

## THE EFFECT OF LEADERSHIP STYLE AND MOTIVATION ON THE COVERAGE OF THE COVID-19 VACCINATION MEDIATED BY THE OFFICER PERFORMANCE

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**Abstract**— Vaccination is an effective intervention to break the chain of transmission of COVID-19. The scope of the COVID-19 vaccination is the achievement of the results of the vaccination implementation in accordance with the set targets. Leadership style is the behavior of the leader towards subordinates in achieving the goals that have been set. Motivation of health workers is a condition that gives energy to health workers in encouraging activities, directing and channeling behavior towards achieving needs. The performance of the COVID-19 vaccination officer is a result of work that can be achieved in an effort to achieve the goals carried out based on their duties and responsibilities effectively and efficiently. **Objective:** to determine the effect of leadership style and motivation of health workers on the coverage of COVID-19 vaccination mediated by the performance of COVID-19 vaccination officers. **Methods:** this research is descriptive and quantitative analysis, with 129 respondents. Data was collected using a questionnaire and analyzed by Partial Least Square (PLS). **Results:** leadership style has a positive effect on COVID-19 vaccination coverage, motivation of health workers has a positive effect on COVID-19 vaccination coverage. Leadership style on the performance of COVID-19 vaccination officers has a positive effect. The motivation of health workers on the performance of COVID-19 vaccination officers has a positive effect. The performance of COVID-19 vaccination officers on vaccination coverage had a positive effect. There is a positive indirect effect of leadership style on COVID-19 vaccination coverage through the performance of vaccination officers. And the motivation of health workers towards COVID-19 vaccination coverage through the performance of vaccination officers. From this research we can conclude that leadership style and motivation of health workers can increase the coverage of COVID-19 vaccination through the performance of vaccination officers.

**Keywords**— Leadership Style, Motivation, Performance, Coverage of COVID-19 Vaccination.

### 1. Introduction

The COVID-19 pandemic poses a significant challenge in improving public health status and impacting the health system in Indonesia, so it is necessary to make practical intervention efforts to break the chain of disease transmission apart from the implementation of health protocols, namely vaccination. Vaccination is the administration of a vaccine that is given explicitly in order to actively generate or increase a person's immunity against a disease so that if one day he is exposed to the disease, he will not get sick or only experience mild illness and will not become a source of transmission. (Minister of Health, 2020). Meanwhile, vaccines are biological products containing antigens in the form of dead or alive microorganisms that are attenuated, still intact or parts thereof, or in the form of microorganism toxins that have been processed into toxoids or recombinant proteins, which are added with other substances, which is given to a person will cause active specific immunity against certain diseases.

The purpose of implementing the COVID-19 vaccination is to reduce transmission of COVID-19, reduce morbidity and mortality due to COVID-19, achieve group immunity in the community or herd immunity and protect the community from COVID-19 in order to remain socially and economically productive (Permenkes, 2021). ) An appropriate vaccination strategy is needed so that the administration can achieve the expected goals. The priority of targeting for COVID-19 vaccination is carried out by considering conditions such as the epidemiology of the spread of COVID-19 cases, the availability of vaccines, and other

readiness and operational costs. The government has determined priority groups for COVID-19 vaccine recipients: a. health workers, assistants for health workers, and supporting personnel working in health service facilities, b. older people and public service personnel, c. vulnerable people from geospatial, social, and economic aspects, d. other communities. Tangerang City Hospital has carried out COVID-19 vaccinations for its employees from January to March 2021 according to the schedule set by the Tangerang City Health Office because Tangerang City Hospital employees are included in the priority target for the first stage of COVID-19 vaccination in Tangerang City. Judging from the targets that must be achieved, the COVID-19 vaccination coverage is only 71.11%, so there is a shortage of the expected target. The performance of hospital vaccination officers has a vital role in the implementation of the vaccination program, and many tasks must be carried out both technically and administratively. Employee performance results from work that has a strong relationship with organizational strategic objectives customer satisfaction and contributes to the economy (Siagian, 2003). Careful preparation in vaccination services means that hospitals have a goal of maintaining or maintaining customers or employees (customer retainers) so that they do not move to other places (Haryono, 2016).

