variables. These data demonstrate a fairly good distribution quality and can be used for subsequent hypothesis testing.

PLS-Based Structural Equation Modeling (SEM) Analysis PLS-SEM analysis involves the following stages (Ghozali & Latan, 2012): Outer Model Evaluation Outer model evaluation is used to test the relationship between latent variables and indicators. The outer model evaluation, processed using SmartPLS 3.0, is described as follows:

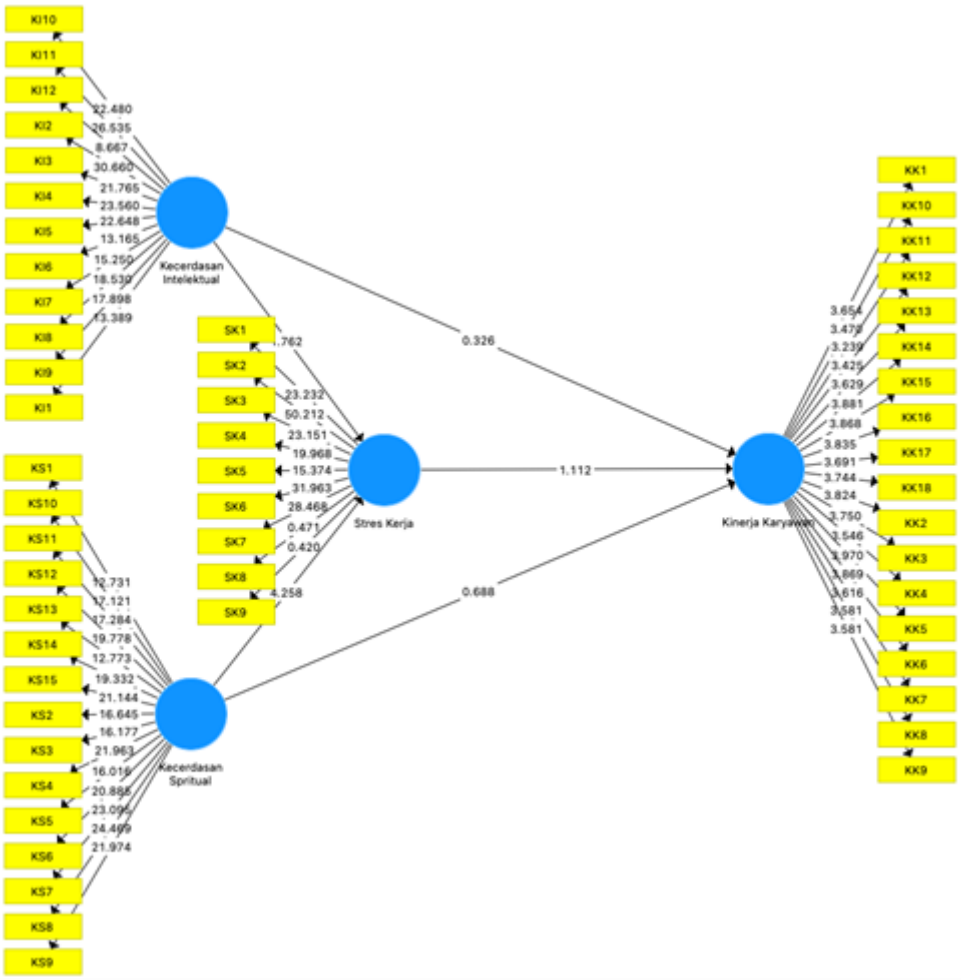

Figure 1. Outer Model Test Results
Source: Processed by researchers 2025

Evaluation of the outer model is conducted by conducting validity and reliability tests. Validity tests, including convergent validity and discriminant validity, and reliability tests, including composite reliability and Cronbach's alpha, are explained below:

1. Convergent Validity

Convergent validity testing can be seen from two criteria: standardized loading estimates or factor loading estimates of 0.5 or higher, or ideally 0.7 or higher, and average variance extracted (AVE) of 0.5 or higher. If an indicator has an outer loading value >0.7, it is said to meet the requirements for convergent validity and can be considered effective as an indicator for measuring the construct/variable.

