Effect of Stress and Leadership on Nurse Performance in General Hospital Simalungun Regency North Sumatera Province

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Abstract

The purpose of this study is to determine the effect of stress and leadership on the performance of nurses in the general hospital of Simalungun Regency North Sumatra Province. Population in this research as much as 120 responder nurse of General Hospital of Regency of Simalungun and samples taken as many as 55 respondents by passing cluster sampling stage and incidental sampling. The data used in this research are primary data and secondary data. Primary data is data obtained from the sample through field research by using questionnaires given directly to the respondents who made object in this study and secondary data is data obtained from the documentation or information other sources that can support the object under study. Primary data collection technique using survey method by distributing the list of statements (questionnaires) directly to the nurses of the general hospital of Simalungun Regency North Sumatra Province and analysis techniques using multiple linear regression analysis. The results showed that there is a significant influence of stress and leadership on the performance of nurses in the general hospital of Simalungun Regency North Sumatra Province. Stress has the most dominant influence on the performance of nurses in the general hospital of Simalungun Regency North Sumatra Province.

Keywords: Stress; Leadership; Nurse Performance.

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1. Introduction

Hospital is one form of health facilities, both organized by the government and or the community that serves to make efforts of basic health care or referral health and or supporting health efforts. The success of a hospital in performing its function is marked by the improvement of hospital service quality. The quality of the hospital is greatly attributed to several factors. The most dominant factor is human resources [1]. The era of globalization and the development of health technology science, demanding nurses as a profession, in which nurses in providing nursing services to patients not only deal with the patient's physical problems but also includes psychological (psychological) patients, psychiatric services can be given in the form of hospitality, support morally, being affectionate to the patient so as to impact the patient's mental state. Because the mental support provided is more than the medicine given by a doctor. The role of the nurse is very important because as a spearhead in every hospital, the nurse is the longest person in contact or associated with patient and family [2]. A nurse's job is very heavy. On one side, a nurse must carry out the task concerning the survival of the patient he or she is taking care of. On the other side, the psychological state of the nurse must also be kept awake. Conditions and problems experienced by the nurses in performing their duties as a nurse will gradually become the pressures that will trigger the occurrence of stress in work. This will lead to a stronger stall on the nurse in the work environment [3]. Stress facing nurses in work will greatly affect the quality of nursing services provided to patients. Stress is sustainable and the individual can not adapt well will be a stress that can cause physical, mental, social, and spiritual [4]. Stress is a state generated by changes in environments that are as challenging or threatening and or destructive to the dynamic balance of a person. Performance generated by each employee in an organization is also not free from the leadership style of the organization. It also happens to every nurse who works [5]. Every company is influenced by several factors that support in achieving its goals. One factor to note is the leadership factor. Leaders determine where the organization's goals are in aligning assets and organizational skills to address risks within and outside the company's environment. So important is the role of a leader in the organization that the success or failure of the organization in achieving its goals is largely determined by its leader. The leader is also the first creation to determine the success and failure of the organization [6]. A leader should be able to adjust his leadership in the lead, in order to determine the ability and willingness of employees, so that the resulting performance is also optimal. And in the achievement of optimal performance leaders must also be able to motivate employees well. Based on the above description, the authors are interested to learn scientifically about: "Effect of Stress and Leadership on Performance Nurse in General Hospital Simalungun Regency North Sumatra Province".

2. Materials and Method

2.1. Research Design

This research is designed using descriptive research type with quantitative approach, that is a method in researching the status of a group of people, an object, a condition, a condition condition, a system of thought or a class of events in the present. Causal associative research is a study that aims to determine the effect between two or more variables [7].

This research explains the influence and influence relationships of the variables to be studied. This study analyzes the effect of stress and leadership on nurse performance in general hospital Simalungun Regency North Sumatera Province.

2.2. Location and Time of Research

Place of study, conducted at Simalungun Regency Regional General Hospital of North Sumatera Province. With a research time of approximately 1 month in July 2017.

2.3. Population and Sample

Population set in this research as many as 120 respondents. The amount is the number of nurses in general hospital Simalungun Regency North Sumatera Province.

