



THE INFLUENCE OF NURSE WORKLOAD AND MOTIVATION ON PATIENT SAFETY WITH KNOWLEDGE AS A MEDIATION VARIABLE IN TANGERANG CITY HOSPITAL

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Abstract

This study aims to determine how much influence the workload and motivation of nurses have on patient safety in Tangerang City Hospital. The number of samples in this study were 100 respondents. The data used is a type of quantitative data obtained from filling out questionnaires by selected respondents through simple random sampling. The analytical method used in this research is through the Structural Equation Model (SEM) approach using the Smart PLS program. The results of this study indicate that there is a significant effect of workload and nurse motivation on patient safety with knowledge as a mediating variable in Tangerang City General Hospital. The population of the study is limited to the Tangerang Regional Hospital. Further research is expected to be carried out in other locations so that a comparison of findings in studies related to patient safety can be carried out.

Keywords : *Workload, Nurse Motivation, Knowledge, Patient Safety*

1. INTRODUCTION

In the midst of the current challenges of globalization, manufacturing services in the health sector are increasingly competing to provide the best health services so that a patient will be more selective in choosing a health facility that can also provide a sense of security and calm. This is of particular concern to the management of health facilities to be able to provide safe and comfortable care for patients and their families and is accompanied by a low number of Adverse Events (KTD). Every activity carried out by medical personnel at the hospital has a possibility that is either good or bad. The large number of types or names of drugs and even the names of drugs that are almost similar, various laboratory and radiological examinations as well as the number of patients who come and are hospitalized every day and a large staff of employees can be a threat for confusion to occur in clinics or health facilities. . Patient safety is very concerned in health services. Patient safety has now turned towards a global issue and has become a common belief throughout the world Patient safety or patient safety is a system by which clinics or hospitals make patient care safer, including risk assessment, identification and management, reporting and analysis of incidents and aims to reduce the risk of injury and actions that should not occur to patients while in health services (WHO-Law on health stipulates that Article 53 (3) of Law No. 36/2009 states that all matters relating to mental safety everyone must take precedence when medical or paramedical personnel provide health services. Therefore the role of competent medical and paramedical personnel is needed in improving the quality of service that can satisfy the customer. However, we must admit that in long-standing health services we can still meet KTD (Unwanted Events) which often ends in lawsuits. Patient safety incident reports in Indonesia by the Patient Safety Committee based on incoming reports found that Jakarta occupies the top position, namely 37.9%, then Central Java 15.9%, Yogyakarta Special Region 13.8%, East Java 11.7%, South Sumatra 6.9%, West Java 2.8%, Bali 1.4%, South Sulawesi 0.69% and Aceh 0.68%.

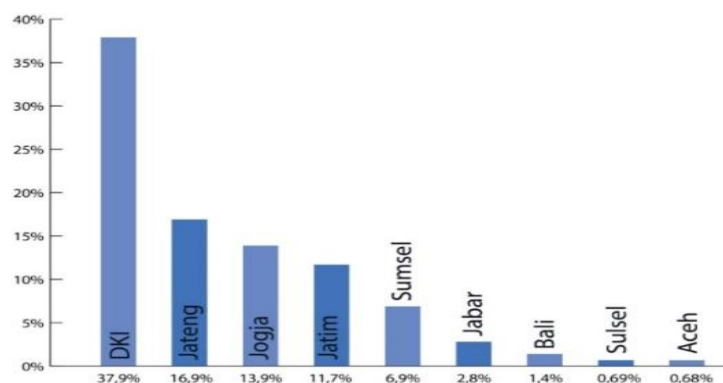


Figure 1. IKP Report for January - April 2011

In the period between 2006 – 2011 KPPRS reported 877 patient safety incidents. The report on the national map of patient safety incidents states that negligence by nurses when providing therapy ranks at the top at 24.8% of the top ten incidents that are often encountered. For example, when a patient is hospitalized in a health facility and requires therapy in the form of an injection of medicinal fluids where there is interaction between the patient and the paramedics to achieve the patient's recovery and have an impact on improving the patient's better health status. Incidents of wrong medication in giving therapy or misreading the patient's name when administering therapy in the inpatient room given by health workers can occur due to accidental or negligence that can harm the patient and can endanger the patient's own safety which is known as medication error. Based on a study report conducted by the Faculty of Medicine, Gadjah Mada University in 2001-2003, it was found that 5.97% of patients who were undergoing hospitalization reported the incidence of wrong medication administration.

