THE INFLUENCE OF LEADERSHIP ON NURSE MOTIVATION THROUGH WORKLOAD AS AN INTERVENING VARIABLE AT UNDATA HOSPITAL

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Abstract

This study aims to determine and analyze the influence directly or indirectly (Intervening) of Leadership on Nurse Motivation, and Workload as an intermediate variable. The population consists of 376 nurses at Undata Hospital in Palu City. Of the 376 populations sampled in this study, 194. This research is descriptive and will be analyzed by *Structural Equation Model-Partial Least Square* (SEM-PLS) analysis. The results showed that (1) Leadership has a direct influence on the Motivation of Undata Hospital Nurses. This is evidenced by the t-count value of 5.198 with a significance value of 0.000 < 0.05, the path coefficient has a positive value of 0.496; (2) the Leadership variable has a direct influence on the Workload of Undata Hospital nurses t-count value of 14.417 with a significance value of 0.000 < 0.05, the path coefficient has a positive value of 0.765 and (3) the Workload variable has a direct influence on the motivation of Undata Hospital nurses has a t-count value of 4.952 with a significance value of 0.000 < 0.05, the path coefficient has a positive value of 0.409. (4) for the indirect influence of leadership variables on motivation through the workload of Undata Hospital nurses has a t-count value of 4.834 with a significance value of 0.000 < 0.05, *indirect effects* coefficient has a positive value of 0.313.

Keywords: Leadership, Motivation, Workload, Intervening Variable, Structural Equation Model

INTRODUCTION

Humans are resources that are needed by an organization from ancient times to the current era of globalization. This is because human resources are resources that play an active role in the course of an organization and the decision-making process. The best decision making produced by humans shows a person's performance and ability to analyze a problem in the scope of work and position. According to Robbins (2006) leadership is the ability to influence a group towards achieving goals. Leadership has been defined as the process of influencing the activities of a person or group to achieve goals in a given situation. In essence, leadership is an effort to achieve goals with and through people. In this regard, leadership factors play a very important role in moving and directing the organization to achieve its goals.

Leadership has a very large influence in the life of organizations and groups to achieve common goals, humans in the organization need to foster togetherness by following the control of the leader. This is basically in an organization, leadership is one of the important factors that can have a meaningful influence on employee motivation, because leaders plan, inform, make and evaluate various decisions that must be implemented to achieve organizational goals. The results of research conducted by Hulu (2021) that leadership has a significant influence on a person's motivation.

House et all. (2006, p. 48) states that 30% of the time of leaders is used to deal with human environmental problems (employees). The approach used in motivating employees needs to pay attention to the characteristics of the employees concerned. While a study conducted by Jurkeiwick (2001, p. 43) comparing between employees and supervisors of the public and private sectors gives different results. Public sector employees are more likely to motivate their work due to stability and security in working in the future as the main influential factors. For private sector employees, their motivation to work is strongly influenced by the high salary they earn and the opportunity to reach higher levels. At the supervisory level, employees' motivation to work for public agencies is influenced

by their involvement in contributing to making important decisions. Thus work motivation is a psychological symptom that is dynamic, compound and specific to each employee. Because of this nature, to provide positive motivation a leader should know and be sensitive to the factors that affect the motivation of individual employees. Including nurses at Undata Hospital, they need to get motivation from a leader. Therefore, leadership is one that can affect the high and low motivation of nurses to do their jobs well so that the quality of service can be improved. This statement is supported by the results of research conducted by Hulu (2021) stating that leadership has a positive and significant effect on work motivation.

The influence of leadership in addition to increasing motivation, will also affect the workload. Each profession has a different level of workload both physically and mentally which can also affect the level of motivation. Meanwhile, the nursing profession according to the results of research by the *International Council of Nurses* (ICN) that the increase in nurse workload from four patients to six patients resulted in a 14% increase in deaths of patients treated in the first 30 days since hospitalization (Febrina, Edward, & Nasution, 2020). This is also supported by the results of another study which states 50.9% of Indonesian nurses who work in 4 provinces experience work stress, often feel dizzy, tired, no rest because the workload is too high and time-consuming, low salary without adequate incentives (Rachmawati, 2008).

Nurses at Undata Regional General Hospital of Central Sulawesi Province who have a workload level, both physically and mentally. As the results of direct observation, where the number of Emergency Inpatient visits at Undata Regional General Hospital of Central Sulawesi Province, in 2021 was 12,842 patients with an average patient visit per day of 36 visits, as for the number of nurses as many as 41 people, divided into working groups consisting of 7 to 8 people per scheduling, which means that each nurse has a workload of 4 to 5 patients per day. While in 2022 there are 12,025 patients with an average patient visit per day of 33 visits, the number of nurses is 43 people, divided into working groups consisting of 8 people per scheduling, which means that each nurse has a workload with a ratio of 1 to 4 or 1 nurse handling 4 patients. Based on this phenomenon, nurses who have high motivation in completing their tasks are highly expected by hospitals that have high workloads. Therefore, leadership roles are needed to motivate nurses, as Cahyani et al. (2022) revealed that there is a significant influence of one's leadership on employee motivation.

The results of observations and empirical studies that leaders should also know the universal nature of humans are usually not happy to be ruled. Employees are usually willing to be happy if the order is done in a persuasive way and based on skill and pride in job expertise. Employees after completing work tasks certainly want notification of their work results whether they are correct or still need to be improved. Based on this description, it is necessary to conduct a more in-depth study of the motivation of Undata Regional General Hospital nurses with leadership as a predictor and workload as an intervention.