To improve health services in a hospital itself, a leader is needed to manage everything achieved. Leadership is the style of a leader influencing his subordinates to cooperate and work effectively according to his orders, with the leadership style possessed by a leader who will direct human resources to use all of his abilities in achieving good work motivation (Wahab, 2014). The high transmission power of COVID-19 causes health workers, especially in Tangerang City Hospital, to be vulnerable to the disease. There have been 153 employees who have been infected with COVID-19 from October 2020 to March 2021. Health workers who have not or have confirmed COVID-19 are not motivated to vaccinate because the vaccine's efficacy and effectiveness are still lacking. "Health workers are every person who has the authority to carry out health efforts" (Law Number 36, 2014). Motivation is a process that explains an individual's intensity, direction, and persistence to achieve his goals (Robbins, 2008). Winoto (2020) explained that motivation is an aspect that determines the success of an organization, where employees who have high work motivation will have maximum performance for an organization. Related research on the influence of leadership style and motivation of health workers on vaccination program coverage is carried out at the Sigi District Health Center. (Ngadarodjatun1, Amran Razak2, 2013) Many predecessors have conducted similar studies, but research on the performance of vaccination officers is related to the coverage target. COVID-19 vaccination for hospital employees does not yet exist because the Indonesian government has just launched the COVID-19 vaccination program in early 2021. This study aimed to determine the effect of leadership style and motivation of health workers on COVID-19 vaccination coverage mediated by performance. COVID-19 vaccination officer

## **2. Research Method**

The research design used descriptive and quantitative analysis, with 129 respondents. Questionnaires were conducted in data collection and analysis used with Partial Least Square (PLS). The population in this study amounted to 797 people. Calculate the number of samples using the Slovin formula (129 respondents). In this study, the sample taken was Tangerang City Hospital employees with a minimum of Diploma 3 education, the status of ASN (State Civil Apparatus) or non-ASN, willing to be respondents, and received COVID-19 vaccination at Tangerang City Hospital. This study uses analysis with Partial Least Square (PLS). This research was carried out at the Tangerang City Regional General Hospital. The instrument in this study used a questionnaire (online questionnaire format), and the number of questions in data collection was 45 items. Data processing is carried out using a multivariate statistical analysis method called Structural Equation Modeling or better known as SEM (Structural Equation Modeling) using path analysis, also known as Path Analysis or Confirmatory Factor Analysis because both are particular types of SEM.

## **3. Result and Discussion**

The results and data analysis obtained from the questionnaire data collection was conducted on 129 respondents. The data taken will explain the analysis of the Influence of Leadership Style and Motivation of Health Workers on the Coverage of COVID-19 Vaccinations mediated by the Performance of COVID-19 Vaccination Officers at the Tangerang City Hospital.

## Univariate Analysis Results

The following is a frequency distribution resulting from each of the variables studied:

Table 1.  
 Characteristic Frequency Distribution  
 Respondents At Tangerang City Hospital December 2021 (N=129)

Characteristic	Category	n	(%)
Gender	Male	33	26%
	Female	96	74%
Age	<30 y.o.	35	27%
	30-40 y.o.	60	46%
	41-50 y.o.	32	25%
	>50 y.o.	2	2%
Education Level	Diploma 3	56	43%
	Strata 1	59	46%
	Strata 2	8	6%
	Strata 3	0	0
	Etc	6	5%
Working Period	<1 year	11	9%
	1-3 years	27	21%
	3-5 years	8	6%
	>5 years	83	64%
Profession	Doctor	20	15%
	Nurse	46	35%
	Pharmacist	5	4%
	Nutritionists	7	5%
	Etc	51	41%

Source: *Smart* PLS (2021)

Based on table 1 above, more female respondents than male respondents, amounting to 96 people (74%). Respondents aged 30-40 years were more than 60 people (46%). Meanwhile, the highest level of education is strata 1, with as many as 59 people (46 %). Respondents with more than five years of service are 83 people (64%). More respondents with other professions are 51 people (41%).