The number of unexpected events is also found in the pharmaceutical department, which is usually caused by errors in writing prescriptions, which vary widely, between 0.03–16.9%. The study found drug administration errors in health facilities related to discrepancies between the names of the drugs listed on the prescription and those given to patients in forms and types of drugs that were different from those requested. Medication errors should be avoided in the health care system. The practice of giving drugs by injection can be dangerous in the health care system because it can lead to infections such as HIV, HCV, and can pose a direct danger to patients and medical and paramedical personnel. About 9 million lost lives due to disability and death worldwide. Although human error is one of the causes of errors in the field, looking for errors is not the right form. In reducing adverse events related to patient safety aspects, the management of health facilities is obliged to implement a patient safety culture. This is because there are several health facilities that use the system well, but in fact there are still many incidents. Supposedly if patient safety patterns are implemented properly then safety incidents can be minimal, but data in the field shows patient safety programs are not implemented optimally if they are not supported by organizational values or culture, characteristics of health workers such as length of work, level of knowledge, motivation, and existing facilities.

The increasing patient safety services in every health service facility will have a positive impact on the community and for medical and paramedical personnel, such as reducing the cost of treatment, and being safe from lawsuits. Therefore, the role of competent medical and paramedical personnel is urgently needed in improving the quality of services that can ensure public safety. To maximize the quality of health services, hospitals carry out various concepts of basic rules such as the application of Hospital Service Standards, Licensing, Hospital Accreditation, Medical Audits with Service Standards, Hospital Accreditation Committees, and Medical Personnel Audits aimed



at in order to be able to increase the quality and quality of local hospital services and to be able to improve the process of health services to be even better.

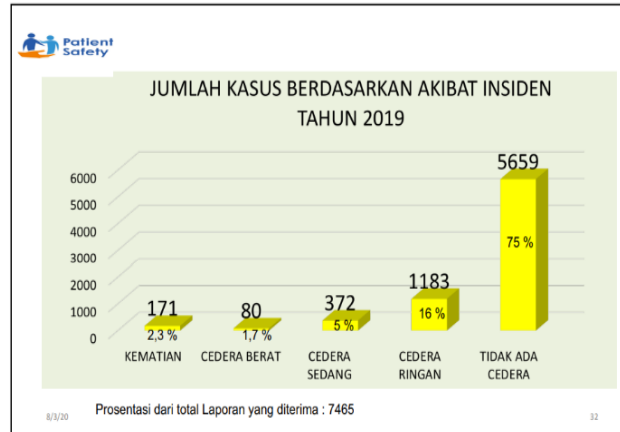


Figure 2. Number of Cases Based on 2019 Incidents

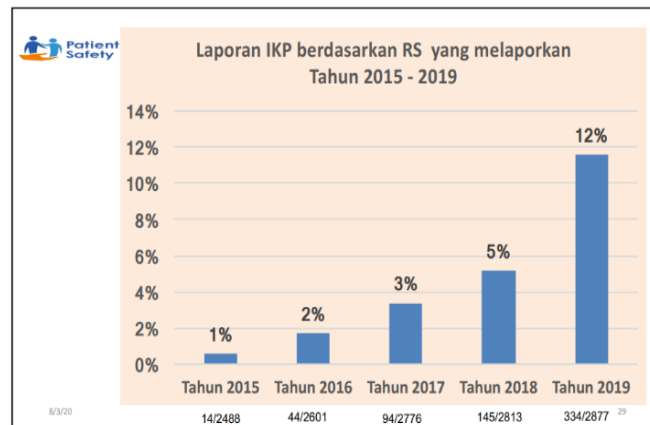


Figure 3. IKP reports based on reporting hospitals 2015-2019

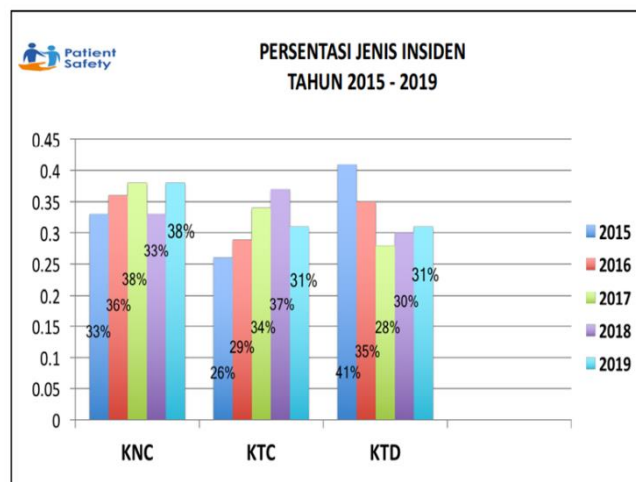


Figure 4. Presentation of Types of Incidents in 2015-2019

Therefore it is necessary to conduct research to find out how much workload, motivation and knowledge have on patient safety.