RESEARCH METHODS

This research is a causal associative research with quantitative techniques. According to Sugiyono (2017, p. 55), associative research is research that aims to determine the relationship between two or more variables. The location of this research is at Undata Regional General Hospital, Central Sulawesi Province. Data collection techniques in this study are the use of questionnaires and field observations. The population in this study is all nurses at Undata Regional General Hospital of Central Sulawesi Province totaling 376 people, according to Sugiyono (2017, p. 131) in quantitative research, the sample is part of the number and characteristics possessed by the population. If the population is large, and it is impossible for researchers to study everything in the population due to limited research funds, energy and time, researchers can use the Yamane formula by taking samples from the population. The calculation results in determining the sample of this study were obtained by 194 people.

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

Information:
n = Number of samples required
N = Total Population
e = Sample Error Rate (5%)

Known:

$$n = \frac{N}{1+N\,(e)^2} = \frac{376}{1+376\,(0{,}05)^2} = 194 \quad (2)$$

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This research was conducted with a *Structural Equation Model* (SEM) approach using *Partial Least Square* (PLS) Software, namely SmartPLS software version 3.0. Before conducting SEM-PLS testing, it is necessary to test the instrument first by looking at the validity and reliability test of data on 30 samples of R.S Madani nurses.

The validity test used in this study was Cronbach's Alpha. According to Sugiyono (2017, p. 173), in Cronbach's Alpha method the r-count value is represented by the Corrected Item-Total Correlation value. The data validity test criteria are as follows:

a) If the value of Corrected item-Total Correlation (r-count) > r-critical = 0.30 then the instrument is said to be valid.
b) If the Corrected Item-Total Correlation (r-count) value < r-critical 0.30 then the instrument is said to be invalid.

Table 1 Instrument Validity Test Results

Variable	Research Indicators	*Corrected Item-Total Correlation*	r- critical	Ket
Leadership (X)	X.1	0,898	0,3	Valid
	X.2	0,839	0,3	Valid
	X.3	0,775	0,3	Valid
	X.4	0,731	0,3	Valid
	X.5	0,895	0,3	Valid
	X.6	0,603	0,3	Valid
	X.7	0,821	0,3	Valid
	X.8	0,888	0,3	Valid
	X.9	0,891	0,3	Valid
	X.10	0,583	0,3	Valid
Motivation (Y)	Y.1	0,919	0,3	Valid
	Y.2	0,778	0,3	Valid
	Y.3	0,830	0,3	Valid
	Y.4	0,835	0,3	Valid
	Y.5	0,806	0,3	Valid
	Y.6	0,772	0,3	Valid
	Y.7	0,798	0,3	Valid
	Y.8	0,866	0,3	Valid
	Y.9	0,903	0,3	Valid
	Y.10	0,819	0,3	Valid
	Y.11	0,821	0,3	Valid
Workload (Z)	Z.1	0,645	0,3	Valid
	Z.2	0,723	0,3	Valid
	Z.3	0,740	0,3	Valid
	Z.4	0,732	0,3	Valid
	Z.5	0,491	0,3	Valid

Variable	Research Indicators	*Corrected Item-Total Correlation*	r- critical	Ket
	Z.6	0,561	0,3	Valid
	Z.7	0,582	0,3	Valid
	Z.8	0,758	0,3	Valid

Source: IBM SPSS Statistics V.23 output, 2024

Reliability test in this study, using Cronbach's Alpha method. According to Hussein (2013, p. 198) Cronbach's Alpha is very suitable to be used on scale scores (eg 1-4, 1-5) or range scores (eg 0-20, 0-50). For testing usually use certain limitations such as 0.6. Reliability less than 0.6 is less good, while 0.7 is acceptable and above 0.8 is good.

Table 2 Instrument Reliability Test Results

Research Variables	Cronbach Alpha	Alpha Tolerance	Status Item
Leadership (X)	0,951	0,6	Reliable
Motivation (Y)	0,965	0,6	Reliable
Workload (Z)	0,883	0,6	Reliable

Source: IBM SPSS Statistics V.23 output, 2024

According to Ghozali (2013), *Structural Equation Modeling* (SEM) can be used through measurement models (*outer model*) will explain three important components in explaining the relationship between indicators and their latent variables. The three-component measurement model *(outer model)* in this study is as follows:

a) Convergent Validity

A reflective measure is said to be high if it correlates more than 0.70 with the latent variable you want to measure. However, for early stage research from the development of a measurement scale, a loading value of 0.50 to 0.60 is considered sufficient

b) Discriminant Validity

Discriminant Validity of measurement models with reflexive indicators is assessed based on *cross loading* measurements with latent variables. If the correlation of a latent variable with a measurement item is greater than the size of another latent variable, it will indicate that the latent indicator predicts a size on a block better than on the size of other blocks. Recommended AVE values of more than 0.5.

c) Composite Reliability

Composite Reliability measures a latent variable whose value must be above 0.70. A *composite reliability* value above 0.70 indicates that all latent variables meet the criteria for high reliability.

d) Cronbach's Alpha

Reliability tests with *composite reliability* can be strengthened using *Cronbach's Alpha values*. Variable assessment criteria if the value of *Cronbach's Alpha* on each variable is > 0.7, then the variable can be declared reliable.