	Intellectual intelligence	Spiritual Intelligence	Employee Performance	Work Stress
KI10	0,844			
KI11	0,854			
KI12	0,669			
KI2	0,883			
KI3	0,832			
KI4	0,830			
KI5	0,832			
KI6	0,750			
KI7	0,830			
KI8	0,801			
KI9	0,799			
KK1			0,813	

KK10			0,743	
KK11			0,793	
KK12			0,843	
KK13			0,826	
KK14			0,847	
KK15			0,766	
KK16			0,800	
KK17			0,833	
KK18			0,850	
KK2			0,866	
KK3			0,699	
KK4			0,661	
KK5			0,807	
KK6			0,807	
KK7			0,847	
KK8			0,770	
KK9			0,828	
KS1		0,726		
KS10		0,815		
KS11		0,796		
KS12		0,823		
KS13		0,761		
KS14		0,828		
KS15		0,811		
KS2		0,775		
KS3		0,789		
KS4		0,847		
KS5		0,779		
KS6		0,819		
KS7		0,826		
KS8		0,838		
KS9		0,821		
SK1				0,865
SK2				0,926
SK3				0,853
SK4				0,834
SK5				0,791
SK6				0,887
SK7				0,882
SK8				-0,077
SK9				-0,070
KI1	0,738			

Tabel 3. Summary of the validity test results for loading factor
Source: Primary data processed using SmartPLS 3.0 2025

Based on the results of convergent validity testing through outer loading value analysis, all indicators for the variables of Intellectual Intelligence, Spiritual Intelligence, Employee Performance, and Job Stress generally showed values that met the minimum threshold of 0.70. The lowest outer loading values were recorded in indicators KK4 (0.661) and KK3 (0.699) for the Employee Performance variable, and KI12 (0.669) for the

Intellectual Intelligence variable. Although below the ideal value, these indicators can still be considered if their contribution to the overall construct is significant.

Conversely, the highest values were found in indicators SK2 (0.926) and SK6 (0.887) of the Job Stress variable, and KI2 (0.883) of the Intellectual Intelligence variable, indicating that these indicators have a very strong contribution in representing their constructs. However, two indicators in the Job Stress variable, namely SK8 (-0.077) and SK9 (-0.070), had negative loadings and were far below the minimum threshold. These indicators were declared convergently invalid and should be removed from the model to improve construct validity. Overall, it can be concluded that most indicators have good convergent validity, meaning they can be relied upon to measure the variables studied: Intellectual Intelligence, Spiritual Intelligence, Employee Performance, and Job Stress.

2. Construct Validity

Construct validity is measured by an average variance extracted (AVE) value above 0.5. The results of the average variance extracted (AVE) test are as follows:

	Average Variance Extracted (AVE)	**Conclusion**
Intellectual intelligence	0.651	Valid
Spiritual intelligence	0.647	Valid
Employee performance	0.643	Valid
Work stress	0.581	Valid

Tabel 4. Test results Average Variance Extracted (AVE)
Source: Primary data processed using SmartPLS 3.0 2025

Based on the AVE test results shown in Table 4, all analyzed variables showed AVE values above 0.50. This indicates that each construct has good convergent validity, where more than 50% of the indicator variance can be explained by the intended construct. The Intellectual Intelligence variable has an AVE value of 0.651, the Spiritual Intelligence variable of 0.647, the Employee Performance variable of 0.643, and the Job Stress variable of 0.581. Thus, all variables meet the minimum AVE criteria (> 0.50) as suggested by Hair et al. (2019), which states that an AVE value above 0.50 indicates that the construct has sufficient ability to explain the variance of its indicators.

In conclusion, the measurement model used in this study is considered convergently valid and reliable in representing the constructs of each studied variable.

3. Discriminant Validity

Discriminant validity can be seen from the composite reliability and Cronbach's Alpha values, with criteria of 0.7 and 0.6, respectively. The results of the composite reliability and Cronbach's Alpha can be seen in Table 5 below:

	Cronbach's Alpha	**Composite Reliability**	**Information**
Intellectual Intelligence	0.951	0.957	Reliabel
Spiritual Intelligence	0.961	0.965	Reliabel
Employee Performance	0.967	0.970	Reliabel
Work Stress	0.868	0.902	Reliabel

Tabel 5. Composite Reliability & Cronbach’s Alpha
Source: Primary data processed using SmartPLS 3.0 2025

Table 5 shows that the composite reliability and Cronbach's alpha test results for all research variables were greater than 0.70, indicating that all latent variables are reliable. Inner Model Evaluation Inner model evaluation is a testing model used to answer research hypotheses by assessing the significance of exogenous latent variables on endogenous latent variables.

The quality of the inner model is assessed based on its ability to predict endogenous variables. Several criteria facilitate this model quality assessment, including the coefficient of determination (R2) and hypothesis testing.