2. IMPLEMENTATION METHOD

Workload

According to Koesomowidjojo (2017: 21) explains that workload is a way to ensure the number of working hours required to carry out tasks within a certain period of time. So the workload is the problem of officers in the field which includes all energy and thoughts and resource capabilities accompanied by a period of time. The types of workloads are:

1. Quantitative Workload which is interpreted by the presence of a pile of tasks or obligations that must be completed in a short period of time accompanied by responsibilities towards superiors so that if they are not in accordance with the target time it will give a mental burden to the task bearer.
2. Qualitative Workload, which is defined as the inability of workers to complete a number of jobs given by their superiors. Things that color the workload on a worker from within the worker's person and the surrounding (outside) environment. Elements that come from within can arise due to the actions of workers to complete tasks given by superiors such as gender, age, size of the worker's body and several psychological factors (will and pleasure) and motivation. While external factors such as coming from a calm work environment certainly have an impact on peace of mind and body when carrying out obligations. On the other hand, if the working atmosphere does not support, for example, the light that illuminates the work space is rather dim and uncomfortable, such as dusty, stuffy, the work space lacks oxygen, and is full of noise, negative (toxic) co-workers.

Other external factors such as physical tasks are interpreted as something related to supporting facilities and infrastructure used when carrying out obligations. Trade union organizations that require a daily routine agenda in carrying out daily routine tasks. Planning for promotion in the future and the payment or honorarium system will be taken into account in terms of the workload felt by each worker or laborer. According to Koesomowidjojo (2017:33), workload indicators include:

1. Workplace situation, which is interpreted when a worker understands their duties, for example if a nurse in the ICU understands and is skilled in operating the tools in the ICU, it will greatly help the division achieve the set targets. A good management should have an SOP in each division and provide time to be able to socialize the SOP (Standard Operating Procedure) to all members in the division so that the paramedics working in it can: a. carry out the work entrusted to him. b. make it easy at the stages of work c. Reducing work injuries. d. Reducing workload and increasing comparability, credibility and defensibility. e. making evaluation an easy way for workers to do and determined by their management.
2. The use of working hours that are comparable to the reference standard can reduce the burden or work obligations of employees. There are several companies that do not have guidelines and are not compliant in implementing SOPs, the use of working time that is enforced sometimes tends to be excessive or very narrow.
3. There is a target. When interpreted directly will affect the workload received by employees. To complete a job that has been entrusted, of course, takes time, if the time provided is not balanced with the amount of work delegated, it will become a burden for workers. So that an agreement is needed between the time to complete a certain volume of work, each of which is not the same amount that differs from one another.



Work Motivation

Hasibuan (2017: 141) defines motivation as an external stimulus based on the existing capacity or ability from within and from outside of a worker who recommends completing his work such as instructions and work patterns within a limited time. Every aspect that is carried out by someone who is driven by inner power is called motivation which has three aspects including individual characteristics, job characteristics, and organizational characteristics (Tecoalu et al., 2022).

Motivation as a psychological process within a person will be colored by several factors, which are differentiated into external and internal factors of a worker. Factors originating from within a worker that can influence the emergence of motivation include:

1. Desire to fulfill personal interests such as: a. get proper compensation b. still employed even though the income is not so sufficient c. Conducive work situation,
2. The need to have something that can motivate a worker to finish work.
3. Want to be respected or appreciated by his superiors, desire to be respected by parents and siblings, desire to be respected for his dignity in society, in association, so that a worker will work hard to earn money.
4. The desire to be appreciated for their performance. There is a harmonious reciprocal relationship, a boss who is neutral and does not take sides and the company is respected by local residents.
5. Desire for authority and positional authority will stimulate work. Especially if there is ambition to become a leader, namely the desire to become a branch head. There are a number of external factors whose presence can affect a person's work motivation. Like the atmosphere around work where damage to work tools that are not renewed and not replaced with new ones can affect the mood to complete tasks properly. Small compensation, because it is an additional income input for workers to support themselves and their families. The existence of good supervision should be able to guide or direct and help workers to complete tasks correctly and perfectly. There is job certainty not for today, a worker has the hope of being able to work for a long time. Status or position in the company is a dream or aspiration of workers in work. By being given a position, a worker will feel responsible when on duty in completing the work given on a daily basis. Humane company policies will have an impact on nurturing workers to work better. All existing legal provisions need to be disseminated explicitly and clearly to workers.

Knowledge

Knowledge or knowledge is someone who succeeds in knowing an object through his five senses. The word Knowledge comes from the Arabic word ilm, which means to know or know or understand. Knowledge arises when a person uses his mind to remember certain objects or events that have not been encountered or felt before. Notoatmodjo (2018) divides knowledge into 6 levels, namely: 1) Know (know) at this level a person gets it by repeating what has been understood before, so this stage is the lowest level. 2) understand (comprehension) this level is owned by someone when with someone expertly describing an object or an item correctly. 3) Application (application). This stage is the level of people who can apply their knowledge in everyday life. 4) Analysis (analysis) that is able to explain an object into an element that is related to one another. 5) Synthesis (synthesis). At this level a person is able to integrate two or more elements to produce something new. 6) Evaluation (evaluation) this level of knowledge is owned at the stage where a person is able to make several judgments on a material or object.