Inner model (*inner relation, structural model and substantive theory*) is a structural model that connects between latent variables that describes the relationship between latent variables based on substantive theory. The structural model was evaluated using the *Path Coefficient* Test, *Goodness of Fit*.

a) *Path Coefficient*

Path coefficient *evaluation* is used to show how strong the effect or influence of the independent variable is on the dependent variable. This test is done by looking at threshold values above 0.1.

b) Model Feasibility Test (*Goodness of Fit*)

The *Goodness of Fit Index* (*Go F Index*) assessment is known from the *Q-Square* value. The *Q-Square* value has the same meaning as *the coefficient determination (R-Square)* in regression analysis. A value close to one means that the independent variables provide almost all the information needed to predict the variation of the dependent variable. *Go F Index* is calculated from

the square root of *the average communality index* and *average R-square* values. In model feasibility testing using Q2, Q2 can be calculated through Q2 = 1 – [(1-R2) x (1-R2)]. NFI values range from zero to one.

Structural equations are equations that explain the causal relationship of exogenous variables X to endogenous variables Y and Z. Ghozali's (2013) structural equations are based on a path analysis model created/drawn. From the path analysis obtained three sub-structural, namely; Sub structural 1, Sub Structural 2 and Sub Structural 3 with their structural equations as follows:

$$Y = \rho yxX + \rho y\varepsilon 1 \quad (3)$$
$$Z = \rho zxX + \rho z\varepsilon 2 \quad (4)$$
$$Y = \rho yzZ + \rho y\varepsilon 3 \quad (5)$$

Based on the structural equation, a linear regression equation is constructed:

$$Y = a1+bX+ \varepsilon 1 \quad (6)$$
$$Z = a2+bX+ \varepsilon 2 \quad (7)$$
$$Y = a3+bZ+ \varepsilon 3 \quad (8)$$

Information:

Y	= Motivation (Endogenous dependent variable)
Z	= Workload (Intermediate endogenous variable)
A1, A2, and A3	= Constant Value
X	= Leadership (as an exogenous independent variable)
ε1, ε2, and ε3	= *Standart error*

RESULTS AND DISCUSSION

Test Measurement Model (*Outer Model*)

The measurement model using *Smart PLS* version 3.0, before the model test was carried out as follows:

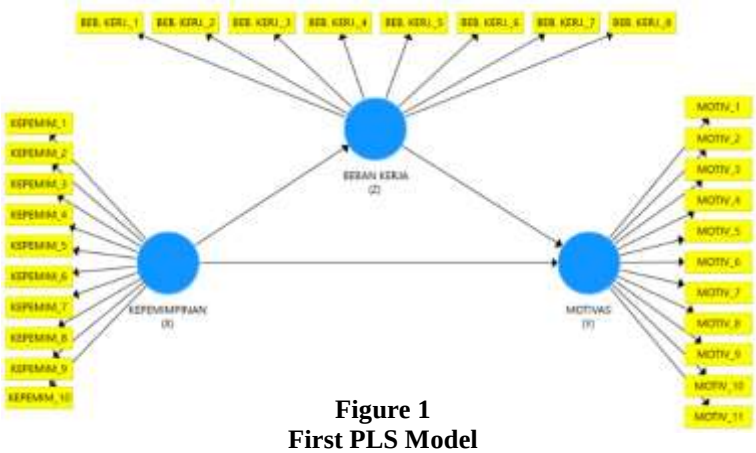

Figure 1
First PLS Model

Figure 1 is a PLS model consisting of indicators and latent variables, where latent variables consist of exogenous variables, endogenous variables and intervening variables. The exogenous variable is the Leadership variable (X) with ten number of indicators; endogenous variables namely the Motivation variable (Y) eleven indicators; and intervening variables, namely Workload variables (Z) with eight indicators. To test the relationship between latent variables, it is necessary to know the relationship between indicators and latent variables, the contribution of each indicator will have an impact on the influence of exogenous latent variables on endogenous latent variables, as shown in the following figure:

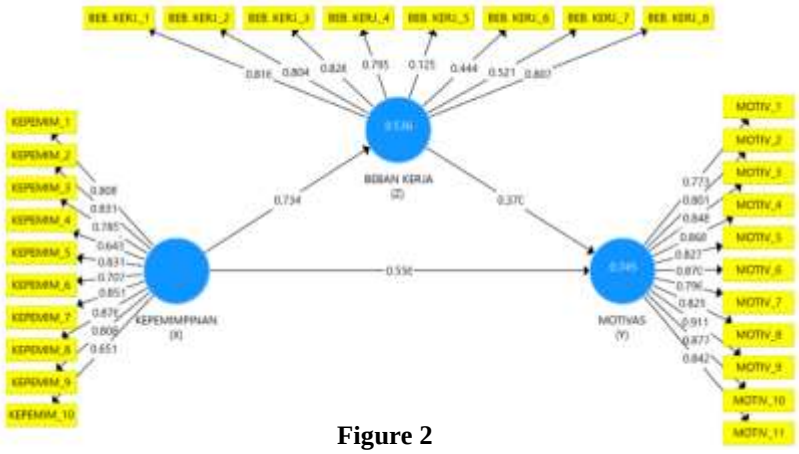

Figure 2
Second PLS Model

The figure above shows that the value between the indicator and the latent variable is the *outer loading value*, while the value between the variable is the Path *Coefficients* value. In *Partial Least Square* (PLS) analysis, before determining the measurement model, it is necessary to do some testing to determine the relevant model.

Convergent Validity *Test*

The reflective measure provision is generally said to be relevant if it correlates more than 0.70 with the latent variable to be measured. According to Ghozali (2013) for early stage research of development, a loading value measurement scale of 0.50 to 0.60 is considered sufficient. Because this study is not the beginning of a development but empirical evidence, this study uses *loading values* above 0.70 for reflective measures. The results of the *Convergent Validity* test for all indicators with latent variables in this study are as follows:

Leadership Variable (X)

Provided that the reflective measure of *the loading factor* value of 0.70 then indicators correlated with latent variables (leadership variables) that have values below 0.70 cannot be used (omitted).

