The Effect of Leadership and Work Demands on the Performance of Lecturers and Educational Staff At Stikes Senior Medan 2021

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ABSTRACT
This study aims to determine the effect of leadership and work stress on the performance of lecturers and education staff at the Medan Senior High School of Health in 2021. This research is a quantitative study using a survey method, in which basic data from a sample of a population is collected using a questionnaire instrument in field. The data used in this study is primary data. Primary data is obtained directly from the original source through the distribution of questionnaires to respondents. The research population was all lecturers and education staff at the Medan Senior High School of Health as many as 50 people with the number of samples used as total sampling. Data collection techniques were carried out by interviewing and distributing questionnaires to respondents. Classical assumption test is done by normality test, multicollinearity test, and heteroscedasticity test. The data analysis technique used the T-test and F-test. The results showed that the t-count value > t-table, namely the leadership t-count value 2.978 > 1.677 and the t-count compensation value 2.040 > 1.677, this indicates that there is a positive and significant influence between leadership and work stress, on the performance of lecturers and education staff. Meanwhile, it simultaneously shows that the calculated F value > F table (4.641 > 3.20).

Keywords: Lecturer and Staff Performance, Leadership, Work Demands

Received: 01.05.2022 Revised: 01.06.2022 Accepted: 13.06.2022 Available online: 01.07.2022

Suggested citations:

Open Access | URLs:
https://ejournal.ipinternasional.com/index.php/ijcs/OpenAccessPolicy

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INTRODUCTION

An important factor that determines employee performance and organizational ability to adapt to environmental changes according to (Bass et al. 2003, Locander et al. 2002, and Yammarino et al. 1993) is leadership (leadership). Leadership describes the relationship between leaders (leaders) and those who are led (followers) and how a leader directs followers will determine the extent to which followers achieve the goals or expectations of the leader (Locander et al 2002; Yammarino et al 1993). Leaders develop and direct the potential and abilities of subordinates to achieve and even exceed organizational goals (Dvir et al 2002). Ogbonna and Harris (2000) conducted research on leadership style, organizational culture and performance in companies in the United Kingdom. From the results of his research found that leadership style is not directly related to performance. However, there is a positive and strong relationship between competitive and innovative culture and organizational performance.

Leadership is the process of influencing the activities of a person or group in an effort to achieve goals in certain situations. Leadership is a process in which a person (leader) influences subordinates without coercion to achieve organizational goals (Blanchard in Liana and Irawati, 2013) as stated in Law Number 14 of 2005 concerning Teachers and Lecturers, and Government Regulation of the Republic of Indonesia Number 37 of 2009 concerning Lecturers, it is stated that lecturers are professional educators and scientists with the main task of transforming, developing and disseminating science, technology and art through education, research and community service. As a professional educator and scientist, a lecturer has competencies that include cognitive competence, personality competence, social competence and professional competence.

Lecturers as one of the strategic factors that drive the operations of a university have a fairly important role, namely the obligation to carry out the activities of the Tri Dharma of higher education. In supporting the performance of a university, the role of a leader cannot be ignored. The effectiveness of an organization is determined by the role of a leader who will bring members of the organization and group towards achieving the goals, vision and mission of an organization (Thompson, 2000). A leader provides direction to his subordinates, so that later his followers can accept and implement the goals and objectives of an organization.

With an understanding of the tasks carried out, and understanding the characteristics of his subordinates, a leader will be able to provide guidance, encouragement and motivation to all members to achieve goals. If the interaction process works well, then he will be able to provide satisfaction at the same time can improve its performance. In many studies on the role of leadership is able to improve employee performance (Chen, 2005).

The performance of subordinates is also influenced by the behavior of the leader as a superior. House in Guritno (2005) states that leadership style has a significant impact on subordinate attitudes, behavior and performance of subordinates. The effectiveness of a leader will be greatly influenced by the characteristics of his subordinates. Good leadership is one of the main requirements in supporting the
smooth operation of the organization. In leadership theory it is explained that a person is called a leader if he is able to influence others to do something according to what he wants. While effective leadership is leadership that emphasizes the behavior of leaders rather than the characteristics of existing leaders. Anyone who occupies a leadership role is expected to act effectively as a leader.