Patient Safety

Institute of Medicine (1999) states that patient safety is defined as freedom from accidental injury. Accidental Injury is an accidental error that can occur while working, such as not carrying out what was planned or using an inappropriate plan to achieve a goal and the result of not making

a real decision that should be taken. Accidents while working daily in health facilities can be unwanted events. Patient safety includes risk assessment, identification and management of patient risks, reporting and analysis of incidents, and implementing solutions to prevent risks and injuries (PMK 11 of 2017 concerning patient safety). Six patient safety goals such as

1. Identify the patient correctly, namely before carrying out each action.
2. Increasing effective communication between officers and SBAR (Situation, Background, Assessment, Recommendation, readable writing, if verbal communication is written, read the confirmation.
3. Increasing the safety of drugs that must be watched out for, such as by implementing a double check, drugs with high alert stored in a safe place and labeled, store Lasa drugs far apart (Look Alike and Sound Alike)
4. Ensure exact location, procedure, and patient by clearly marking the surgical site and involving the patient.
5. Reducing the risk of infection due to health care
6. Reducing the risk of patient injury due to falls.

The following are seven patient safety standards (Source PMK No. 11 of 2017 Articles 7-12, regarding patient safety)

1. Patient rights
2. Education for patients and families
3. Patient safety in continuity of care
4. Use of performance improvement methods in the evaluation and improvement of patient safety
5. The role of leadership in improving patient safety
6. Education of staff on safety
7. Communication is the key for staff to achieve patient safety

Conceptual Framework

Based on the literature review, it is known that there are several things that can influence the formation of the relationship between workload, motivation, knowledge of patient safety. The conceptual framework of this research can be described as follows:

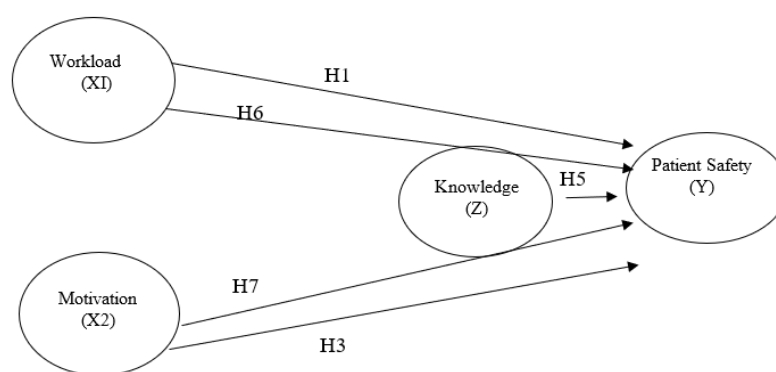


Figure 5. Conceptual Framework

Hypothesis Development

The hypothesis set in this study based on the background of the problem, the formulation of the problem, and the conceptual framework that has been described, among others:

- H1: There is a positive influence between workload and patient safety
- H2: There is a positive influence between workload on knowledge
- H3: There is a positive influence between motivation and patient safety



- H4: There is a positive influence between motivation and knowledge
- H5: There is a positive influence between knowledge and patient safety
- H6: Knowledge mediates the effect of workload on patient safety
- H7: Knowledge mediates the effect of motivation on work safety

Object of Research

The object of this research is patient safety which is influenced by workload, motivation and level of knowledge. The location of this research is located in the inpatient room of Tangerang City Hospital. The collection was carried out using a questionnaire which was distributed and then filled in by the paramedics on duty during April – May 2023.

Population and Sample

Population is a collection of subjects with certain traits or characteristics. The number is set at 100 people. Sugiyono (2017) states that the sample is part of a population that has certain specificities or characteristics. Sample measurement aims to determine the number of samples used in research of an object. The sampling method applied in this study is the simple random sampling technique probability method. The inclusion criteria in this study include:

- (1) Paramedics on duty at Tangerang City Hospital
- (2) Age 25 - 45 years
- (3) Willing to be a respondent

While the exclusion criteria in this study include:

- (1) Cooperative officers
- (2) Patients have a level of knowledge

In this study, the number of population (N) was set at 100 people. while the error tolerance is set at 10%. Based on the Slovin formula, the results of a sample of 67 respondents will be obtained.

Data Collection Technique

In this study, the source of data in this study is primary data. Primary data source means that the data is obtained and collected by the author from the source directly. The data collection technique that will be applied is the questionnaire method. The questionnaire used was adapted from Primandaru (2019), Rahmawati et al., (2022), Subhan & Iswati (2022) and Priliagita et al., (2021). This questionnaire is able to provide an overview of the influence of workload, motivation on patient safety with knowledge as a mediating variable at Tangerang City Hospital. In this questionnaire, respondents' ratings were measured using a Likert scale worth 1 to 5. This scale is used to measure the extent to which respondents agree with the indicators in the questionnaire. According to Siregar (2017), the Likert scale is a scale whose use is intended to measure one's opinions, perceptions and attitudes regarding a matter or situation.