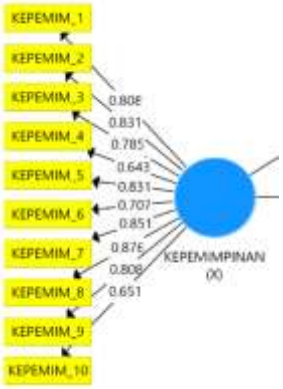

Figure 3
The Value of *Loading Factor* Leadership Variables

From Figure 3, the *loading* value for the reflective size is the lowest reaching 0.643, and the highest reaching 0.876. In accordance with the provisions used in this study, the *loading* value is above 0.70 for the reflective measure of each indicator. From the figure, indicators with values below 0.70 will be excluded from the measurement model, as for the indicators in question, namely: Kepemim_4, and Kepemim_10. However, after testing again, there was a change in the loading value at Kepemim_6 to 0.682, then according to the provisions of the Kepemim_6 was also removed from the measurement model. So that the number of indicators in the Leadership variable becomes seven indicators.

Motivational Variable (Y)

The motivational variable indicators all have a *loading factor* value above 0.70 as shown in the

following figure:

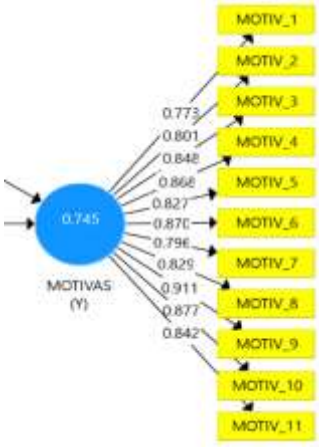

Figure 4
Value of *Loading Factor* Variable Motivation

From Figure 4, the *loading factor* value for the reflective size is the lowest at 0.773, and the highest at 0.911. In accordance with the provisions used in this study, all indicators on motivational variables can be used.

Workload Variable (Z)

The indicator on the workload variable has a *loading factor* value below 0.70 as shown in the following figure:

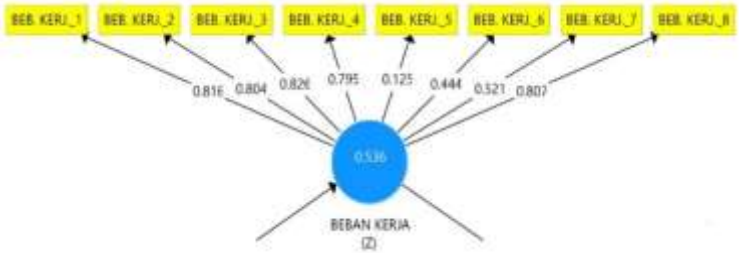

Figure 5
Workload Variable *Loading Factor* Value

From Figure 5, the *loading factor* value for the reflective size is the lowest at 0.125, and the highest at 0.826. In accordance with the provisions used in this study, the *loading value* is above 0.70 for the reflective measure of each indicator. From the picture, indicators with values below 0.70 will be excluded from the measurement model, as for the indicators in question, namely: Beb. Kerj_5, Beb. Kerj_6, and Beb. Kerj_7. After the issuance of indicators with loading values below 0.70, then testing is carried out again, to ensure the *loading* values are all above 0.70. Here' s *the next version 3.0* of Smart PLS measurement model:

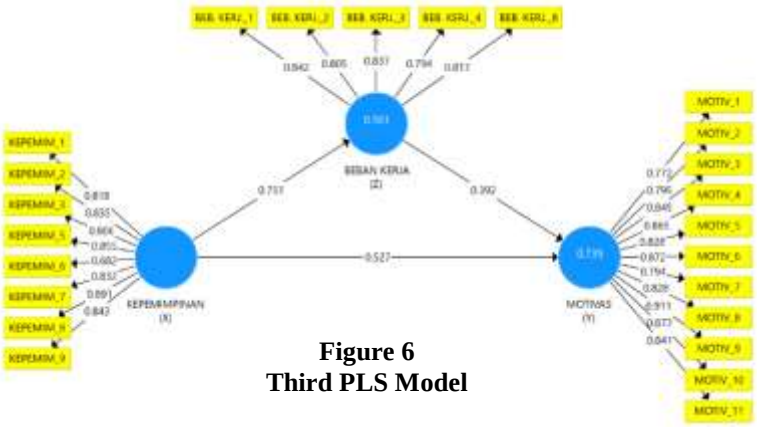

Figure 6
Third PLS Model

Figure 6 shows that the *loading factor* value of all indicators is above 0.70, which means that the *outer model* complies with the reflective size provisions in this study and is declared to have passed the convergent validity *test.*Thus further tests can be carried out.

Discriminant Validity *Test*

Discriminant Validity of measurement models with reflective indicators is assessed based on *cross loading* measurements with latent variables, that is, if the correlation of latent variables with measurement items is greater than the size of other latent variables, it can be declared to pass the *Discriminant Validity test*. The results of the *Discriminant Validity* test for all indicators with latent variables in this study are as in the following table:

Table 3 *Cross Loading*

Indicators	Leadership (X)	Motivation (Y)	Kerj Load (Z)
KEPEMIM_1	0.833	0.599	0.689
KEPEMIM_2	0.823	0.665	0.568
KEPEMIM_3	0.817	0.608	0.633
KEPEMIM_5	0.864	0.686	0.665
KEPEMIM_7	0.826	0.728	0.609
KEPEMIM_8	0.894	0.764	0.691
KEPEMIM_9	0.847	0.713	0.660
MOTIV_1	0.623	0.772	0.608
MOTIV_2	0.590	0.798	0.549
MOTIV_3	0.708	0.850	0.673
MOTIV_4	0.701	0.870	0.702
MOTIV_5	0.721	0.830	0.731
MOTIV_6	0.758	0.873	0.732
MOTIV_7	0.582	0.792	0.511
MOTIV_8	0.653	0.827	0.598
MOTIV_9	0.751	0.912	0.752
MOTIV_10	0.677	0.877	0.667
MOTIV_11	0.674	0.841	0.707
BEB. KERJ._1	0.668	0.701	0.842
BEB. KERJ._2	0.590	0.575	0.809
BEB. KERJ._3	0.584	0.600	0.838
BEB. KERJ._4	0.518	0.531	0.795
BEB. KERJ._8	0.734	0.772	0.817

Source : Smart PLS Data Processing Results version 3.0, 2024

The table above shows that the cross loading value of a latent variable with a gauge item is greater than the size of another latent variable. For example, the Leadership variable indicator (X) has a value greater than the value in the other variable columns, this means that the indicator is able to explain the Leadership Variable, while other variables do not exceed the explanation for the Leadership Variable. It's the same with the next variable indicator. So that *the outer model* is in accordance with the reflective size provisions and is declared to pass the *Discriminant Validity test.* But before further testing, it is recommended that *the Average Variance Extracted* (AVE) value for each latent variable show a value of more than 0.5. The AVE of each latent variable in the *outer model* as shown in the following table:

Table 4 *Average Variance Extracted* (AVE)

Variable	Average Variance Extracted (AVE)
X_Kepemimpinan	0.712
Y_Motivasi	0.707
Z_Beban Work	0.673

Source : Smart PLS Data Processing Results version 3.0, 2024

The table above shows that, the AVE value of the Leadership Variable has an AVE value of 0.712>0.5, the Motivation Variable is 0.707>0.5, and the Workload variable has an AVE value of 0.673>0.5. Thus all variables according to *the outer model*, have an AVE value of more than 0.5, then further testing can be carried out.

Composite Reliability* Test and *Cronbach's Alpha

Composite Reliability measures a latent variable whose value must be above 0.70. Similarly, *Cronbach's alpha* value must also be above 0.70. *Composite reliability* and *Cronbach's alpha* values above 0.70 indicate that all latent variables meet high reliability criteria. As for the value of *composite reliability* and *Cronbach's alpha*, from this study as the following table:

Table 5 *Construct Reliability*

Variable	Cronbach's Alpha	rho_A	Composite Reliability
X_Kepemimpinan	0.933	0.934	0.945
Y_Motivasi	0.958	0.961	0.964
Z_Beban Work	0.879	0.888	0.911

Source : Smart PLS Data Processing Results version 3.0, 2024

The table above, shows that the *composite reliability* value of the Leadership Variable of Undata Regional General Hospital Nurses of Central Sulawesi Province is 0.945, the Motivation Variable is 0.964, and the Workload variable is 0.911, meaning that all latent variables in the measurement model show *a composite reliability* value above 0.70, as well as *Cronbach's alpha* value The Leadership Variable of Undata Regional General Hospital Nurses of Central Sulawesi Province is 0.933, the Motivation Variable is 0.958, and the Workload variable is 0.879, all variables in the measurement model of this study show *Cronbach's alpha* value above 0.70, which means that the data in this study is based on *composite reliability* and *Cronbach's alpha* testshas a high reliability value. Based on the measurement model test (*outer model*), it can be stated that the data used in this study meet the criteria of valid and reliable.

Structural Model Test (*Inner Model*)

Inner model (*innerrelation, structural model and substant ivetheory*) is a structural model that connects between latent variables and describes the relationship between latent variables based on substantive theory. Structural models are evaluated using *the Path Coefficient* Test, *Goodness of Fit*, and Hypothesis Test.

4.4.1 Path *Coefficient Test*

This test is done by looking at threshold values above 0.1. This means that it states that the *path* in question has an influence in the model. Based on test results using Smart PLS version 3.0, as shown in the following table:

Table 6 *Path Coefficient*

Variable	Y_Motivasi	Z_Beban Work
X_Kepemimpinan	0,496	0,765
Z_Beban Work	0,409	

Source : Smart PLS Data Processing Results version 3.0, 2024

Based on the path coefficient table, it shows that the Leadership variable (X) has a positive influence on the Motivation Variable of Undata Regional General Hospital Nurses of Central Sulawesi Province (Y) of 0.496, the Workload variable (Z) has a positive influence on the Motivation Variable of Undata Regional General Hospital Nurses of Central Sulawesi Province (Y) of 4.409, while the

Leadership variable (X) has a positive influence on the Workload variable (Z) of 0.765. Thus, based on the *Path Coefficient* Test, the value between latent variables is above 0.1, it can be stated that the *path* in question has an influence in the model.

Model Feasibility Test (*Goodness of Fit*)

1. Test *R-Square*

The *Goodness of Fit Index* (*Go F Index*) assessment is known from the *Q-Square* value. The *Q-Square* value has the same meaning as *the coefficient determination (R-Square)* in regression analysis. The value of the Coefficient of Determination is between 0-1. A value close to one means that the independent variables provide almost all the information needed to predict the variation of the dependent variable.

Table 7 *Coefficient of Determination*

Variable	R *Square*
Y_Motivasi	0,720
Z_Beban Work	0,584

Source : Smart PLS Data Processing Results version 3.0, 2024

Based on the *value of coefficient determination (R-Square)* in the table above, the Variable of Motivation of Nurses at Undata Regional General Hospital of Central Sulawesi Province is 0.720, which means that 72% of the motivation of nurses can be explained by Leadership and Workload Variables, thus there are 28% influenced by other variables that are not included in the model. While the *value of the coefficient determination (R-Square)* of the Workload variable of 0.584 or 58.4% of the Workload variable can be explained by the Leadership Variable, so that there are 41.6% influenced by other variables that are not included in the measurement model.