To determine the sample required in this study, used Slovin formula as follows:

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

Where :

N = Number of samples

N = Population

e^2 = Precision (10% set with 95% confidence level)

Based on the above formula, then to calculate the number of samples from the population of 120 nurse in general hospital Simalungun regency North Sumatera Province, the error rate is 10% and the difference between the expected number of samples and the occurance = 10% (0.1) is:

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

$$n = \frac{120}{1 + 120.(0.1)^2}$$

$$n = \frac{120}{2.2}$$

n = 54.5 round up to 55

2.4. Types and Data Sources

A. Primary Data

According to Umar [8], the primary data is data obtained directly in the field by the researchers as the object of writing, ie data obtained from the research object in this case the general hospital Simalungun regency North Sumatera Province. Primary data that exist in this research is questionnaire data.

B. Secondary Data

Ie data obtained indirectly, eg through intermediate media (obtained and recorded by other parties) or from various sources outside of the research object (such as literature, literature review and other written materials that are sources of supporting data). Secondary data obtained from the documents or in the form of reports that exist in the general hospital Simalungun regency North Sumatera Province.

2.5. Data Collection Techniques

To obtain data in this study, used Some data collection techniques are as follows:

Field Studies

A) Observation, is a research method where the researcher conducted a direct observation on the object of research (General Hospital Simalungun Regency North Sumatera Province).

B) Interview, the way of collecting data is done by way of direct question and answer with the parties that are considered can explain about the problem under study.

C) Questionnaire, how to collect data by creating a list of questions relevant to the issues to be studied, then pass it on to the nurse to answer the question. In this study, the answers given by the respondents were then scored with reference to the Likert scale. Likert scale is used to measure attitudes, opinions and perceptions of a person or group of people about social phenomena with this scale, researchers can find out how the response given by each respondent. The score score / weight based on Likert scale on each question as follows:

A) Answer SS (Strongly Agree) value / score = 5

B) Answer S (Agree) value / score = 4

C) Answer N (Neutral) value / score = 3

D) Answer TS (Disagree) value / score = 2

E) STS Answer (Strongly Disagree) value / score = 1

Library Studies, data collection techniques conducted by reading books, literature, references that have to do with the subject matter of research being conducted.

3. Results and Discussions

3.1 Description of Respondents's Characteristics

Descriptive analysis was conducted on the characteristics of respondents by sex, education, age, and years of service. The description referred to can be seen in the table as follows.

Table 1: Description of Respondents by Sex, Education, Age and Work Period

Respondent Characteristics	Number (Person)	Percentage
I. Sex		
1. Male	14	34.1
2. Female	41	65.9
Number	55	100
II. Age		
1. 21 s/d 34 year	30	60
2. 35 s/d 45 year	20	36.3
3. 46 s/d 56 year	5	3.7
Number	55	100
III. Working Period		
1. 0 s/d 5 year	17	30.9
2. 6 s/d 25 year	18	32.7
3. > 25 year	20	36.4
Number	55	100

Table 1 shows that the number of female respondents dominates the research sample is 65.9% and the male respondent is only 34.1%. Based on age, it can be said that 50 respondents or 96.3% are in a very productive age range that is between 21 - 45 years. While according to the working period, the research sample is dominated by respondents group with a working period of more than 6 years as many as 38 respondents or 69.1%.

3.2 Test Instrument Research

3.2.1 Validity Test

The validity test is to know the level of validity of the questionnaire instrument used in data collection. This validity test is conducted to find out whether the items presented in the questionnaire are really able to reveal with certainty what will be examined. If the correlation coefficient between the score of an item statement with

the total score of all items greater than 0.30 then the item of the research instrument is valid, the result of the test of the validity of the variables of career development, ability, communication and performance can be seen in the following table.