Data Analysis Technique

The data analysis approach used in this study is through the Structural Equation Model (SEM) approach using SmartPLS 3.0 software. Hair et al., (2017) stated that SEM is an analytical tool that can be used to examine causal relationships with latent variables. The SEM analysis includes two models, namely the measurement model (outer model) which refers to how the manifest variable represents the measurement of latent variables and the structural model (inner model) which states the strength of estimation between latent or construct variables (Ghozali, 2020).

Evaluation of the Measurement Model (Outer Model)

Evaluation of the measurement model aims to assess the validity and reliability of the model. The purpose of validity testing is to see the extent to which a measuring instrument is able to measure what is to be measured. Reliability aims to determine the consistency of measurement results if the same phenomenon is measured more than once and with the use of the same measuring device (Siregar, 2017). Tests carried out on the outer model include:

Convergent Validity

Hair et al., (2017) stated that to assess convergent validity, you can use the Rule of Thumb, namely the loading factor must be worth more than 0.7. In addition, convergent validity can be determined by looking at the Average Variance Extracted (AVE) value for each construct with a correlation between constructs. The expected AVE value, which is over or above 0.5, means that 50% or more of the variance of the indicator can be explained.

Discriminant Validity

Discriminant validity indicates that a construct has certain characteristics and is not described by other constructs. There are two methods that can be used to test discriminant validity, which are based on cross loading values and Fornell Lacker criteria. The cross loading value, namely the discriminant validity value of an indicator must be greater than the cross loading value of other constructions. The use of the Fornell Lacker criterion is by comparing the square root of the AVE value with the correlation of latent variables. The AVE square root must be greater than the highest correlation with other constructs Hair et al., (2017).

Cronbach Alpha and Composite Reability

The reliability of a construct using the PLS-SEM method using SmartPLS 3.0 can be tested by looking at the Cronbach Alpha and Composite Reability values. Cronbach Alpha is used to determine the lower limit of the reliability of a construct while Composite Reability is to see the reliable value of a construct (Ghozali, 2020). The use of the rule of thumb in assessing construct reliability is based on the value of composite reliability. Composite reliability is expected to be above 0.7 (Hair et al., 2017). The Cronbach Alpha value is said to be reliable if it is greater than 0.7 (Ghozali, 2018).

Evaluation of the Structural Model (Inner Model)

The purpose of testing the inner model is to predict the relationship between variables. The relationship between variables that is significant or not seen is based on the value of the path coefficient (path coefficient). The path coefficient value is obtained from the bootstrapping process. The direction of the path coefficient must be in accordance with the hypothesized theory. The tests on the inner model used include:

Coefficient of Determination (R²)

According to Siregar (2017), the coefficient of determination shows how much contribution is made by one or more variable X to variable Y. The coefficient of determination (R²) measures the size of the model's ability to explain variations in the dependent variable. The value of the coefficient of determination is in the range of 0 to 1. According to Hair et al., (2017), the value of the coefficient of determination is strong if it has a value of 0.75. While the value of 0.50 means moderate and is said to be weak if the value is 0.25.

Blindfolding and Predictive Relevance (Q²)

Predictive relevance, which is marked with the Q² value, shows how well the observed value is generated using the blindfolding procedure (Ghozali, 2018). In the inner model, it is said that the model has predictive relevance for certain endogenous constructs if the Q² value is greater



than zero. If the result of calculating the Q2 value is 0.02, it means that it is weak. If the Q2 value is 0.15 it means moderate while 0.35 means big (Hair et al., 2017).

Hypothesis Testing

This study uses several variables, including service quality, satisfaction, trust and patient loyalty. To test the hypothesis, multivariate analysis was carried out with the PLS-SEM test, using the SmartPLS program. The t-test statistic is used to show how far an independent variable influences the variation in the dependent variable (Ghozali, 2018). Then you can see the p-value with a significance level of $\alpha = 10\%$. If the p-value < 0.05 then H_0 is rejected. While H_0 is accepted if the p-value > 0.05 . The following is the basis for decision making, namely: If the t statistic value $< t$ table then H_0 is accepted and H_a is rejected. If the t statistic value $> t$ table then H_0 is rejected and H_a is accepted.

3. RESULTS AND DISCUSSION

Characteristics of Respondents

Respondents in this study were paramedics on duty at Tangerang City Hospital. Following are the characteristics of the respondents based on the characteristics of age, gender, work experience and marriage.

Table 1. Characteristics of Respondents by Gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	35	35	35	35
Female	65	65	65	65
Total	100	100	100	100

Source: Analysis Results

Table 2. Characteristics of Respondents by Age

Age	Frequency	Percent	Valid Percent	Cumulative Percent
20-30 years	36	36%	36%	36%
31-40 years	45	45%	45%	45%
> 41 years	19	19%	19%	19%
Total	100	100%	100%	100%

Source: Analysis Results

Table 3. Criteria for Respondents Based on Education

Education	Frequency	Percent	Valid Percent
Elementary School	0 %	0%	0%
Junior high school	0%	0%	0%
Senior High School	13%	13%	13%
Diploma	59%	59%	59%
Undergraduate	25%	25%	25%
Postgraduate	3%	3%	3%

Source: Analysis Results

Table 4. Respondents by Marital Status

Single	41%
Married	59%

Source: Analysis Results

Table 5. Characteristics of Respondents Based on Work Experience

Length of Work	Frequency	Percent
< 3 years	15	15 %
4-5 years	25	25 %
6-7 years	35	35%
8-9 years	22	22%
>10 years	3	3%

Source: Analysis Results

Data Analysis

An indicator is said to be valid if it has a loading factor > 0.7, even though a loading factor > 0.4 is still acceptable. The loading factor of all variable indicators in this study can be seen in the table below.