Performance is a real behavior that is displayed by everyone as work performance produced by employees in accordance with their roles and the company. Employee performance is very important in the company’s efforts to achieve its goals (Rivai and Ella Jauvani Sagala, 2009). That the completion of an employee’s task is a real achievement for both the employee and the company. A person's willingness and ability to complete a task is one of the company’s benchmarks in achieving company goals.

According to (Luthan, 2008) explains that stress is not automatically bad for individual employees or their organizational performance. In fact, it is generally known that low stress levels can improve performance and increase activity, change and good performance. Stress antecedents are often referred to as stress that affects employees, the causes come from outside and within the organization, from groups influenced by employees and from employees themselves.

Everyone must experience stress, both outside the organization and in any organization. In other words, everyone cannot avoid stress, for that employees and leaders are obliged to manage it properly. When an employee or manager is able to manage their stress well, the consequences are functional (positive), otherwise if they ignore the stress that arises, the consequences are negative for individuals and organizations. So, stress not only has a negative impact, but also has a positive impact on a person. This is in accordance with the opinion expressed by (Luthan, 2008).

**METHOD**

This study aims to determine the effect of leadership and work stress on the performance of lecturers at the Medan Senior High School of Health in 2016 by exploring each research variable. This research is categorized as exploratory research. The research population was all lecturers and education staff at the Medan Senior High School of Health as many as 50 people with the number of samples used as total sampling. Data collection techniques were carried out by interviewing and distributing questionnaires to respondents. Classical assumption test is done by normality test, multicollinearity test, heteroscedasticity test. Data analysis technique using T test and F test.

**RESULTS AND DISCUSSION**

Classic Assumption Test
Normality test
The normality test aims to test whether in the regression model, the independent variables and the dependent variable are both normally distributed or not. The normality of the data in the study was seen by means of histograms and paying
attention to the points on the Normal P-Plot of Regression Standardized Residual of the dependent variable.

On the histogram curve, the model meets the assumption of normality if the shape of the curve is symmetrical or does not deviate to the left or right. The following are the results of the normality test using the histogram curve:

![Histogram Curve](image1)

**Figure 1. Normality Test (Regression Standardized Residual Vs Frequency)**

The histogram curve results show that the shape of the curve is symmetrical and does not deviate to the left or right so that based on the histogram curve, the regression model is normally distributed. In addition to the histogram, the requirements of the normality test can also be seen from the Normal P-Plot of Regression Standardized Residual, namely if the data spreads around the diagonal line and follows the direction of the diagonal line, then the regression model meets the assumption of normality. If the data spreads far from the diagonal line and/or does not follow the diagonal line, then the regression model does not meet the assumption of normality.

![Normal P-P Plot](image2)

**Figure 2. Normality Test (P-Plot)**
Based on data from the figure 2, it can be seen that all data are normally distributed, the distribution of data is around the diagonal line.

**Heteroscedasticity Test**

This test aims to test whether in a regression model there is an inequality of variance from the residuals, from one observation to another. If the variance of the residuals from one observation to another observation remains, it is called homoscedasticity and if the variance is different, it is called heteroscedasticity. A good regression model is that there is no heteroscedasticity. To detect the presence or absence of heteroscedasticity, the Scatterplot graph method can be used. If the figure shows that the points spread randomly and are spread both above and below the number 0 on the Y axis, it can be concluded that there is no heteroscedasticity in the regression model (Ghozali, 2005).

From the graph, it can be seen that the points spread randomly, do not form a certain clear pattern, and are spread both above and below the number 0 (zero) on the Y axis, this means that there is no deviation from the classical assumption of heteroscedasticity in the regression model that made, in other words accept the homoscedasticity hypothesis.

**Multicollinearity Test**

Multicollinearity testing aims to determine the perfect relationship between independent variables in the regression model. Symptoms of multicollinearity can be seen from the tolerance value and the Variant Inflation Factor (VIF) value. If the VIF value is less than 10 and the tolerance value is above 0.1 or 10%, it can be concluded that the regression model does not occur multicollinearity (Ghozali, 2005).

**Table 1. Multicollinearity Test Results**

<table>
<thead>
<tr>
<th>No.</th>
<th>Dependent Variable</th>
<th>Tolerance Value</th>
<th>VIF Value (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Leadership</td>
<td>0.618</td>
<td>1.373</td>
</tr>
<tr>
<td>2</td>
<td>Work Demand</td>
<td>0.648</td>
<td>1.543</td>
</tr>
</tbody>
</table>
From table 1, it shows that the VIF value of all independent variables in this study is smaller than 10 while the tolerance value of all independent variables is more than 0.1 which means that the regression model does not have multicollinearity problems between independent variables (leadership and work stress) in the regression model.