Table 2: Validity Test of Research Variables

Indicator	Coefisien	Remark	Indicator	Coefisien	Remark
X1.1	0.477	Valid	X2.4	0.475	Valid
X1.2	0.430	Valid	X2.5	0.381	Valid
X1.3	0.531	Valid	Y1	0.521	Valid
X1.4	0.522	Valid	Y2	0.601	Valid
X1.5	0.541	Valid	Y3	0.427	Valid
X2.1	0.421	Valid	Y4	0.523	Valid
X2.2	0.481	Valid	Y5	0.491	Valid
X2.3	0.512	Valid			

Table 2 shows that the Pearson correlation coefficient value for all items ranges greater than 0.30, so it can be said that the whole item of statement on the research questionnaire is valid, so that the data obtained through the questionnaire can be used for further analysis.

3.2.2 Test Reliability

Reliability test is intended to determine the consistency of measuring instruments in its use, or in other words the measuring tool has consistent results when used many times at different times. According to Arikunto [9] for reliability test used Cronbach Alpha Technique, where an instrument can be said reliable if has a coefficient of reliability or alpha of 0.6 or more.

Table 3: Test Reliability

Variable	Cronbach's Alpha	Provisions	Information
Stress	0.683	0.6	Reliable
Leadership	0.638	0.6	Reliable
Performance	0.631	0.6	Reliable

Based on table 3 it is known that each variable measured by each instrument yields cronbach alpha > 0.6 so that it can be concluded that the statement instrument used in the hypothesis testing model in this study is a valid statement instrument so that it can continue to be used for the next hypothesis stage.

3.2.3 Multiple Linear Regression

The result data of respondent then distributed into SPSS program, to know how the influence of these variables can be seen by using multiple linear regression analysis using equation as follows:

$Y = \beta0 + \beta1\ X1 + \beta2\ X2 + e$

The table below is the result of SPSS processing which shows the coefficient value of each variables.

Table 4: Regression Coefficients

Model		Unstandardlized Coeficients		Standarlized Coeficients		
		B	Std. Error	Beta	t	Sig
1	(Constant)	4.832	.632		6.235	.000
	Stress	-.543	.124	-.564	-5.274	.000
	Kepemimpinan	.305	.142	.313	2.923	.005

Based on the results of processing by using SPSS obtained the following numbers:

Y = 4.832 - 0.543X1 + 0.305X2

Where:

Y = Nurse Performance

B0 = Constant

X1 = Stress Nurse

X2 = Transformational Leadership

From the calculation and equation of statistical analysis of multiple regression coefficient above can be interpreted:

1. Constant value (B0 = 4.832) is a constant which if all the values of independent variables = 0, then the value of the dependent variable (Y) is 4.832 units.

2. The coefficient value of nurse stress factor (X1 = -0.543) shows that each increase of nurse stress factor of 1 unit then, performance will decrease by 0.654 units.

3. The value of transformational leadership factor coefficient (X2 = 0.305) shows that the increase of

transformational leadership factor of 1 unit then the performance will rise by 0.305 units.

3.3. Hypothesis Test

3.3.1 Coefficient of Multiple Correlation (R^2) and Coefficient of Determination

Based on the results of multiple linear regression calculations using SPSS (Statistic For Product and Service Solution) program obtained the following regression equation results:

Table 5: Model Summary Calculation of Regression

Model	R	R. Square	Adjusted R Square	Std. Error of The Estimate
1	.577[a]	.518	.406	.39608

Based on table 5, the result of correlation coefficient (R) of 0.577 or 57.7% shows the relation between all independent variables to the dependent variable in this study in the criteria of close relationship of moderate or medium effect. This can be seen on the criteria of the degree of correlation coefficient relationship is $0.40 < 0.70$ = the intercourse of moderate or medium effect. The following table is a standard category of relationship degrees:

Table 6: Standard Category Guilford

Correlation Coefficient	Category
< 0.20	The closeness of the relationship is very low or the influence is very weak
$0.20 < 0.40$	The closeness of the relationship is low or the influence is weak
$0.40 < 0.70$	The closeness of moderate or medium-impact relationships
$0.70 < 0.90$	High relationship or high influence
> 0.90	The relationship is very high or the influence is very high

In addition, the coefficient of determination (R^2) is 0.518. It shows that both independent variable that is stress and leadership together have influence equal to 51,8% to nurse performance while the rest equal to 48.2% influenced by other variable not in carefully. The stress factor (X1) is the dominant factor affecting the performance of nurses at the general hospital of Simalungun regency North Sumatra Province.