2. *Q-Square Test*

Go F Index is calculated from the square root of *the average communality index* and *average R-square* values. In the feasibility test the model uses Q2. While the value of Q2 can be calculated using the equation $Q^2 = 1 - [(1-R2) \times (1-R2)]$. The values of *Q-Square* in this study are:

Q2 = 1-(1-0.720) x (1-0.584)
Q2 = 1-(0.28 x 0.416)
Q2 = 1-0.117
Q2 = 0.883

From the calculation of the *Q-Square* value of 0.883, it means that the amount of contribution from the observations produced in this study has an estimated parameter value of 88.3%. According to Ghozali (2013) that the Q2 value greater than 0 (zero) indicates that the model is said to be good enough, while the Q2 value is greater than 0 (zero) so that the predictions made by the model are considered relevant.

Test the Direct Influence Hypothesis

In *the Smart PLS program* version 3.0, the results of the direct influence hypothesis test can be seen through *the Path Coefficients* Bootstrapping technique. The test results for direct influence as the following table:

Table 8 Direct Effect Test Results

Variable Relationships	T Statistics (|O/STDEV|)	P Values
X_Kepemimpinan -> Motivation	5,198	0,000
X_Kepemimpinan -> Z_Beban Work	14,417	0,000
Z_Beban Work -> Motivation	4,952	0,000

Source : Smart PLS Data Processing Results version 3.0, 2024

From the path coefficient *table* above, it can be seen the original sample value, p value or t-statistics used as a reference for decision making accepted hypotheses or rejected hypotheses. The hypothesis is acceptable if the value of t-statistics > t-table or p value < 0.05.

H1: Leadership affects the motivation of nurses at Undata Regional General Hospital, Central Sulawesi Province. The *path coefficient table* shows that the direct influence of the Leadership Variable

on the Motivation of Nurses at Undata Regional General Hospital, Central Sulawesi Province, has a positive t-statistics value of 5.198 >1.972 which means t-statistics > t-table, with *a p value* of 0.000 < 0.05. So it can be concluded that leadership affects the motivation of nurses at Undata Regional General Hospital, Central Sulawesi Province. Accepted.

H2: Leadership affects the Workload of Undata Regional General Hospital Nurses, Central Sulawesi Province. From the path coefficient *table*, it shows that the direct influence of the Leadership Variable on the Workload of Nurses at Undata Regional General Hospital, Central Sulawesi Province, has a positive t-statistics value of 14.417 > 1.972 which means t-statistics < t-table, with *a p value* of 0.000 < 0.05. So it can be concluded that leadership affects the workload of nurses at Undata Regional General Hospital, Central Sulawesi Province. Accepted.

H3: Workload affects the motivation of nurses at Undata Regional General Hospital, Central Sulawesi Province. From the path coefficient *table,* it shows that the direct influence of the Workload Variable on the Work Motivation of Undata Regional General Hospital Nurses, Central Sulawesi Province, has a positive t-statistics value of 4.952 > 1.972 which means t-statistics < t-table, with *a p value* of 0.000 < 0.05. So it can be concluded that the workload affects the work motivation of nurses at Undata Regional General Hospital, Central Sulawesi Province. Accepted.

Test the Indirect Influence Hypothesis

Test the hypothesis of indirect influence, To test the hypothesis of indirect influence using *Specific Indirect Effects data,* as shown in the following table:

Table 9 Indirect Influence Test Results

Variable Relationships	T Statistics (|O/STDEV|)	P Values
X_Kepemimpinan -> Z_Beban Work -> Y_Motivasi	4.834	0.000

Source : Smart PLS Data Processing Results version 3.0, 2024

The Specific *Indirect Effects table* above shows that leadership affects motivation through the workload of nurses at Undata Regional General Hospital, Central Sulawesi Province. From the Specific *Indirect Effects Table,* it shows that the positive t-statistics value is 4.834 > 1.972 which means t-statistics > t-table, with *p values* of 0.000 < 0.05. So the hypothesis of this study can be concluded that leadership affects motivation through the workload of Undata Regional General Hospital Nurses, Central Sulawesi Province. Accepted.

Discussion of Research Results

The Influence of Leadership on Motivation

The results of the analysis of this study show that the Leadership Variable has a positive and significant influence on the Motivation of Undata Regional General Hospital Nurses in Central Sulawesi Province, meaning that the better a leader is in carrying out his role, the more motivated the Undata Regional General Hospital Nurses in Central Sulawesi Province will be in carrying out each of their duties and responsibilities.

The results of this study indicate that the leadership of Undata Regional General Hospital of Central Sulawesi Province can influence nurses in achieving the goals of Undata Regional General Hospital of Central Sulawesi Province as a center for specialist and subspecialty medical referral services that function to provide and organize curative and rehabilitative health efforts for patients. As according to Gorda (2010, p 151), leadership is a trait for character, or the way a person in an effort to nurture and cultivate a person or group of people so that they are willing, committed and faithful to carry out their duties and responsibilities to realize the company's goals that have been set before. From the results of this study shows that leadership has a significant effect on the motivation of Undata Regional General Hospital Nurses, Central Sulawesi Province, the results of this study are in line with Yuki's opinion (2005, p. 56) that leadership is the ability of individuals to influence, motivate, and make others able to contribute to the effectiveness and success of the organization.

