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Submission date: 16-Dec-2022 09:24AM (UTC+0700)
Submission ID: 1982485365
File name: 6._9314-Article_Text-16630-1-10-20210624.pdf (286.3K)
Word count: 5181
Character count: 27416

Turkish Journal of Computer and Mathematics Education Vol.12 No.13 (2021), 3998-4006

Research Article

Influence Factors about the Compliance of Madurese Community related to COVID-19 Health Protocols based on Structural Equation Modeling-Partial Least Square (SEM-PLS)

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Article History: Received: 11 January 2021; Revised: 12 February 2021; Accepted: 27 March 2021; Published online: 4 June 2021

Abstract: Corona Virus Disease 2019 (COVID-19) was first discovered at the end of 2019 in Wuhan, China. This virus has spread throughout Indonesia, including Madura. Various government policies that affect the achievement of the Sustainable Development Goals (SDGs) are affected. To anticipate the impact of the spread of COVID-19, one of them is by forming a Task Force for the Acceleration of Handling COVID-19. Through this institution, the government is intensively socializing the "3M movement" during the adaptation of new habits. The 3M movement includes wearing masks, washing hands, and keeping a distance. In implementing government policies, adherence to health protocols is very important as a determinant of the success of government policies. However, in reality, this policy is not fully complied with by the community. This study aims to analyze what factors influence the perception of community compliance with health protocol compliance, in Madura. One of the analytical methods that can be used to analyze the factors that influence a situation is Structural Equation Modeling Partial Least Square (SEM-PLS). The endogenous variable in this study is compliance, while the exogenous variables are knowledge, environment, facilities, policies, routines, socialization, and personal factors. Based on the analysis conducted using the Structural Equation Modeling Partial Least Square (SEM-PLS) method, it can be concluded that the knowledge and socialization variables have a significant effect on the personal factor variables. Knowledge and socialization have a positive effect on personal factors with a path coefficient value of 0.512 for knowledge and 0.278 for socialization.

Keywords: good health, COVID-19 pandemic, compliance with health protocols, Structural Equation Modeling Partial Least Square.

1. Introduction

Corona Virus Disease 2019 (COVID-19) was first discovered at the end of 2019 in Wuhan, China. This virus attacks the respiratory system with pneumonia-like symptoms. This virus is classified as a new virus so it does not have an antidote and has spread all over the world until it is out of control. There are more than 200 countries that have reported cases of COVID-19, including Indonesia. According to these conditions, the World Health Organization (WHO) has designated the COVID-19 virus as a pandemic. Based on data collected on April 12, 2020, there were at least 1,775,210 cases with the death toll reaching 108,544 and 401,517 recoveries. The total number of cases infected with COVID-19 in Indonesia reached 4,241 with 359 recovered patients and 373 deaths as of April 12, 2020 **(Setiati, S., & Azwar, M. K., 2020).** The government officially designated COVID-19 as a national disaster on April 13, 2020 **(Sembiring, R., & Suryani, D. E., 2020).** The government has set various policies to anticipate the impact of the spread of the COVID-19 virus. One of these policies is to establish a Task Force for the Acceleration of Handling COVID-19 based on Presidential Decree No. 7 of 2020 which was signed on March 13, 2020. Through this Task Force for the Acceleration of Handling COVID-19, the Government has intensively promoted the "3M movement", namely wearing masks, washing hands, and maintaining distance during the adaptation of new habits. This movement is one of the efforts to break the chain of transmission of COVID-19 in Indonesia.

Madura Island, which is part of East Java Province, also implements policies that have been set by the government. In practice, adherence to health protocols is very important as a determinant of the success of the government's policy. Considering that the changes in healthy living behavior that must be carried out by the community following government policies are quite significant, it is necessary to conduct an empirical study of the factors that influence the perception of community compliance with health protocol compliance.