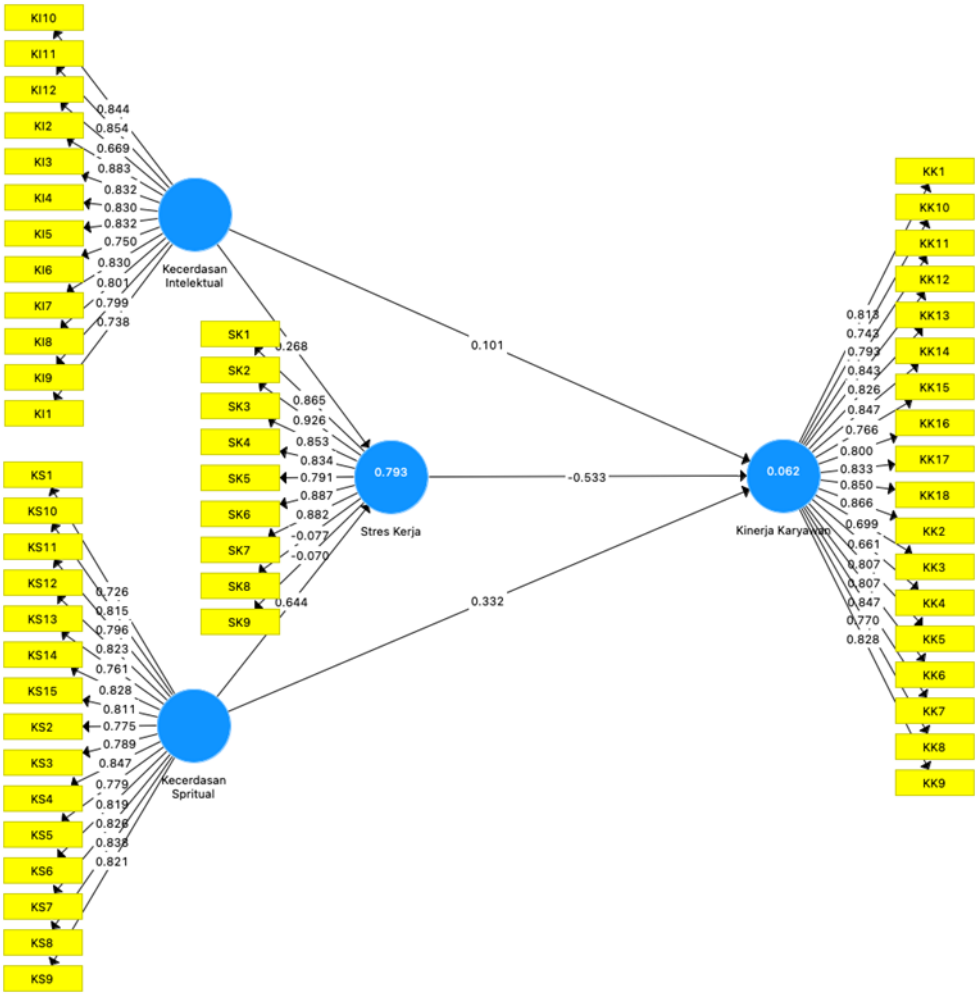

Figure 2. Test results Inner model
Source: Processed by researchers 2025

Figure 2 shows the t-test of each exogenous latent variable relative to the endogenous latent variable. To meet the criteria for a structural model, several factors must be evaluated, namely:

1. Coefficient of Determination

Evaluation of the coefficient of determination is primarily based on the R-square value. The R-square value can be interpreted as an indication of the extent to which the exogenous variables in the model explain the endogenous variables. The R-square results for each endogenous variable are shown in Table 6 below:

	R Square	R Square Adjusted
Employee performance	0.062	0.032
Work stress	0.793	0.788

Tabel 6. R-Square value
Source: Primary data processed using SmartPLS 3.0 2025

Based on the results of the coefficient of determination test shown in Table 6, an R-Square value of 0.793 was obtained for the Job Stress variable, and 0.062 for the Employee Performance variable. The R-Square value of 0.793 for the Job Stress variable indicates that 79.3% of the variance in Job Stress can be explained by the independent variables that influence it in the model. This indicates that the model has very high predictive power for respondents' job stress. Thus, only 20.7% of the variance in job stress is explained by other factors outside the research model.

Meanwhile, the R-Square value of 0.062 for the Employee Performance variable indicates that only approximately 6.2% of the variance in Employee Performance can be explained by the constructs used in the model. This means that 93.8% of the variance in employee performance is influenced by other factors not included in this research model. This indicates that the model's predictive power for employee performance variables is very low, and therefore, it is recommended to reevaluate relevant factors and consider adding other constructs in future research. Thus, these results emphasize the importance of strengthening the

conceptual model, particularly aspects that influence employee performance. The constructs that influence work stress have demonstrated strong relationships within the model.