Related to the above, the leadership function according to Supardi and Anwar (2002, p. 66) which is a reference in this study, namely: leadership functions as *an innovator, comunicator, motivator, controller* plays a role in the leadership of Undata Regional General Hospital Central Sulawesi

Province.

This means that leaders who are innovators have an important role to play in driving change and progress. Leaders are responsible for identifying innovation opportunities in healthcare, medical technology, operational management, and patient care strategy. By becoming an agent of change, lead innovators help Undata hospital to stay relevant and competitive amidst rapid developments in the healthcare industry. Leaders in order to introduce best practices to nurses, such as new technology or SIMGos used by nurses, it is part of a management strategy that can improve efficiency, quality so that patient satisfaction can be felt directly.

The leadership of Undata Regional General Hospital of Central Sulawesi Province functions as a communicator must have the ability to communicate clearly, effectively, and empathetically to all nurses virtually using *WhatsApp* or in person. Leaders must also be able to convey the vision, mission, and goals of the hospital. In addition, a good communicator also facilitates communication between various departments and teams in the hospital, as well as ensuring good coordination and a clear understanding of the duties and responsibilities of each nurse and staff, both team and personal.

The leadership of Undata Regional General Hospital of Central Sulawesi Province as a motivator requires the ability to motivate and inspire all nurses. Leaders must be able to recognize individual and team needs, provide appropriate support, appreciation, and recognition, and create a work environment that supports professional and personal growth. By being an effective motivator, Undata hospital leaders can improve the morale, performance and loyalty of nurses and hospital staff, which has an impact by contributing to quality and sustainable health services.

The leadership of Undata Regional General Hospital of Central Sulawesi Province as the controller of the hospital is certainly responsible for ensuring compliance with applicable safety standards, regulations, and operational procedures. Leaders must have a strong understanding of the policies and regulations governing the healthcare industry, as well as the ability to monitor and evaluate the performance of the nursing workforce on a regular basis. As well as ensuring that the hospital operates according to established standards, controllers help maintain patient safety, institutional integrity, and the financial sustainability of the hospital. Overall, the role of innovator leaders, communicators, motivators, and controllers plays a crucial role in hospital leadership.

The findings of the study show that the application of leadership functions by integrating these skills and functions effectively, a hospital leader can lead the institution towards excellence in health services, innovation, and sustainability at Undata Regional General Hospital Central Sulawesi Province. The test results that leadership has a significant effect on the motivation of nurses, in line with the results of research conducted by Cahyani et al. (2022) which states that there is a significant influence between Leadership on Motivation.

The Influence of Leadership on Workload

The results of the analysis of this study show that the Leadership Variable has a positive and significant influence on the Workload of Undata Regional General Hospital Nurses in Central Sulawesi Province, meaning that the better a leader is in carrying out his role, the more optimal the workload of Undata Regional General Hospital Nurses in Central Sulawesi Province in carrying out each of their duties and responsibilities.

Workload is the difference between the capacity or ability of workers and the demands of the work that must be faced (Hancock and Meshkati, 1988). As is known that the workload of nurses at Undata Regional General Hospital of Central Sulawesi Province has a workload level both physically and mentally the workload, from the results of questionnaires and direct observation even though the physical workload of nurses requires less *energy expenditure,* Because the physical work of nurses is more writing and pushing, for example patient beds, wheelchairs, and medical instrument tables, while lifting is more often for certain patients and is done together with colleagues or families of patients, but basically the activities of nurses at Undata Regional General Hospital of Central Sulawesi Province are complex, so the workload Mentally requires full concentration in carrying out tasks.

According to Hancock and Meshkati (1988) that human labor is mental and physical, so each has a different level of load. Too high a loading level allows excessive energy consumption and *overstress occurs,* while too low a loading intensity allows boredom and boredom or *understress.* The influence of leadership on workload can sometimes cause excessive load intensity, which means that the better the leadership, the higher the work load which in turn can cause *overstress*, to be able to find out this,

according to Handoko (2011, p. 200) various kinds of stress symptoms in employees both regarding mental health and physical health, employees who experience stress can become *nerveous* and feeling chronic worry, often irritable and aggressive, unable to relax, or showing a cooperative attitude. While physically, such as digestive problems or high blood pressure, as well as difficulty sleeping, these conditions although can also occur due to other causes, but in general they are symptoms of stress. From this opinion, it shows that nurses at Undata Regional General Hospital of Central Sulawesi Province do not experience *overstress* or too high workload.

The leadership functions according to Supardi and Anwar (2002, p. 66) that are referenced in this study are: leadership functions as an *innovator*, communicator, motivator and controller plays a role in efforts to the optimum level of workload intensity for nurses at Undata Regional General Hospital Central Sulawesi Province, in other words that the leader has directed nurses according to interests and abilities Nurses in their fields of duty and responsibility as the frontline of hospital services, this is also inseparable from the high motivation drive, so it can be said that leadership is needed in the strategy of determining the proportion of work.

The Effect of Workload on Motivation

The findings of this study show that Workload has a significant effect on the Motivation of Undata Regional General Hospital Nurses, Central Sulawesi Province. This means that the more optimal the workload of nurses, it will have an impact on the high motivation of Undata Regional General Hospital Nurses, Central Sulawesi Province.

Abraham Maslow's theory states that motivational indicators, namely Physiological Needs, Security Needs, Social Needs, Recognition Needs, and Self-Actualization Needs are references from this study can be influenced by the optimal proportion of workload, which is in accordance with the interests and abilities of nurses In the field of duties and responsibilities, or in other words even though nurses have a physical workload, namely writing, typing, binding, and encouraging activities at work and a complex mental workload, which includes doing the same work activities every day, must work in detail, complicated, think hard, and require good memory. However, this is in accordance with the profession as nurses, so that nurses have motivation in carrying out their duties and responsibilities in accordance with the vision and mission of Undata Regional General Hospital, Central Sulawesi Province.