One of the analytical methods that can be used to analyze the factors that influence a situation is Structural Equation Modeling (SEM). **Nusair, K. & Hua, N. (2010)** in their research revealed that SEM is a powerful statistical technique in determining measurement models and structural models. According to **Amalia, Z. N., Ulya, W. W., Hastuti, D. R., & Mardianto, M. F. F. (2021),** SEM is a combination from factor analysis, path analysis, and regression. The parameter estimation method commonly used in SEM modeling is the Partial Least Square (PLS) method. The PLS approach to SEM is known as SEM-PLS or it can be called PLS Path Modeling (PLS-PM) **(Trinchera, L., 2007).** PLS is a powerful analytical method because it can be applied to all data

scales, does not require many assumptions and the sample size does not have to be large. Besides being able to be used as a confirmation of the theory, PLS can also be used to build relationships that do not have a theoretical basis or to test propositions and it can be used for structural modeling with reflective or formative indicators **(Hair, J. F., Sarstedt, M., Christian M., & Ringle., 2019).**

2. Significance of The Study

At the end of 2019, the world was shocked by the fact about the emergence of a highly contagious disease that attacks the respiratory organs and is deadly in mainland China. The WHO officially announced on February 11, 2020, that this infectious disease is COVID-19 caused by the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2). In humans, this type of coronavirus causes respiratory tract infections such as SARS, MERS, which are deadly. This virus can be transmitted from human to human and has spread widely in China and more than 190 other countries and territories **(Wu, Chi, Y., Chen, Sung, C., Chan., & Jiun, Y., 2020).** The first case of COVID-19 in Indonesia was discovered on March 2, 2020, with a total of 2 cases. The increase in the number of COVID-19 sufferers is caused by many factors. One of them is the lack of public awareness about health behavior. Since the official announcement regarding the handling and prevention of the spread of the COVID-19 virus, various government policies have emerged such as health protocols, including requiring people to maintain a minimum distance of one meter, always wash their hands with soap, and always wear masks **(Sriarumtias, F.F., Andeani, R.F., Rosita, N., Ardian, F., & Septiani, A.T., 2020).** These policies are expected to reduce the number of positive cases infected. However, in practice, the level of community compliance with the health protocol is still not satisfactory. Efforts are needed to increase public awareness about the importance of complying with health protocols which will ultimately have an impact on breaking the chain of transmission of the COVID-19 virus. One of them is to examine what factors affect the perception of public compliance with health protocols during the COVID-19 pandemic.

3. Review of Related Studies

Nusair, K., & Hua, N. (2010) in their research compares SEM modeling with multiple regression. Based on their analysis, they concluded that SEM showed a more statistically significant relationship. **Ulum, M., Tirta, I. M., & Anggreini, D. (2014)** used SEM-PLS on a small sample with a case study of the relationship between service rewards, work motivation, job satisfaction, and performance. The results of the study, with 50 repetitions, showed that the representative sample size for the serdos data was a sample of 55. SEM-PLS was superior to the CB-SEM method because apart from the relatively small sample size, the data did not need to be transformed to a z-score, and there is no assumption that the data must be normally distributed. **Safa, N. S., & Solm, R. V. (2016)** modeled the factors that influence customer loyalty in electronic commerce (e-commerce) using the structural equation Modeling (SEM) model, where the endogenous variable is e-loyalty while the exogenous variables are e-satisfaction and e-trust. In this study, is concluded that e-satisfaction and e-trust have a positive and significant relationship to increase e-loyalty. **Cahyono, E. F., Rani, L. N., & Mardianto, M. F. F. (2021)** used SEM-PLS to determine factors that affect depositor confidence in conventional and Islamic banks in Indonesia during the COVID-19 pandemic. This study concludes that based on the SEM-PLS analysis, the external aspect of the industrial production index has a significant effect on depositor confidence in both conventional and Islamic banks. On the other hand, the external factor of inflation has no significant effect on depositor confidence in the two banks. None of these studies have investigated the factors influence perception of compliance of the Madurese community on compliance with health protocols.