Table 6. Loading Indicator Factors

Variable	Indicator	Loading Factor	Information
Workload	BK1	0,827	Valid
	BK2	0,795	Valid
	BK3	0,856	Valid
Motivation	MOT1	0,758	Valid
	MOT2	0,818	Valid
	MOT3	0,773	Valid
	MOT4	0,831	Valid
Knowledge	KNO1	0,772	Valid
	KNO2	0,826	Valid
	KNO3	0,713	Valid
	KNO4	0,748	Valid
Patient Safety	KP1	0,855	Valid
	KP2	0,765	Valid
	KP3	0,884	Valid
	KP4	0,728	Valid
	KP5	0,800	Valid
	KP6	0,712	Valid

From the loading factor in the table above, it can be seen that all indicators have a loading factor > 0.7 in the construct variable. Thus it can be said that all research indicators do not have serious problems with validity. Checking the validity of the indicators is then carried out through discriminant validity using the cross loading test and Fornel Larcker. The cross loading test is carried out by seeing whether the loading factor indicator on the construct variable is greater than the factor loading on the other construct variables as shown in the table below.



Table 7. Cross Loading

Indicator	Workload	Motivation	Knowledge	Patient Safety
BK1	0,827	0,563	0,509	0,542
BK2	0,795	0,541	0,466	0,471
BK3	0,856	0,622	0,640	0,718
MOT1	0,524	0,758	0,506	0,595
MOT2	0,523	0,818	0,615	0,620
MOT3	0,588	0,773	0,564	0,640
MOT4	0,583	0,831	0,700	0,543
KNO1	0,448	0,599	0,772	0,595
KNO2	0,582	0,617	0,826	0,620
KNO3	0,578	0,512	0,713	0,640
KNO4	0,410	0,593	0,748	0,543
KP1	0,634	0,607	0,686	0,855
KP2	0,556	0,545	0,644	0,765
KP3	0,592	0,610	0,648	0,884
KP4	0,526	0,528	0,550	0,728
KP5	0,582	0,655	0,637	0,800
KP6	0,501	0,539	0,553	0,712

Source: Smart PLS output processed (2023)

The loading factor of the workload indicators (BK1, BK2, and BK3) has the highest loading factor in the construct variable, namely Workload compared to the loading factor in other variables. For example, the BK1 indicator has a loading factor of 0.827 in the Workload variable. This is greater than the loading factor on the Motivation variable of 0.563 and also greater than the loading factor on the Knowledge variable of 0.509, and larger than the loading factor on the patient safety variable of 0.542. Likewise other indicators have a larger loading factor on the construct variable compared to other variables. Thus, through the cross loading rule no serious problems were found related to the validity of the indicators.

Furthermore, validity testing was carried out through the Fornel Lacker test by comparing the root value of AVE (Average Variance Exreacted) in each construct with the correlation value between each construct in the model. Good discriminant validity indicated that the AVE root value of each construct must be greater than the correlation value between the constructs in the model. Fornel Larcker test values can be seen in the table below.

Table 8. Fornell Lacker

Variable	Workload	Patient Safety	Motivation	Knowledge
Workload	0,826			
Patient Safety	0,715	0,793		
Motivation	0,700	0,734	0,796	
Knowledge	0,663	0,785	0,758	0,786

From Fornell Larcker above it can be seen that the root correlation of AVE from workload is 0.826 greater than the correlation on patient safety variables (0.715) and motivation (0.700), as well as knowledge (0.663). Likewise, the other variables show that the correlation of the AVE root on the variable (diagonal) is greater than the correlation with other variables. Thus it can be concluded that there are no problems in the validity of the research indicators. After checking the validity of the instrument or indicator, the next step is to check the reliability or consistency of the research variables. This is done by examining cronbach alpha, composite reliability and the roots of Variance Extracted (AVE) as shown in the table below.