## Convergent Validity Results

Table 2.  
 Construct Outer Loading

Construct	Indicator	Loading Factor	Result
Leadership Style	A climate of mutual trust	0,789	Valid
	Respect for subordinates' ideas	0,780	Valid
	Taking into account the feelings of subordinates	0,730	Valid
	Attention to work comfort	0,821	Valid
	Taking into account the job satisfaction factor for subordinates	0,786	Valid
	Appropriate and professional recognition of the status of subordinates	0,762	Valid
Health Workers Motivation	Motive	0,844	Valid
	Hope	0,701	Valid
	Incentive	0,864	Valid
Performance of COVID-19 Vaccination Officers	Ability	0,753	Valid
	Accuracy and objectivity	0,754	Valid
	Scope of work	0,725	Valid
	Punctuality	0,813	Valid
Covid-19 Vaccination Coverage	Target	0,949	Valid
	Result	0,928	Valid

Source: *Smart* PLS (2021)

Some indicators have a loading factor value  $> 0.7$ , namely: a climate of mutual trust (0.789), respect for subordinates' ideas (0.780), taking into account the feelings of subordinates (0.730), attention to work comfort (0.821), and taking into account the satisfaction factor. Work on subordinates (0.721). For indicators of recognition of the status of subordinates correctly have a loading factor value of  $> 0.7$ , which is 0.762, so that all indicators of leadership style (X1) are declared valid and can be used as indicators for measuring variables.

It can be seen that indicators that have a loading factor value  $> 0.7$ , namely: motive (0.844) and incentives (0.864) and the expectation indicator has a loading factor value (0.701) so that it is declared valid so that all indicators of motivation for health workers (X2) are declared valid. Furthermore, it can be used as a measure of the variable. It can be seen that indicators have a loading factor value  $> 0.7$ , namely: ability (0.753), accuracy and objectivity (0.754), scope of work (0.725), and timeliness (0.813). All performance indicators of COVID-19(Z) vaccination officers are declared valid and can be used as variable measuring indicators. It can be seen that indicators have a loading factor value  $> 0.7$ , namely: target (0.949) and result (0.928). All indicators of COVID-19 vaccination coverage (Y) are declared valid and can be used as variable measuring indicators.

### Discriminant Validity Results

The validity test results are based on the value of the main loading factor on the value of the cross-loading factor with other constructs. Table 4.8 below shows the loading factor value in the leadership style indicator (yellow), namely a climate of mutual trust, respect for subordinates' ideas, taking into account the feelings of subordinates, attention to work comfort, taking into account job satisfaction factors for subordinates and recognition of status. the subordinates appropriately and professionally have a higher loading factor value when compared to other construct values. The loading factor value of Climate mutual trust towards Leadership Style of 0.789 is much greater than the value of loading factor of Climate mutual trust on Motivation of Health Workers of 0.382, of COVID-19 Vaccination Officer Performance of 0.472, and COVID-19 Vaccination Coverage of 0.448. Likewise, for several other indicators, there is a correlation that the loading factor value of each item on the construct in their block has a more excellent value than the indicator value in the other blocks, so it can be concluded from the results that there are no problems with discriminant validity.