4. Objectives of The Study

The purpose of this study is to determine whether there is an effect of exogenous latent variables on endogenous latent variables, where the exogenous latent variables in this study are Knowledge (P), Environment (L), Facilities (F), Policy (KB), Routines (R), Socialization (S), and Personal Factors (IP). While the endogenous latent variable is Compliance (K).

Table 1. Definition of Variable

Indicator	Variable	Type of Variable
Compliance	K	Latent
Rules of mask	K1	Manifest
Rules of hand washing	K2	Manifest
Rules of social distancing	K3	Manifest
Rules of prohibiting large gatherings of people	K4	Manifest

Rules for not traveling out of town or abroad	K5	Manifest
Knowledge	P	Latent
Knowing the dangers of COVID-19	P1	Manifest
Knowing a healthy lifestyle amidst the COVID-19 pandemic	P2	Manifest
Knowing the principle that the COVID-19 pandemic will end quickly if more people comply with health protocols	P3	Manifest
Strategy	P4	Manifest
Sanction	P5	Manifest
Environment	L	Latent
Always wearing a mask	L1	Manifest
Conducting social distancing	L2	Manifest
Keeping clean	L3	Manifest
Disinfectant liquid	L4	Manifest
Avoiding the crowd	L5	Manifest
Facility	F	Latent
Hand sanitizer	F1	Manifest
Wearing a mask every leaving the house	F2	Manifest
Social distancing	F3	Manifest
COVID-19 referral hospital	F4	Manifest
Transportation	F5	Manifest
Policy	KB	Latent
Implementing strict social distancing rules	KB1	Manifest
Implementing sanctions for violators of health protocols	KB2	Manifest
Wearing a mask every leaving the house	KB3	Manifest
Prohibiting events that cause crowds	KB4	Manifest
Educational activities mostly apply online learning	KB5	Manifest
Most office activities apply for work from home	KB6	Manifest
Routines	R	Latent
Wearing a mask when leaving the house	R1	Manifest
Bringing hand sanitizer when leaving the house	R2	Manifest
Always washing hand	R3	Manifest
Cleaning body after leaving the house	R4	Manifest
Taking vitamins or supplements	R5	Manifest
Nutritional food	R6	Manifest
Regular exercise every day	R7	Manifest
Socialization	S	Latent
Whatsapp	S1	Manifest
Facebook	S2	Manifest
Instagram	S3	Manifest
The government socializes about COVID-19 to the public	S4	Manifest
Television	S5	Manifest
Personal Factors	IP	Latent
Sentenced to COVID-19	IP1	Manifest
Get government sanctions if you violate health protocols	IP2	Manifest
Afraid that the family in the same house as is infected with COVID-19	IP3	Manifest
Afraid that the COVID-19 pandemic will never end	IP4	Manifest
Afraid that the COVID-19 pandemic affecting daily activities or work	IP5	Manifest

5. Hypotheses of The Study

There is an effect of exogenous latent variables on endogenous latent variables, where the exogenous latent variables in this study are Knowledge (P), Environment (L), Facilities (F), Policy (KB), Routines (R), Socialization (S), and Personal Factors (IP). While the endogenous latent variable is Compliance (K).

6. Population and Sample

The data used in this study is primary data obtained through the distribution of questionnaires using google form. The sample data comes from 4 districts in Madura. The sampling technique used for sampling in this study was start-up random sampling. In this sampling technique, the population is divided into several strata,

and samples are taken randomly from each stratum. Samples taken from each district were taken as many as 52 respondents so that in total there were 208 respondents.