Multiple Linear Regression Equation Analysis

A good regression equation model is one that meets the requirements of classical assumptions, including all data are normally distributed, the model must be free from multicollinearity symptoms and free from heteroscedasticity. From the previous analysis, it has been proven that the equation model proposed in this study has met the requirements of the classical assumptions so that the equation model in this study is considered good. Regression analysis was used to test the hypothesis about the partial effect of the independent variables on the dependent variable. Based on the multiple regression estimation, the results are as shown in table 2.

Table 2. Regression Result Coefficient Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficient</th>
<th>Unstandardized Coefficient</th>
<th>t</th>
<th>Sign</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>1. Constant</td>
<td>32.991</td>
<td>4.800</td>
<td></td>
<td>6.874</td>
<td>0.000</td>
</tr>
<tr>
<td>Leadership</td>
<td>0.358</td>
<td>0.162</td>
<td>0.175</td>
<td>2.978</td>
<td>0.033</td>
</tr>
<tr>
<td>Work Demands</td>
<td>0.312</td>
<td>0.108</td>
<td>0.186</td>
<td>2.040</td>
<td>0.014</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Lecturer and staff Performance

Table 2 shows that the regression equation formed is:

\[ Y = a + b_1X_1 + b_2X_2 \]

\[ Y = 32.991 + 0.358X_1 + (-0.312)X_2 \]

Information:

Y = Lecturer and staff performance

a = Constant

b1, b2 = Regression coefficient

X1 = Leadership

X2 = Work demand

From these equations it can be explained that:

a. The variables of leadership and work stress have a positive direction coefficient on the performance of lecturers and education staff.

b. A constant of 32.991: it means that if leadership (X1) and work stress (X2) the value is 0, then the performance of lecturers and education staff is 32.991.

c. The leadership coefficient gives a value of 0.358 which means that if the leadership is getting better with the assumption that other variables are fixed, the performance of lecturers and education staff will increase. The positive coefficient means that there is a positive relationship between work discipline and the performance of lecturers and
education staff, the better the leadership, the higher the performance of lecturers and education staff.

d. The compensation coefficient gives a value of 0.312 which means that if the work stress is lower with the assumption that other variables are fixed, the performance of lecturers and education staff will increase. A negative coefficient means that there is a negative relationship between work stress and the performance of lecturers and education staff; the lower the work stress, the higher the teacher's performance.

Hypothesis test

Coefficient of Determination ($R^2$)

The coefficient of determination is a quantity that shows the magnitude of the variation in the dependent variable that can be explained by the independent variable. In other words, the coefficient of determination is used to measure how far the independent variables explain the dependent variable. The value of the coefficient of determination is determined by the adjusted $R$ square value as can be seen in the table 3.

Table 3. Analysis of Determination Coefficient Result (Model Summary$^b$)

<table>
<thead>
<tr>
<th>Model</th>
<th>$R$</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
<th>Std. Error of Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.663$^a$</td>
<td>0.567</td>
<td>0.545</td>
<td>8.121</td>
<td>2.430</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), leadership, work demand
b. Dependent Variable: lecturer and staff performance

Table 3 shows that the coefficient of determination (adjusted $R^2$) obtained is 0.545. This means that 51% of the variation in teacher performance variables can be explained by work discipline and compensation variables, while the remaining 45.5% is explained by other variables not proposed in this study.

F test (simultaneous hypothesis testing)

To test the effect of independent variables jointly tested using the F test. Where if the calculated F value is greater than the F table, the model used is fit or good. The calculated F value can be seen in the regression results and the table F value is obtained $\alpha$ sig. = 0.05 with df1=k and df2 = n-k-1. The results of simultaneous regression calculations are obtained as follows:

Table 4. Analysis of F-Test (ANOVA$^b$)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>84.599</td>
<td>2</td>
<td>42.300</td>
<td>4.61</td>
<td>0.031$^*$</td>
</tr>
<tr>
<td>Residual</td>
<td>3099.421</td>
<td>47</td>
<td>65.945</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3184.020</td>
<td>49</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Leadership, work demand
b. Dependent variable: Lecturer and staff Performance
Table 4 shows that the calculated F value is 4.641, while the F table with df1 = 2 and df2 = 47, then the F table is 3.20. The calculated F value > F table (4.641 > 3.20) thus the regression model between work discipline and compensation on teacher performance is declared fit or good.