Table 3.  
Cross-Loading Factor

Indicator	Leadership Style	Health Workers Motivation	Performance of COVID-19 Vaccination Officers	Covid-19 Vaccination Coverage
A climate of mutual trust	0,789	0,382	0,472	0,448
Respect for subordinates' ideas	0,780	0,136	0,257	0,327
Taking into account the feelings of subordinates	0,730	0,267	0,516	0,404
Attention to work comfort	0,821	0,304	0,335	0,390
Taking into account the job satisfaction factor for subordinates	0,789	0,382	0,472	0,390
Appropriate and professional recognition of the status of subordinates	0,762	0,080	0,305	0,299
Motive	0,304	0,844	0,419	0,506
Hope	0,280	0,864	0,332	0,372
Incentive	0,229	0,701	0,295	0,288
Ability	0,417	0,369	0,753	0,398
Accuracy and objectivity	0,375	0,276	0,754	0,382
Scope of work	0,381	0,321	0,725	0,374
Punctuality	0,391	0,371	0,813	0,395
Target	0,547	0,471	0,530	0,949
Result	0,410	0,468	0,418	0,928

Source: *Smart PLS* (2021)

Fornell-Larcker Criterion method compares the AVE value with the correlation value between the constructs. If the AVE value is greater than the correlation value between the constructs, the discriminant validity can be considered achieved. The following is the result of the analysis using the Fornell-Larcker AVE method.

Table 4.  
 Fornell-Larcker Criterion

Construct	Covid-19 Vaccination Coverage	Leadership Style	Performance of COVID-19 Vaccination Officers	Health Workers Motivation
Covid-19 Vaccination Coverage	<b>0,939</b>			
Leadership Style	0,516	<b>0,779</b>		
Performance of COVID-19 Vaccination Officers	0,509	0,514	<b>0,762</b>	
Health Workers Motivation	0,499	0,341	0,441	<b>0,806</b>

Source: *Smart* PLS (2021)

The AVE test results measure for COVID-19 vaccination coverage of 0.939, for the leadership style of 0.779, performance of COVID-19 vaccination officers of 0.762, and motivation of health workers of 0.806. The AVE value of the COVID-19 vaccination coverage is 0.939, which has a more excellent value than the correlation of COVID-19 vaccination coverage – leadership style of 0.516, the correlation of COVID-19 vaccination coverage – the performance of COVID-19 vaccination officers of 0.509, and the correlation of vaccination coverage COVID-19 – motivation of health workers is 0.499. Likewise, the constructs of Leadership Style, Performance of COVID-19 Vaccination Officers, and Motivation of Health Workers have a higher AVE value than the correlation between other constructs. Because all constructs have an AVE value more significant than the other constructs, it can be concluded that the discriminant validity requirements for all included constructs, namely COVID-19 Vaccination Coverage, Leadership Style, Performance of COVID-19 Vaccination Officers, and Motivation of Health Workers, have been met.

### Cronbach's Alpha

The reliability test of an instrument can be strengthened by using Cronbach's alpha value. To be said to be reliable, the Cronbach's alpha value of all constructs is expected to be > 0.7. The following is the value of the results of Cronbach's alpha analysis.

Table 5.  
 Cronbach's Alpha Value

Construct	Cronbach's Alpha	Result
Leadership Style	0,873	Reliable
Health Workers Motivation	0,734	Reliable
Performance of COVID-19 Vaccination Officers	0,759	Reliable
Covid-19 Vaccination Coverage	0,866	Reliable

Source: *Smart* PLS (2021)

The table above shows that Cronbach's alpha value for all constructs is excellent, which is > 0.7, meaning that all constructs have good reliability and no reliability or unidimensionality problems were found in the former model. For the analysis of the outer model in this study, all indicators have met the rules of validity and reliability to be continued with the analysis of the inner model.

The value of the coefficient of determination (R-Square) is expected to be between 0 and 1, and if there is an R-Square value close to 1, this indicates that the exogenous construct provides almost all the information needed to predict variations in the endogenous construct. R-Square values of 0.67, 0.33, and 0.19 are interpreted as strong, moderate, and weak model parameters (Chin, 1998 in Ghazali and Latan, 2015).