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Table 9. Reliability Test

Variable	Cronbach Alpha	Composite Reliability	AVE
Workload	0,772	0,866	0,683
Patient Safety	0,880	0,910	0,629
Motivation	0,809	0,873	0,633
Knowledge	0,764	0,850	0,587

Source: Smart PLS output processed (2023)

Composite Reliability or composite reliability is a measurement to find out the true value of the reliability of a construct if the available data already has a Composite Reliability value of > 0.7 even though a value of 0.6 is still acceptable. Whereas Cronbach Alpha measures the lower limit of the reliability value of a construct, it is said to be good if it has a value of > 0.7 for confirmatory research and a value of > 0.6 is still acceptable for exploratory research. Meanwhile, the average AVE value must be > 0.5 to be declared a consistent or reliable variable. From the table above it can be seen that all variables have Composite Reliability values > 0.7 as well as Cronbach Alpha values > 0.7 and the average AVE value for all variables is > 0.5. Thus all research variables are declared reliable. The R-Square value or the coefficient of determination is in the range of 0 and 1. If the R-Square value is found to be very small, this indicates that the power or ability of the model to explain endogenous constructs is very limited and if the R-Square value is close to 1, it means that the exogenous construct provides almost all the information needed to predict variations in endogenous constructs. The criteria for R-Square values of 0.67, 0.33, and 0.19 are defined as the parameters of a strong, moderate, and weak model.

Table 10. R-square

	R-Square	Adjusted R-Square
Patient Safety	0,697	0,688
Knowledge	0,609	0,600

Source: Smart PLS output processed (2023)

From the table above it can be seen that the R-Square value for the endogenous patient safety variable is 0.697. This means that 69.7% of the variation in patient safety can be explained by workload, motivation and knowledge. While the remaining 30.3% is explained by other variables not examined in this study. To obtain the value of hypothesis testing is done through both strapping with the results as below.

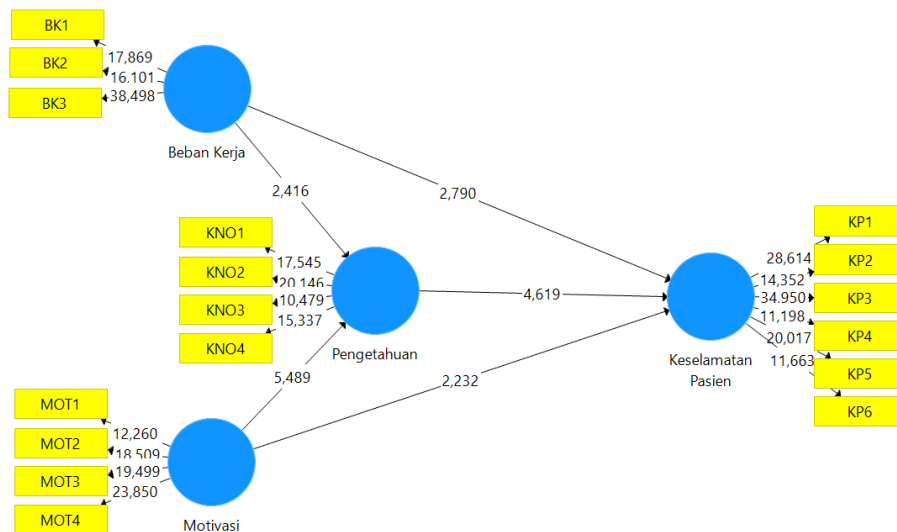


Figure 6. Hypothesis Testing is Done Through Bootstrapping

Source: Smart PLS output (processed)



Furthermore, testing is carried out by looking at the t-statistic and p-value values as shown in the table below.

Table 11. Direct Influence

Effect	Coefficient	T-statistic	P-Value
Workload → Patient Safety	0,278	2,790	0,005
Workload → Knowledge	0,260	2,416	0,016
Motivation → Patient Safety	0,199	2,232	0,026
Motivation → Knowledge	0,576	5,489	0,000
Knowledge → Patient Safety	0,450	4,619	0,000

First Hypothesis: Workload Has a Positive Impact on Patient Safety

The effect of workload on patient safety is 0.278. This means that there is a positive influence between workload and patient safety. The t-statistic value of $2.790 > 1.96$ and the p-value of $0.005 < 0.05$ indicates that there is sufficient evidence to state that workload has a positive and significant effect on patient safety. Thus the first hypothesis in this study is accepted.

Second Hypothesis: Workload Has a Positive Effect on Knowledge

The effect of workload on knowledge is 0.260. This means that there is a positive influence between workload and knowledge. The t-statistic value of $2.416 > 1.96$ and the p-value of $0.016 < 0.05$ indicates that there is sufficient evidence to state that workload has a positive and significant effect on knowledge. Thus the second hypothesis in this study is accepted.

The third hypothesis: Motivation has a positive effect on patient safety

The effect of motivation on patient safety is 0.199. This means that there is a positive influence between motivation and patient safety. The t-statistic value of $2.232 > 1.96$ and the p-value of $0.026 < 0.05$ indicates that there is sufficient evidence to state that motivation has a positive and significant effect on patient safety. Thus the third hypothesis in this study is accepted.