2. Hypothesis Testing After conducting various evaluations of both the outer and inner models, the next step is to test the hypothesis to explain the direction of the relationship between the endogenous and exogenous variables. Hypothesis testing in this study was conducted using a t-test with a certain level of significance (value > 1.96 with a 5% significance level < 0.05): a. If the probability value is (≤ 0.05), then Ho is rejected and Ha is accepted, indicating significance. b. If the probability value is (> 0.05), then Ho is accepted and Ha is rejected, indicating insignificance. These values can be seen in Table 7 below:

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Intellectual intelligence -> Employee performance	0,101	0,118	0,310	0,326	0,745
Intellectual intelligence -> Work Stress	0,268	0,267	0,152	2,062	0,049
Spiritual intelligence -> Employee performance	0,332	0,254	0,483	0,688	0,492
Spiritual intelligence -> Work Stress	0,644	0,645	0,151	4,258	0,000
Work Stress -> Employee performance	-0,533	-0,463	0,480	1,112	0,267
Intellectual intelligence -> Work Stress -> Employee performance	-0.143	-0.128	0.161	0.886	0.376
Spiritual intelligence -> Work Stress -> Employee performance	-0.344	-0.293	0.331	1.037	0.300

Tabel 7. Hypothesis test results
Source: Processed by researchers 2025

Based on the results of the path analysis, it can be concluded that not all relationships between variables in the model show statistically significant effects.

1. Intellectual Intelligence does not significantly influence Employee Performance, with a p-value of 0.745 (>0.05) and a T-value of 0.326. This means that intellectual intelligence does not make a strong direct contribution to improving employee performance in this model.
2. Intellectual Intelligence significantly influences Job Stress, as indicated by a p-value of 0.049 (<0.05) and a T-value of 2.062. This means that the higher a person's intellectual intelligence, the better able they are to manage or reduce job stress levels.
3. Spiritual intelligence does not significantly influence employee performance, with a p-value of 0.492 (>0.05) and a T-value of 0.688. This indicates that spiritual intelligence has not directly improved employee performance in the context of this study.
4. Spiritual intelligence has a significant influence on job stress, with a p-value of 0.000 (<0.05) and a T-value of 4.258. This indicates that individuals with high spiritual intelligence tend to be more able to manage job stress effectively.
5. Job stress does not significantly influence employee performance, as indicated by a p-value of 0.267 (>0.05) and a T-value of 1.112. This indicates that in this model, job stress does not directly reduce or significantly impact employee performance.
6. Job stress does not significantly mediate the effect of intellectual intelligence on employee performance, as indicated by a p-value of 0.376 (>0.05) and a T-value of 0.886. This means that although intellectual intelligence influences job stress, the mediation pathway through job stress is not strong enough to mediate performance.
7. Job stress does not significantly mediate the effect of spiritual intelligence on employee performance, as indicated by a p-value of 0.300 (>0.05) and a T-value of 1.037. Thus, the effect of spiritual intelligence on employee performance is not significantly mediated by job stress in this study.

Overall, it can be concluded that in this study, intellectual intelligence and spiritual intelligence play a significant role in influencing work stress, but do not directly improve employee performance. Furthermore, work stress itself was not proven to have a significant direct impact on employee performance. These findings

indicate the need for further study of other variables that may play a more significant role in influencing performance.

3.2 Discussion

The Influence of Intellectual Intelligence on Nurse Performance

The results of this study indicate that intellectual intelligence does not significantly influence nurse performance, as indicated by a significance value of p = 0.745 (>0.05) and a T value of 0.326. This means that, in the context of this study, intellectual intelligence does not make a strong enough direct contribution to improving nurse performance. This finding indicates that although intellectual intelligence is theoretically considered important in completing complex cognitive tasks, in reality, its role is not automatically directly proportional to performance in the field.

Theoretically, various experts such as Goleman (2005), Judge & Robbins (2019), and Purwanto (2013) emphasize that intellectual intelligence encompasses the ability to think critically, solve problems, and adapt to new situations—all of which are relevant to nursing work, which requires a quick and accurate response to patient conditions. From this perspective, intellectual intelligence should be a crucial foundation in supporting nurse performance. However, the results of this study do not empirically support this theory.

The discrepancy between theory and research results can be explained by several possibilities. First, nurse performance may be more influenced by other factors such as emotional intelligence, communication skills, the work environment, motivation, or the hospital management system. In the nursing profession, the ability to be empathetic, work in a team, and handle emotional stress often outweighs cognitive abilities. Second, these results may also be influenced by the characteristics of the respondents and the organizational context in which the study was conducted, such as high workloads or a lack of adequate system support.