The findings of this study are not in line with the results of research conducted by Cahyani et al. (2022) there is an insignificant influence between Workload on Motivation.

The Influence of Leadership on Motivation Through Workload

The findings of this study show that Workload is an intervening variable on the significant influence of Leadership on the Motivation of Nurses at Undata Regional General Hospital, Central Sulawesi Province. This means that the more optimal the workload of nurses, it will have a mediating effect on the functions of leadership on the high motivation of Undata Regional General Hospital Nurses, Central Sulawesi Province.

The results of this study indicate that although a job has high activity, if it is in accordance with the profession and the right capacity it will also have a good impact on an organization. As is known, the activities of nurses at Undata Regional General Hospital of Central Sulawesi Province are complex, both physical and mental and of course every nurse is aware of every task and responsibility, but sometimes the capacity of work is excessive, so it needs to be a concern for the leaders of Undata Regional General Hospital Central Sulawesi Province. Based on the *International Council of Nurses* (ICN) that the most appropriate nurse workload capacity is four patients, based on data at Undata Regional General Hospital of Central Sulawesi Province, in 2021 the workload capacity of nurses, 4 to 5 patients and in 2022 to 4 patients.

The above shows that leadership functions, namely: as *innovators, innovators, comunicators, motivators, controllers* have been implemented by the Undata Regional General Hospital of Central Sulawesi Province as the results of observations through leadership questionnaires that *innovators* always have progressive ways and ideas for nurses in carrying out their duties and solving nurses' problems in carrying out their duties, so that Complex workloads can be carried out well, because it is certainly a necessity for nurses who can increase motivation.

Leaders who function as communicators in coordinating tasks both through *Whats aap Group* and through deliberation, are delivered with good vocabulary, so that young nurses understand every

instruction in carrying out their duties, and in accordance with the vision and mission of Undata Regional General Hospital Central Sulawesi Province, which is a manifestation of the high motivation of nurses. Then with a leader who can also function as a motivator, will be able to provide encouragement and encouragement so that the workload both in the form of physical and mental complex will be resolved quickly and appropriately. Based on the questionnaire also shows that the leader has functioned as a *Controller* directing nurses in carrying out tasks and completing them well, this is one of the evaluations for leaders to see the development of nurses' performance and become a way or solution in handling the problems of nurses that arise. This is a manifestation of the leadership's concern for nurses, which has an impact on high motivation, even with a complex workload.

Another finding from the results of this study is that the direct influence of leadership on motivation is stronger than the emergence of intervening variables, namely workload. This indicates that the leader of Undata hospital plays a role in increasing the motivation of a nurse than the leader involves the workload of nurses to motivate a nurse himself. This is because a nurse feels motivated to work if the leader is an *innovator, comunicator, motivator, controller*. While the workload of nurses is mandatory for nurses because patient safety is the main thing by taking medical action so that the variable role of workload as an intervening does not fully strengthen the motivation of a nurse.

CONCLUSION

The results of research analysis and discussion, regarding the influence of Leadership on the Motivation of Undata Regional General Hospital Nurses in Central Sulawesi Province with Workload as an intervening variable, SmartPLS version 3.0 as an analysis tool, it can be concluded that:

1. From the results of the direct influence analysis, the Leadership Variable on the Motivation of Nurses at Undata Regional General Hospital, Central Sulawesi Province, has a significant and positive influence.
2. From the results of the direct influence analysis, the Leadership Variable on the Workload of Undata Regional General Hospital Nurses, Central Sulawesi Province, has a significant and positive influence.
3. From the results of the direct influence analysis, the Workload Variable on the Motivation of Undata Regional General Hospital Nurses in Central Sulawesi Province, has a significant and positive influence.
4. From the results of the analysis of the indirect influence of Leadership Variables on Motivation through Workload, it shows that Workload variables can mediate the influence of Leadership on the Motivation of Nurses at Undata Regional General Hospital, Central Sulawesi Province.

RECOMMENDATIONS

Based on the discussion and conclusions above, the following are suggestions that can be taken into consideration in decision making:

1. The leadership of Undata Regional General Hospital of Central Sulawesi Province should continue to pay attention and improve the application of Leadership functions in Undata Regional General Hospital Nurses of Central Sulawesi Province both as *Innovators, Comunicators, Motivators,* and *Controllers,* especially in the *Controller* dimensionwhich has the lowest mean value. In this dimension, the current and future leaders of Undata hospital must be able to influence the perspective of each nurse in order to complete their work. The application of leadership functions can increase the motivation of nurses and can affect the optimal workload of nurses, because the workload of nurses is complex, there needs to be more attention in the application of these leadership functions.
2. The leaders of Undata Regional General Hospital of Central Sulawesi Province should also pay attention to the workload of nurses, especially in the dimension of mental workload, in that dimension leaders should conceptualize routine activities once every week that make nurses not feel bored in carrying out their work. Because the workload of nurses is complex, the proportion and tupoksi adjusters must be right so that the high motivation of nurses is maintained, so that the role of nurses as the front line of hospital services is realized in accordance with the vision and mission of Undata Regional General Hospital, Central Sulawesi Province.
3. The next researcher who wants to conduct research with similar objects, should add independent variables, because the results of this study show that there are still variables that can affect both

motivation and workload that are not identified in this study, to obtain optimal research results, because optimal research results can have implications for both practitioners and academics who want to review references.

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