The variables used in this study are the factors that influence the perception of the Madurese community's compliance with health protocol compliance. the endogenous variable is Compliance (K). While the exogenous variables are Knowledge (P), Environment (L), Facilities (F), Policy (KB), Routines (R), Socialization (S), and Personal Factors (IP). Each latent variable has an indicator. The indicators of each latent variable can be seen in **Table 1.**

7. Statistical Techniques Used in the Present Study

The data analysis method used to find out whether there is an effect of the exogenous latent variables Knowledge (P), Environment (L), Facilities (F), Policy (KB), Routines (R), Socialization (S), and Personal Factors (IP) on the endogenous latent variable Compliance (K) is SEM modeling with PLS approach. The procedures that related SEM-PLS as follows:

7.1. Formation of SEM-PLS Model

According to **Monecke, A., & Leisch. F. (2012),** in SEM-PLS there are two kinds of models, namely, the measurement model (outer model) and structural model (inner model). The outer model describes the specification of the relationship between latent variables and their indicators. The outer model defines the characteristics of the construct with its manifest variables. The reflective indicator from model can be written in the following equation:

$$x = \boldsymbol{\Lambda}_x \xi + \delta$$
$$y = \boldsymbol{\Lambda}_y \eta + \varepsilon$$

while the formative indicator from model is as follows:

$$\xi = \boldsymbol{\pi}_\xi X_i + \delta$$
$$\eta = \boldsymbol{\pi}_\eta Y_i + \varepsilon$$

where as

x and y : indicators for exogenous latent variables (ξ) and endogeneous (η)
$\boldsymbol{\Lambda}_x$ and $\boldsymbol{\Lambda}_y$: loading matrix
δ and ε : measurement error or noise
π_ξ and π_η : such as multiple regression coefficients on latent variables on indicators

The second model is the structural model (inner model). The inner model describes the specification of the relationship between latent variables. The model of the Inner equation model can be written as follows:

$$\eta = \boldsymbol{\beta}\eta + \boldsymbol{\Gamma}\xi + \varsigma$$

where η describes the vector of the endogenous variable (dependent), ξ is the vector of the exogenous latent variable and ζ is the residual vector (unexplained variance). While $\boldsymbol{\Gamma}$ is the path coefficient matrix that relates the endogenous latent variable to the exogenous latent variable and $\boldsymbol{\beta}$ is a coefficient matrix that relates the endogenous latent variable to the endogenous latent variable.

7.2. Parameter Estimation with PLS

Partial Least Square (PLS) uses an iterative algorithm consisting of several analysis with the least-squares method. PLS can be applied in both reflective and formative measurement models. The estimation of SEM modeling parameters with the PLS approach is obtained through the following three stages **(Ronkko, M., McIntosh, C. N., Antonakis, J., & Edwards, J. R. 2016)**:

(1) The first stage is to determine the estimated weight to assign a score or calculate the latent variable data.
(2) The second stage determines the path estimation (estimates for the inner and outer models) that connects the latent variables and the estimated loading between the latent variables and their indicators.
(3) The third stage determines the average estimate and the location of the parameters for the indicators and latent variables.

7.3. SEM-PLS Model Evaluation

Evaluation of the SEM-PLS model on the measurement model (outer model) is evaluated by looking at the validity and reliability. If the measurement model is valid and reliable, the next step can be carried out, namely the evaluation of the structural model. If the measurement model is not valid and reliable, so the path diagram should be re-constructed. A validity test is conducted with convergent validity. Convergent validity of the measurement model with reflexive indicators is seen from the Average Variance Extraction (AVE). Convergent

validity is said to be sufficient if the AVE value is greater than 0.5. This shows that the latent variable explains more than half of the indicator variance **(Hair, J. F., Ringle., & Sarstedt, M., 2011).** The AVE value is calculated based on the following formula

$$AVE = \frac{\sum_i^k \lambda_i^2}{\sum_i^k \lambda_i^2 + \sum_i^k (1 - \lambda_i^2)}$$

where λ_i is the loading component to i-th with $i = 1, 2, \cdots, k$ (number of indicators)

Composite reliability measures the reliability of the variable. a variable is said to be reliable if it has composite reliability of ≥ 0.7. Composite reliability can be calculated by the following formula:

$$\rho_c = \frac{\sum_i^k \lambda_i^2}{(\sum_i^k \lambda_i)^2 + \sum_i^k (1 - \lambda_i^2)}$$

while the evaluation of the inner model is done by looking at the value of the R^2 model. The value of R^2 ranging from 0 to 1. The closer to 1, the better the model in explaining the relationship between exogenous latent variables and endogenous latent variables.