Fourth Hypothesis: Motivation Has a Positive Effect on Knowledge

The effect of motivation on knowledge is 0.576. This means that there is a positive influence between motivation and knowledge. The t-statistic value is $5.489 > 1.96$ and the p-value is $0.000 < 0.05$ indicating that there is sufficient evidence to state that motivation has a positive and significant effect on knowledge. Thus the fourth hypothesis in this study is accepted

Fifth Hypothesis: Knowledge Has a Positive Effect on Patient Safety

The effect of workload on patient safety is 0.450. This means that there is a positive influence between workload and patient safety. The t-statistic value of $4.619 > 1.96$ and the p-value of $0.000 < 0.05$ indicates that there is sufficient evidence to state that knowledge has a positive and significant effect on patient safety. Thus the fifth hypothesis in this study is accepted.

The Sixth Hypothesis: Knowledge Mediates the Effect of Workload on Patient Safety

The mediation of knowledge on the effect of workload on patient safety is 0.117. This means that there is a positive mediation of knowledge on the effect of workload on patient safety. The t-statistic value of $1.942 < 1.96$ and the p-value of $0.053 > 0.05$ indicates that there is not enough

evidence to state that knowledge mediates the effect of workload on patient safety. Thus the sixth hypothesis in this study was rejected.

Seventh Hypothesis: Knowledge mediates the effect of motivation on patient safety

Mediation of knowledge on the effect of motivation on patient safety is 0.259. This means that there is a positive mediation of knowledge on the influence of motivation on patient safety. The t-statistic value of $3.778 > 1.96$ and the p-value of $0.000 < 0.05$ indicates that there is sufficient evidence to state that knowledge mediates the influence of motivation on patient safety. Thus the seventh hypothesis in this study is accepted.

Discussion

H1: Workload has a positive and significant effect on patient safety.

Based on the test results of the first hypothesis, it was found that workload had a positive and significant effect on patient safety. This implies that the more the workload improves, the impact on patient safety will also improve. The workload received by hospital staff will make them more careful and in turn will have an impact on improving patient safety.

H2: Workload has a positive and significant effect on Knowledge

Based on the test results of the second hypothesis, it was found that workload had a positive and significant effect on knowledge. This implies that the more the workload increases, the better the knowledge of health workers. The workload received by health workers will bring them new experiences both in accordance with what is learned in college and those that have not been obtained in college. This brings new knowledge to health workers by increasing their knowledge sourced from the workload they receive.

H3: Motivation has a positive and significant effect on patient safety.

Based on the results of testing the third hypothesis, it was found that motivation has a positive and significant effect on patient safety. This implies that the more health workers are motivated to work, the better patient safety will also have an impact.

H4: Motivation has a positive and significant effect on Knowledge.

Based on the test results of the fourth hypothesis, it was found that motivation has a positive and significant effect on knowledge. This implies that the more motivated health workers are, the more they will want to learn to increase their knowledge.

H5: Knowledge has a positive and significant effect on Patient Safety.

Based on the test results of the fifth hypothesis, it was found that knowledge has a positive and significant effect on patient safety. This implies that the more knowledge of health workers, the more they know how to maintain patient safety.

H6: Knowledge mediates the effect of workload on patient safety.

Based on the test results of the sixth hypothesis, it was found that knowledge does not mediate the effect of workload on patient safety. This implies that a positive direct effect on workload on patient safety is not mediated by the knowledge of health workers.

H7: Knowledge mediates the effect of motivation on patient safety.

Based on the test results of the seventh hypothesis, it was found that knowledge mediates the positive influence of motivation on patient safety. This implies that knowledge will encourage the greater influence of motivation on patient safety.



4. CONCLUSION

Conclusion

The conclusions in this study include.

1. Workload has a significant positive effect on patient safety.
2. Workload has a positive and significant effect on knowledge.
3. Motivation has a positive and significant effect on patient safety.
4. Motivation has a positive and significant effect on knowledge.
5. Knowledge has a positive and significant effect on patient safety.
6. There is not enough evidence to state that knowledge mediates the effect of workload on patient safety.
7. There is sufficient evidence to state that knowledge mediates the effect of motivation on patient safety.

Suggestion

The following are suggestions given based on the research that has been done, namely:

Suggestions for Further Research

- a. In this study the R-square value was in the range of 0.69, meaning that there were still around 31 percent of the determinants of patient safety that had not been studied in this study. For this reason, further research interested in improving patient safety is advised to develop other variables that have not been studied in this study.
- b. The population of the study is limited to the Tangerang Regional Hospital. Further research is expected to be carried out in other locations so that a comparison of findings in studies related to patient safety can be carried out.

Practical Advice

- a. In this study it appears that motivation has a significant effect on knowledge and patient safety. For this reason, in order for the knowledge of health workers to increase, and patient safety to be maintained, it is suggested to management to be able to always motivate health workers. Through continuous managerial motivation, it will increase the awareness of health workers for patient knowledge and safety.
- b. In this study it was also found that knowledge has a positive effect on patient safety. For this reason, management is expected to be able to provide space for health workers to increase their knowledge, for example by further studies, or through increased training so that it enables them to care more about patient safety..

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