Thus, the first hypothesis, which stated that intellectual intelligence significantly influences nurse performance, was not supported in this study. These findings confirm that nurse performance is the result of the interaction of multiple dimensions, and that intellectual intelligence alone is insufficient to explain variations in nurse performance in the field.

The Influence of Spiritual Intelligence on Nurse Performance

Based on the data analysis, it was found that spiritual intelligence did not significantly influence nurse performance, as indicated by a significance value of p = 0.492 (> 0.05) and a T value of 0.688. This finding indicates that, in the context of this study, spiritual intelligence has not been able to make a strong direct contribution to improving nurse performance at PKU Muhammadiyah Hospital, Sukoharjo. In other words, although theoretically, spiritual intelligence is believed to be a moral and ethical foundation for work, in practice, its direct impact on nurses' work quality has not been observed.

Theoretically, according to Bitsch and Olynk (2008), spiritual intelligence is a basic ability derived from life experiences and closely related to life values, both in individuals and organizations. Meanwhile, Zohar and Marshall (2007) define spiritual intelligence as an intelligence that originates from within, related to an awareness of the values and meaning of life, as well as the ability to be wise, creative, and oriented toward higher goals. In the context of nursing, spiritual intelligence ideally guides nurses to act according to norms, empathize with patients, and maintain integrity and professionalism in service.

However, the results of this study indicate that although spiritual intelligence plays a significant role in shaping behavior and work ethics, it does not necessarily have a direct impact on nurse performance. It is likely that other factors, such as workload, psychological stress, organizational conditions, or incentive systems, are more dominant in determining variations in nurse performance. Furthermore, the role of spiritual intelligence is likely more indirect, for example through increased intrinsic motivation, job satisfaction, or commitment to humanitarian service values, which are not always quantitatively measured in formal performance.

Therefore, the second hypothesis stating that spiritual intelligence has a significant effect on nurse performance was not proven in this study. This emphasizes that spiritual intelligence, while important in shaping character and work attitudes, is not necessarily the primary determinant of achieving high performance. Therefore, improving nurse performance should not only focus on strengthening spiritual aspects, but also need to be accompanied by improvements in technical competence, stress management, and improvements to more supportive work systems.

The Effect of Intellectual Intelligence on Nurses' Occupational Stress

The results of this study indicate that intellectual intelligence significantly influences nurses' occupational stress, as indicated by a p-value of 0.049 (<0.05) and a T-value of 2.062. This finding indicates that the higher a nurse's intellectual intelligence, the better their ability to manage pressure and workload, resulting in a tendency to reduce work stress. This means that nurses with higher levels of intellectual intelligence are better

able to face work challenges rationally and systematically, and have better critical thinking and problem-solving skills in stressful situations.

In the context of the nursing profession, intellectual intelligence (IQ) plays a crucial role in supporting decision-making, managing medical information, and communicating with patients and the medical team. Nursing requires not only technical skills but also the ability to think logically and quickly in emergency situations. When nurses possess adequate intellectual abilities, they tend to be able to analyze situations more calmly and objectively, thereby reducing the likelihood of prolonged stress. This is in line with the opinion of Siagian (2012) and Mangkunegara (2012) who stated that work stress is tension that affects the psychological and physiological aspects of workers, and can arise when individuals feel unable to cope with work demands.

Furthermore, according to Lazarus and Folkman (1984), the ability to cope with or manage stress depends heavily on an individual's cognitive abilities to assess, understand, and respond to the stressors they face. In this regard, intellectual intelligence plays a role in helping individuals formulate adaptive and rational coping strategies, such as planning, problem-solving, and effective decision-making. This opinion is supported by Radley et al. (2005), who stated that workers with high intellectual intelligence tend to be better able to adapt to work pressure and demonstrate greater psychological resilience.

Thus, the third hypothesis, stating that intellectual intelligence significantly influences nurses' work stress, was confirmed in this study. These findings have important implications for hospital management, particularly in the recruitment and human resource development process. Selection that considers intellectual intelligence, along with training that enhances critical thinking and problem-solving skills, can help reduce nurses' work stress levels and create a healthier and more productive work environment.

The Influence of Spiritual Intelligence on Nurses' Occupational Stress

The results of this study indicate that spiritual intelligence has a significant influence on nurses' occupational stress, with a significance value of p = 0.000 (<0.05) and a T value of 4.258. This finding provides evidence that nurses with high levels of spiritual intelligence tend to be better able to manage and reduce occupational stress. This means that spiritual intelligence plays a crucial role in fostering nurses' mental and emotional resilience in dealing with work pressures in a complex and challenging hospital environment.