8. Data Analysis and Interpretation

This study uses primary data by distributing online questionnaires regarding the factors that influence the perception of the Madurese community's compliance with health protocol compliance. The questionnaires were distributed to four districts in Madura, namely Sumenep, Pamekasan, Sampang, and Bangkalan. Each district was taken a sample of 52 respondents so that the total data used in this study were 208 respondents

Based on a questionnaire distributed online via Google From, of all respondents, on average, more respond normally to all indicators of latent variables, both endogenous and exogenous. This shows that the indicator has no effect on the respondent's mindset regarding the latent variable.

8.1. Results of model analysis using SEM-PLS

8.1.1. Evaluation of the Measurement Model (Outer Model)

Evaluation of the measurement model is done by testing the validity and reliability of the indicators and latent variables formed.

(1) Convergent Validity

Convergent validity is a measure that shows the extent to which an indicator is positively correlated with other indicators in the same construct. An indicator is considered to have a good level of validity if the value of the AVE variable is ≥ 0.5 **(Hair, J.F., Ringle., & Sarstedt, M., 2011).** The AVE value of the 8 latent variables can be seen in **Table 2.**

Table 2. Latent Variable AVE Value

No	Latent Variables	√AVE	Information
1	Compliance	0.487	Not Valid
2	Facility	0.422	Not Valid
3	Personal Factor	0.612	Valid
4	Policy	0.481	Not Valid
5	Environment	0.375	Not Valid
6	Knowledge	0.591	Valid
7	Routines	0.475	Not Valid
8	Socialization	0.591	Valid

According to **Table 2.** it can be seen that there is an AVE value of the latent variable that is less than 0.05, namely the Compliance variable of 0.487, the Facility variable of 0.422, the Policy variable of 0.481, the Environment variable of 0.375, and the Routines variable of 0.474. This indicates that these variables do not meet the requirements of convergent validity, so they need to be removed from the model. The next stage is to reconstruct the measurement model by only involving the variables of Personal Factors, Knowledge, and Socialization.

The results of the estimation of the AVE value after invalid variables are removed from the model can be seen in **Table 3.**

Table 3. The AVE value after the invalid latent variable was removed from the model.

No	Latent Variables	√AVE	Information
1	Personal Factor	0.612	Valid
2	Knowledge	0.591	Valid
3	Socialization	0.591	Valid

Based on **Table 3.** it can be seen that the AVE value of the three latent variables is less than 0.05. this shows that the three variables have met the requirements of convergent validity so that it can be continued at the next stage namely reliability testing.

(2) Composite Reliability

A reliability test is used to measure the consistency of a measuring instrument or indicator used in the questionnaire. Reliability requirements are met if the composite reliability value is ≥ 0.7 **(Hair, J. F., Ringle., & Sarstedt, M., 2011).** Composite reliability values for the three latent variables can be seen in **Table 4.**

Table 4. Composite Reliability Value

No	Latent Variable	Composite Reliability	Information
1	Personal Factor	0.903	Reliable
2	Knowledge	0.878	Reliable
3	Socialization	0.852	Reliable

Based on **Table 4.** composite reliability value for each latent variable is ≥ 0.5 which means that all indicators in each variable have a good level of reliability and the analysis process can be continued to the next stage.

8.1.2. Evaluation of the Structural Model (Inner Model)

After evaluating the measurement model (outer model), the next step is to evaluate the structural model (inner model). Structural model evaluation was conducted to analyze the relationship between the existing latent variables. Evaluation of the structural model can be reviewed through the value of R^2 and the significance of the path coefficient.