**t test**

This t-test is used to prove a significant influence between the independent variables on the dependent variable, where if the t-count > t-table indicates the acceptance of the proposed hypothesis. The calculated t value can be seen in the regression results and the t table value is obtained through sig. = 0.05 with df = n – k.

<table>
<thead>
<tr>
<th>Model</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Constant)</td>
<td>6.874</td>
<td>0.000</td>
</tr>
<tr>
<td>Work demand</td>
<td>2.978</td>
<td>0.033</td>
</tr>
<tr>
<td>Leadership</td>
<td>2.040</td>
<td>0.014</td>
</tr>
</tbody>
</table>

a. Dependent variable: Lecturer and staff Performance  

Table 5 shows that:

1. The t-count value of leadership on the performance of lecturers and education staff is 2.978, while for the t-table with α sig. = 0.05 and df = n-k, which is 50-2 = 48, then the one-sided t table is 1.677. The value of t count > t table, that is, the t value of leadership is 2,978 > 1,677. This shows that there is a positive and significant influence between leadership on the performance of lecturers and education staff.

2. The t value of work stress on the performance of lecturers and education staff is 2,040, while for t table with α sig. = 0.05 and df = n-k, which is 50-2 = 48, then the one-sided t table is 1.677. The value of t count > t table, namely the value of t count compensation 2,040 > 1,677, this shows that there is a positive and significant influence between work stress on the performance of lecturers and education staff.

Based on the results of statistical tests, it can be clearly seen that partially all independent variables, namely leadership and work stress, affect the dependent variable, namely the performance of lecturers and education staff. The influence given by the two independent variables is positive and negative, meaning that the better the leadership, the higher the performance of lecturers and education staff, the higher the work stress, the lower the performance of lecturers and education staff. These results are in accordance with the proposed hypothesis. This can be seen from the coefficient of determination (adjusted R2) obtained by 0.545. This means that 54.5% of the variation in the performance of lecturers and education staff can be explained by the variables of leadership and work stress, while the remaining 45.5% is explained by other variables not proposed in this study.

Partially it is also seen that the t-count value of leadership on the performance of lecturers and education staff is 2.978, while for the t-table with sig. = 0.05 and df = n-k, which is 50-2 = 48, then the one-sided t table is 1.677. The value of t count > t table, that is, the t value of leadership is 2,978 > 1,677. This shows that there is a positive and significant influence between leadership on the performance of lecturers and education staff. The t value of work stress on the performance of lecturers and
education staff is 2,040, while for t table with $\text{sig.} = 0.05$ and $\text{df} = n-k$, which is 50-2 = 48, then the one-sided t table is 1.677. The value of t count $> t$ table, namely the value of t count compensation $2,040 > 1,677$, this shows that there is a positive and significant influence between work stress on the performance of lecturers and education staff. While simultaneously showing that the calculated F value is 4.641, while F table with df1 = 2 and df2 = 47, then F table is 3.20. The calculated F value > F table (4.641 > 3.20) thus the regression model between leadership and work stress on the performance of lecturers and population personnel is declared fit or good. The influence of leadership will greatly determine the work of subordinates, where the work of subordinates will not work well without the leadership and participation of subordinates. A leader must have the capacity to turn this vision into reality. Leadership must provide direction to the efforts of all workers in achieving organizational goals. Therefore, leadership is very necessary if the organization wants to be successful.

Lecturers as one of the strategic factors that drive the operations of a university have a fairly important role, namely the obligation to carry out the activities of the Tri Dharma of higher education. In supporting the performance of a university, the role of a leader cannot be ignored. The effectiveness of an organization is determined by the role of a leader who will bring members of the organization and group towards achieving the goals, vision and mission of an organization (Thompson, 2000). A leader provides direction to his subordinates, so that later his followers can accept and implement the goals and objectives of an organization.

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**CONCLUSION**

1. Partially there is a positive and significant influence between leadership and work stress on the performance of lecturers and education staff.
2. Simultaneously shows that the calculated F value > F table (4.641 > 3.20) thus the regression model between leadership and work stress on the performance of lecturers and population staff is declared fit or good.

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