Theoretically, Zohar and Marshall (2007) explain that spiritual intelligence is grounded in a deeper self-awareness that transcends the ego and connects with the values of wisdom. This intelligence not only supports individuals in living a meaningful life but also helps them face difficult situations with greater calm, patience, and sincerity. In the context of nursing, spiritual intelligence helps individuals accept workloads with grace, control negative emotions, and maintain motivation to provide the best possible service, even under stressful conditions.

These results also align with the findings of Aini et al. (2023), who found that practicing spirituality in the workplace helps individuals cope with various challenges such as stress, conflict between colleagues, and even burnout. With spiritual intelligence, nurses tend to be able to reduce emotional stress through spiritual approaches such as prayer, meditation, or a more humane interpretation of patient suffering. This attitude indirectly strengthens psychological resilience and prevents the emergence of prolonged stress.

Thus, the fourth hypothesis, stating that spiritual intelligence has a significant effect on nurses' work stress, was confirmed in this study. These findings reinforce the understanding that developing the spiritual dimension in nurses is a crucial element in stress management strategies. Therefore, hospitals need to consider a holistic approach to human resource development, not only through technical and managerial training, but also through spiritual development programs that can strengthen moral values, empathy, and inner peace in carrying out professional duties.

The Effect of Work Stress on Nurse Performance

Based on the analysis, work stress did not significantly impact nurse performance, as indicated by a p-value of 0.267 (>0.05) and a T-value of 1.112. These results indicate that, in this research model, the level of work stress experienced by nurses does not directly influence a significant decrease or increase in their performance. In other words, work stress is not a primary factor determining variation in nurse performance at PKU Muhammadiyah Hospital, Sukoharjo.

Theoretically, work stress is defined as a state of physical and emotional tension arising from a mismatch between job demands and an individual's abilities, resources, or needs. In the nursing context, pressure stemming from high workloads, significant responsibilities, and frequent emergencies can trigger stress. Robbins et al. (2018) emphasize that high levels of stress can disrupt decision-making, reduce emotional stability, and negatively impact performance. Munandar (2001) also states that unmanaged work stress can lead to health problems, burnout, and even lead to the desire to resign from work.

However, the findings in this study did not indicate a significant direct effect of work stress on nurse performance. This could be explained by the possibility of mediating or moderating factors, such as coping

skills, workplace social support, spirituality, or work experience, which help nurses maintain their performance despite pressure. Furthermore, not all forms of stress are destructive; some forms of eustress (positive stress) can actually motivate individuals to work better, be more focused, and be more productive.

Therefore, the fifth hypothesis, which stated that work stress has a significant effect on nurse performance, was not proven in this study. These findings suggest that nurses can maintain their performance despite certain work pressures, as long as they have adequate stress management mechanisms. Therefore, it is important for hospital management to provide psychological support, stress management training, and build a healthy and supportive work environment to maintain stable nurse performance in the long term.

The Relationship between Intellectual Intelligence and Nurse Performance Mediated by Job Stress

The analysis results show that job stress does not significantly mediate the relationship between intellectual intelligence and nurse performance, as indicated by a significance value of p = 0.376 (>0.05) and a T value of 0.886. Thus, although intellectual intelligence has a significant influence on job stress, job stress is not strong enough to act as a mediating pathway that significantly bridges the relationship between intellectual intelligence and nurse performance in this study.

Theoretically, intellectual intelligence refers to an individual's ability to think logically, solve problems, comprehend complex information, and make appropriate decisions in critical situations (Goleman, 2005). In the context of the nursing profession, intellectual intelligence is essential for handling dynamic clinical situations, making medical judgments, and providing high-quality care. This ability is also expected to help nurses manage job stress more effectively through appropriate coping strategies (Lazarus & Folkman, 1984).

Based on these findings, it is known that although nurses with high intellectual intelligence tend to have better coping skills and lower levels of work stress, this does not necessarily contribute significantly to improved performance through the mediation pathway of work stress. This means that work stress does not play a significant role as an intermediary variable in this relationship. It is possible that the effect of intellectual intelligence on performance is more direct, or is influenced by other factors such as social support, work motivation, organizational conditions, and emotional intelligence that are not included as variables in this research model.

The Relationship between Spiritual Intelligence and Nurse Performance Mediated by Job Stress

The results of this study indicate that job stress does not significantly mediate the effect of spiritual intelligence on nurse performance, as indicated by a significance value of p = 0.300 (> 0.05) and a T value of 1.037. Therefore, in this model, there is no significant mediation relationship between spiritual intelligence and performance through job stress.