(1) Coefficient of Determination Value (R^2)

The value of R^2 shows the level of influence of the exogenous latent variable on the endogenous latent variable. The value of R^2 also shows how far the ability of exogenous latent variables to explain the diversity of data on endogenous latent variables. **Chin (1998)** mentioned that the value of R^2 is 0.67 categorized as a good model, 0.33 categorized as a moderate model, and 0.19 categorized as a weak model [15]. The value of the R^2 resulting structural model is 0.525. This shows that the ability of the exogenous latent variable Knowledge and Socialization in explaining the diversity of data on the endogenous latent variable Personal Factor is 52.5%, while the remaining 47.5% is explained by other variables not included in the model. The value of R^2 causes the resulting structural model to be included in the moderate model.

(2) Hypothesis Test

Hypothesis testing is carried out based on the results of structural model testing which includes parameter coefficients and t-statistics. To see whether a hypothesis can be accepted or rejected, among others, by paying attention to the significance value between constructs, t-statistics, and p-values. These values can be seen from the bootstrapping results. The rule of thumb used in this study is t-statistic > 1.96 with a significance level of p-value 0.05 (5%) and a positive β coefficient. The value of testing the hypothesis of this study can be shown in **Table 5.**

Table 5. Path Coefficients Results

	Original Sample (O)	Sample Average (M)	Standard Deviation (STDEV)	t- Statistik (|O/STDEV|)	p-values

Knowledge → Personal Factor	0.512	0.511	0.061	8.454	0.000
Socialization → Personal Factor	0.287	0.286	0.070	3.961	0.000

The hypothesis to test the effect between the variables Knowledge ($\xi 1$) and Personal Factor (η) is as follows:

H_0 : There is no influence of $\xi 1$ on η

H_1 : There is the influence of $\xi 1$ on η

While the hypothesis to test the effect between the variables Socialization ($\xi 2$) and Personal Factor (η) is as follows:

H_0 : There is no influence of $\xi 2$ on η

H_1 : There is the influence of $\xi 2$ on η

Based on **Table 5.** shows the beta coefficient values of $\xi 1$ and $\xi 2$ are 0.512 and 0.287. while the t-statistic values for the two variables are 8,454 and 3,961. These values are > 1.96 so that H_0 is rejected and it can be concluded that there is a significant influence both between Knowledge on Personal Factors and between Socialization on Personal Factors. Conclusions can also be drawn by looking at the resulting p-value. If the p-value <0.05 then reject H_0 and it can be concluded that there is a significant influence between Knowledge on Personal Factors and between Socialization on Personal Factors.

8.2. Model Interpretation

After evaluating the measurement model and evaluating the structural model, the final model is obtained, namely 3 latent variables, namely 2 exogenous latent variables and one endogenous variable, and 15 indicators. In addition, the variable values, weights, and path coefficients are also obtained, so that the structural equation measurement equation can be expressed in a path diagram as shown in **Figure 1.**

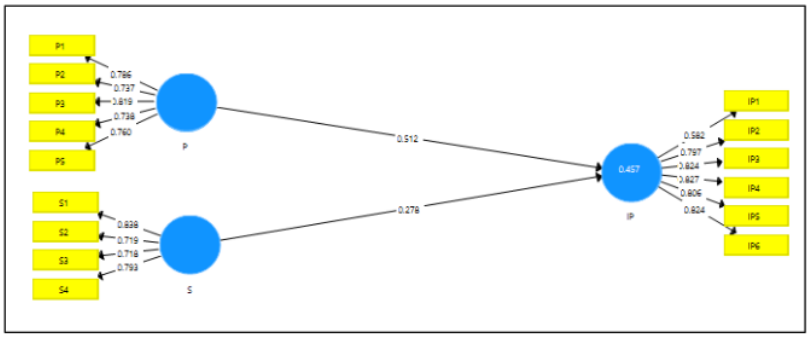

Figure 1. Final Model Path Chart

8.2.1. Measurement Model Interpretation

(1) Knowledge

The measurement equation for the knowledge latent variable can be written as follows:

$$P1 = 0.786\,\xi 1$$
$$P2 = 0.737\,\xi 1$$
$$P3 = 0.819\,\xi 1 \quad (1)$$
$$P4 = 0.738\,\xi 1$$
$$P5 = 0.760\,\xi 1$$

Equation (1) shows that the indicators used and the latent variable Knowledge have a positive correlation. Based on equation (1), it can be explained that indicator 1 can explain 78.6% of the knowledge latent variable, indicator 2 can explain 73.7% of the knowledge latent variable, indicator 3 can explain 81.9% of the knowledge latent variable, indicator $P4$ can explain 73.8% of the latent variable knowledge, and 5 can explain 76% of the knowledge latent variable.