3.3.2 Simultaneous Hypothesis Test (Test F)

In this test the authors use a real level (level of significant) of 5%. Criteria used in this test is if the value of F > F table, then Ho is rejected Hi accepted. This means that there is a significant influence of independent variables together on the dependent variable. If the value of F arithmetic < F table, then the two independent variables are not significantly affect the variable. The calculation result F arithmetic with SPSS program and comparison with F table is as follows:

Table 7: Recapitulation of SPSS Output Results

Model		Sum Of Squares	df	Mean Square	F	Sig
1	Regression	5.887	2	2.944	17.876	.000[a]
2	Residual	7.844	50	.157		
3	Total	13.731	52			

Furthermore, to prove the research hypothesis whether all independent variables simultaneously have a significant influence on the dependent variable, can be done by statistical test. From the calculation with the SPSS program shows the magnitude of F calculated by 13.124 and F table with 5% significance level.

F table = (k-1); (N-k)

= (2-1); (55-2)

= 1; 53

= 4.242

F arithmetic > F table

17.876 > 4.242

From the calculation results F table above can be concluded that F arithmetic > from F table (17.876 > 4.242), then Ho rejected and Hi accepted. This means that stress and leadership variables simultaneously affect the performance of nurses at the general hospital of Simalungun Regency North Sumatra Province. It means that the hypothesis made is acceptable.

3.3.3 Partial Test (t test)

The result of calculation by using SPSS program obtained by the amount of regression coefficient partially respectively independent variable under study.

Table 8: Recapitulation of SPSS Results

Model		Unstandardlized Coeficients		Standarlized Coeficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	3.943	.632		6.235	.000
	Stress	-.654	.124	-.564	5.385	.000
	Kepemimpinan	-.416	.142	.313	2.812	.005

Based on table 8 the hypothesis can be verified partially:

A. If t arithmetic > t table then the independent variable can explain the dependent variable or in other words there is a significant influence between two variables studied.

B. If t arithmetic < t table then the independent variable can not explain the dependent variable or in other words there is no significant influence between two variables studied.

Test t is done by comparing t arithmetic with t table at a significant level of 5% ($\alpha = 0.05$)

T table = α / 2; N-3

= 0.05 / 2; 55-3

= 0.25; 52

= 2.119

The test results of each variable are as follows:

A. Variable X1 (stress): 5.385 > 2.119. So it can be concluded that the variable stress partially significant effect on nurse performance variable at the general hospital of Simalungun Regency North Sumatra Province.

B. Variable X2 (leadership): 2.812 > 2.119. So it can be concluded that leadership partially significant effect on nurse performance variable at the general hospital of Simalungun Regency North Sumatra Province.

From the test results can be concluded that the hypothesis of the suspected stress and leadership influence on the performance of nurses because the result t count > t table. Furthermore, to determine the level of influence of which independent variables are more dominant to the dependent variable can be explained as follows:

A. X1 (stress) is a variable that has dominant influence on the performance variable (Y) because it has t > t table

(5.385 > 2.008).

B. Variable X2 (leadership) is a variable that has an effect on the performance variable (Y) because it has t count > t table (2.812 > 2.008).

Thus it can be concluded that stress is more dominant in affecting the performance of nurses than leadership.

4. Conclusion

1. Stress has a negative and significant effect on the performance of nurses at the general hospital of Simalungun Regency North Sumatra Province.
2. Leadership positively and significantly influence the performance of nurses at the general hospital of Simalungun Regency North Sumatra Province.
3. Stress and leadership variables partially and simultaneously have a significant influence on the performance of nurses at the general hospital of Simalungun Regency North Sumatra Province.
4. Based on the test results, stress is the most dominant variable affecting the performance of nurses, when compared from leadership.

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