Conceptually, spiritual intelligence is a dimension of intelligence rooted in an individual's deepest awareness, related to values, the meaning of life, and a connection with something higher than oneself (Zohar & Marshall, 2007). In the context of the nursing profession, spiritual intelligence is considered highly relevant because it helps individuals cope with emotional stress, ethical dilemmas, and maintain motivation and a spirit of service.

Previous theories suggest that spiritual intelligence can help individuals better manage job stress. This is based on the ability of spirituality to cultivate inner peace, gratitude, and acceptance of difficult circumstances. Therefore, theoretically, work stress has the potential to be a mediator in the relationship between spiritual intelligence and performance, where high levels of spiritual intelligence can reduce stress, and low levels of stress can improve performance.

However, in this study, although spiritual intelligence was shown to have a significant effect on reducing work stress, the mediation pathway of work stress did not contribute significantly to nurse performance. This means that while spiritual intelligence helps manage stress, the effect is not strong enough to indirectly improve performance through stress reduction.

This finding suggests that the relationship between spiritual intelligence and performance is more direct, or perhaps through other mechanisms such as job satisfaction, intrinsic motivation, and ethical commitment, which were not examined in this model. Furthermore, the effect of stress on performance may be mitigated by other factors such as organizational support, work experience, or effective coping strategies.

Thus, these findings imply that while developing spiritual intelligence remains important, strategies to improve nurse performance should not only focus on spiritual aspects and stress management, but also consider enhancing professional competence, providing supportive work systems, and strengthening other motivational factors that more directly influence performance.

4. Conclusion

Based on the research results and analysis of the five variables studied, several key points can be concluded as follows:

Intellectual intelligence did not significantly influence nurse performance. This indicates that while intellectual intelligence is theoretically important in completing complex tasks, in practice, it does not directly contribute to improved performance. This finding confirms that other factors such as emotional intelligence, work motivation, or organizational conditions may be more dominant in influencing nurse performance.

Spiritual intelligence did not significantly influence nurse performance. Although spiritual intelligence is believed to be the moral and ethical foundation of nursing practice, its influence is not directly reflected in performance output. This suggests that spiritual aspects may play a more significant role in shaping work attitudes and ethics, but are not strong enough to be the primary determinant of nurse performance quantitatively.

Intellectual intelligence has been shown to significantly influence job stress reduction. Nurses with high IQs tend to be better able to manage stress, solve problems, and make rational decisions in challenging work situations. This demonstrates that intellectual intelligence is a protective factor against job stress in the hospital environment.

Spiritual intelligence has also been shown to significantly influence nurses' work stress. Nurses with high spiritual intelligence tend to have inner peace, patience, and the ability to accept workloads more sincerely, enabling them to cope with work pressure with greater emotional stability. This finding reinforces the importance of developing the spiritual dimension in building stress resilience in stressful work environments like hospitals.

Work stress did not significantly impact nurses' performance. This means that even though nurses experience work stress, it does not directly reduce their performance. This may be due to strong coping skills, social support, and other non-cognitive factors that enable nurses to remain productive despite pressure.

Work stress did not significantly mediate the relationship between intellectual intelligence and nurse performance. Although intellectual intelligence significantly impacted work stress, statistical tests showed a significance value of $p = 0.376$ (>0.05) and a T value of 0.886, indicating that the mediation pathway of work stress was not strong enough to bridge the relationship between intellectual intelligence and improved nurse performance. This suggests that the influence of intellectual intelligence on performance is more likely to be direct or mediated by other variables such as work motivation, emotional intelligence, or organizational support.

Job stress also did not significantly mediate the relationship between spiritual intelligence and nurse performance. The analysis yielded a significance value of $p = 0.300$ (>0.05) and a T value of 1.037, indicating no significant mediation of job stress on the relationship between spiritual intelligence and performance. Although spiritual intelligence was shown to play a role in reducing work stress, this effect was not strong enough to indirectly improve nurse performance. This suggests that spiritual intelligence likely has a more direct influence on other dimensions such as job satisfaction or motivation.

Overall, the results of this study underscore that intellectual and spiritual intelligence are more relevant in the context of managing job stress than directly influencing performance. Meanwhile, nurse performance appears to be influenced by a complex combination of factors, not just cognitive and spiritual aspects. Therefore, hospital management is advised to develop programs to improve soft skills, emotional resilience, and psychological well-being to create a healthier and more productive work environment.