(2) Socialization

The measurement equation for the knowledge latent variable can be written as follows:

$$S1 = 0.838\,\xi 2$$
$$S2 = 0.719\,\xi 2$$
$$S3 = 0.718\,\xi 2 \quad (2)$$
$$S4 = 0.793\,\xi 2$$

Equation (2) shows that the indicators used and the latent variable Socialization have a positive correlation. Based on equation (2), it can be explained that the S1 indicator can explain 83.8% of the socialization latent variables, the S2 indicator can explain 71.9% of the socialization latent variables, the S3 indicator can explain 71.8% of the socialization latent variables, and the S4 indicator can explain 79.3% of the socialization latent variables.

(3) Personal Factors

The measurement equation for the knowledge latent variable can be written as follows:

$$IP1 = 0.582\,\eta$$
$$IP2 = 0.797\,\eta$$
$$IP3 = 0.842\,\eta \quad (3)$$
$$IP4 = 0.827\,\eta$$
$$IP5 = 0.806\,\eta$$
$$IP6 = 0.824\,\eta$$

Equation (3) shows that the indicators used and the Personal Factors latent variables have a positive correlation. Based on equation (3) it can be explained that the IP1 indicator can explain 58.2% of the Personal Factors latent variables, the IP2 indicator can explain 79.7% of the Personal Factors latent variables, the IP3 indicator can explain 84.2% of the internal/personal latent variables, the IP4 variable can explain 82.7% of the Personal Factors latent variables, the IP5 indicator can explain 80.6% of the Personal Factors latent variables, and the IP6 indicator can explain 82.4% of the Personal Factors latent variable.

8.2.2. Structural Model Interpretation

The structural equation for the Personal Factors endogenous latent variable can be written as follows:

$$\eta = 0.512\,\xi 1 + 0.278\,\xi 2 \quad (4)$$

The path coefficient values are obtained based on **Table 5.** on the path coefficient. Based on equation (4), it can be seen that the knowledge latent variable ($\xi 1$) can explain the latent personal factor variable (η) of 0.512. While the latent variable Socialization ($\xi 2$) can explain the latent variable personal factor (η) of 0.278. Both path coefficients are positive. This shows that there is a directly proportional relationship between the knowledge variable and the personal factor variable and between the socialization variable and the personal factor variable. This means that the higher the level of knowledge of the Madurese about COVID-19, the Madurese will tend to comply with health protocols. In addition, the more socialization about COVID-19 is carried out by the government, the Madurese people will also tend to comply with health protocols.

9. Recommendation

Socialization related to COVID-19 needs to be increased to increase public knowledge about COVID-19 and its impacts. Based on the data analysis that has been carried out in this study, increasing socialization and public knowledge will increase the tendency of the Madurese community to comply with health protocols.

10. Conclusion

Based on descriptive analysis, of the 44 indicators used, the majority of respondents from four districts in Madura chose ordinary answers for all indicators. This means that compliance, knowledge, environment, facilities, policies, routines, socialization, and personal factors do not affect the Madurese community in adherence to health protocols. Based on the analysis of factors that influence the perception of the Madurese community's compliance with health protocol compliance with the Structural Equation Modeling Partial Least Square (SEM-PLS) method, it can be concluded that the knowledge and socialization variables have a significant effect on personal factor variables. Knowledge and socialization have a positive effect on personal factors with a path coefficient value of 0.512 for knowledge and 0.278 for socialization.

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