Table 6.  
 R-Square

Construct	R-Square	Result
Leadership Style and Motivation of Health Workers on the Performance of COVID-19 Vaccination Officers	0,344	Moderate
Leadership Style, Motivation of Health Workers and Performance of COVID-19 Vaccination Officers on the Coverage of Covid-19 Vaccination	0,417	Moderate

Source: *Smart* PLS (2021)

The influence of leadership style and motivation of health workers together on the performance of COVID-19 vaccination officers with an R-Square value of 0.344 which means that all exogenous constructs of leadership style and motivation of health workers simultaneously affect the performance of COVID-19



vaccination officers by 34.4 % and the remaining 65.6% is influenced by other factors outside the study. All exogenous constructs of leadership style, motivation of health workers, and performance of COVID-19 vaccination officers simultaneously affected the COVID-19 vaccination coverage by 41.7%, and other factors outside the study influenced the remaining 58.3%. Calculation of the value of Q-Square can use the following formula:

$$\begin{aligned}
 Q\text{-Square} = Q^2 &= 1 - (1 - R_1^2) (1 - R_2^2) \\
 &= 1 - (1 - 0,344) (1 - 0,417) \\
 &= 1 - (0,656) (0,583) \\
 &= 1 - 0,3824 \\
 &= 0,6176
 \end{aligned}$$

So it can be interpreted that 61.7% of the variation in the endogenous variable (covid-19 vaccination coverage) is explained by the variables used in the model, and other factors outside the model explained 38.3%. This result proves that the model has predictive relevance.

Table 7.  
F-Square

Construct	<i>f-Square</i>	Result
Leadership Style – Covid-19 Vaccination Coverage	0,110	Low
Motivation of Health Workers -Covid-19 Vaccination Coverage	0,121	Low
Performance of Covid-19 Vaccination Officers - Coverage of Covid-19 Vaccinations	0,056	Low
Leadership Style – Covid-19 Vaccination Officer Performance	0,228	Medium
Motivation of Health Workers - Performance of Covid-19 Vaccination Officers	0,122	Low

Source: *Smart PLS* (2021)

Found the effect of medium with f-Square criteria ranging from 0.15 and 0.35 was found on the influence of leadership style on the performance of COVID-19 vaccination officers. Moreover, a small effect with f-Square criteria ranging from 0.02 to 0.15 was found on the influence of leadership style on the COVID-19 vaccination coverage, the influence of health workers' motivation on the COVID-19 vaccination coverage, the effect of the performance of the COVID-19 vaccination officer on the COVID-19 vaccination coverage, and the effect of motivation of health workers on the performance of COVID-19 vaccination officers.

#### 4. Conclusion

Based on the test results of the first hypothesis, it was found that leadership style has a positive effect on COVID-19 vaccination coverage. This means that the better the leadership style, the more COVID-19 vaccination coverage will be carried out; with the superior leadership style that is considered excellent and pleasant by health workers, their enthusiasm for work will be better so that the vaccination coverage they carry out will increase. Based on the test results of the third hypothesis, it was found that leadership style had a significant and positive effect on the performance of COVID-19 vaccination officers. If the leadership style gets better, the performance of COVID-19 vaccination officers will increase. Leadership style plays an essential role in improving the performance of officers.

It was found that the motivation of health workers had a significant and positive effect on the COVID-19 vaccination coverage. This means that the better the motivation of health workers, the greater the coverage of the COVID-19 vaccination. The performance of the COVID-19 vaccination officer has a positive effect on the coverage of the COVID-19 vaccination. This means that the higher the performance of the COVID-19 vaccination officer, the higher the COVID-19 vaccination coverage. The performance of COVID-19 vaccination officers significantly and positively mediates the relationship between leadership style and coverage of COVID-19 vaccination. This means that the performance of COVID-19 vaccination officers plays an essential role in leadership style in influencing COVID-19 vaccination coverage. The performance of the COVID-19 vaccination officer significantly and positively mediates the relationship between the motivation of health workers and the coverage of the COVID-19 vaccination. This means that the performance of COVID-19 vaccination officers plays a vital role in health workers' motivation to influence COVID-19 vaccination coverage.



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