References

Aini, Q., Talib, S. G., Alghazali, T., Hussein Ali, M., Sahi, Z. T., Kumar, T., Muda, I., Ramírez-Coronel, A. A., & Sunarsi, D. (2023). Spiritual intelligence, spiritual health and occupational stress in Islamic organisations. HTS Teologiese Studies / Theological Studies, 79(1). https://doi.org/10.4102/hts.v79i1.8228

Bitsch, V., & Olynk, N. J. (2008). Risk-increasing and risk-reducing practices in human resource management: Focus group discussions with livestock managers. Journal of Agricultural and Applied Economics, 40(1), 185–201.

Cherniss, C. (2010). Emotional intelligence: Toward clarification of a concept. Industrial and organizational psychology, 3(2), 110–126

Erianti, S., Asfeni, B., & Anggreny, Y. (2025). Mengurangi Stres Kerja Pada Perawat Dengan Tekhnik Pernapasan Box Breathing.

Ghozali, I., & Latan, H. (2012). Partial Least Square: Konsep, Teknik dan Aplikasi. SmartPLS 2.0 M3. Badan Penerbit Universitas Diponegoro.

Goleman, D. (2005). Emotional intelligence: Why it can matter more than IQ. Bantam.

Judge, T. A., & Robbins, S. P. (2019). Organizational Behavior, (18 (Global Edition)). New York: Pearson Education Limited.

Khasyanah, A. N., Sari, D. P., & Listyorini, P. I. (2024). Hubungan Antara Beban Kerja dengan Kinerja Petugas Bagian Pelayanan Penunjang Medis di Rumah Sakit PKU Muhammadiyah Sukoharjo. Journal of Educational Innovation and Public Health, 2(4), 108–124. https://doi.org/10.55606/innovation.v2i4.3236

Kosnan, W. (2020). Pengaruh Kualitas Pelayanan Terhadap Kepuasan Pasien Rawat Inap Di Rumah Sakit Umum Daerah Kabupaten Merauke. Jurnal Ekonomi, Bisnis, dan Akuntansi, 21(4). https://doi.org/10.32424/jeba.v21i4.1538

Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. Springer publishing company. https://books.google.com/books?hl=id&lr=&id=i-ySQQuUpr8C&oi=fnd&pg=PR5&dq=Lazarus+dan+Folkman+(1984)+&ots=DhGNmrhlRe&sig=FcaetnXXfPDoI7n6Lu6dBZngP_Q

Mangkunegara, A. A. A. P. (2012). Manajemen sumber daya manusia perusahaan. Remaja Rosdakarya.

Misbahuddin, M. (2019). Faktor-Faktor Yang Berpengaruh Terhadap Kinerja Pegawai Pada Rumah Sakit Umum Arifin Nu'Mang Rappang Kabupaten Sidenreng Rappang. Jurnal BISNIS & KEWIRAUSAHAAN, 8(4), 414–423. https://doi.org/10.37476/jbk.v8i4.719

Munandar, A. S. (2001). Psikologi industri dan organisasi. Universitas Indonesia (UI-Press).

Nilamartini, Syamsuri, A. S., & Jusriadi, E. (2021). Pengaruh kecerdasan spiritual, kecerdasan intelektual, dan kecerdasan emosional terhadap kinerja guru di SMP Islam Athirah 1 Makasar. Competitiveness, 10(1), 1–17.

Psychologia, A. (2020). Pengaruh Beban Kerja terhadap Stres Kerja pada Lembaga Kepolisian. Regulasi Emosi dan Kecemasan pada Petugas Pemadam Kebakaran Rosa, 2(2), 80–91.

Purwanto, M. N. (2013). Psikologi pendidikan. Remaja Rosdakarya.

Radley, J. J., Rocher, A. B., Janssen, W. G. M., Hof, P. R., McEwen, B. S., & Morrison, J. H. (2005). Reversibility of apical dendritic retraction in the rat medial prefrontal cortex following repeated stress. Experimental Neurology, 196(1), 199–203. https://doi.org/10.1016/j.expneurol.2005.07.008

Robbins, S. P., Judge, T., & Judge, T. (2018). Organizational Behavior. Pearson.

Siagian, S. P. (2012). Manajemen sumber daya manusia. Bumi Aksara.

Zohar, D., & Marshall, I. (2007). SQ-Kecerdasan spiritual. Mizan Pustaka. https://books.google.com/books?hl=id&lr=&id=bfhSGrIm7KIC&oi=fnd&pg=PA3&dq=Zohar+dan+Marshall+(2007),+&ots=n5zgA2uMc-&sig=xjcqNpJgw0H_h2voTjcimNs_59I