

# How Was Social Support To The Healing Of Covid-19 Patients In Kediri City? Structural Equation Model Analysis

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## ABSTRACT

Covid-19 is an infectious disease caused by a type of coronavirus that was only discovered in 2019. Social support for Covid-19 patients is very important because there is a sharp stigma that society puts on patients and their families so that it can disturb the patient's psyche, along with the emergence of the global pandemic COVID-19, seems to add a line of disease that can create negative stigma for sufferers and their families. The purpose of this study was to analyze the effect of social support on COVID-19 patients in Kediri. The sample of this study was the patient's family and health personnel in Kediri, with descriptive analysis using SEM. Method. This research was explanatory research. The Population of this research was consisting of 170 patients and 150 patients according to cluster sampling technique. This research was using SEM analysis with AMOS tool which aimed to determine sampling in the city of Kediri. The results showed emotional support (B; 2,377; Lower = 1,064; Upper = 2,775), instrumental support (B; 0.560; Lower = 0.524; Upper = 0.830), information support (B; 2.301; Lower = 1.647; Upper = 2,680), Award Support (B; 2,360; Lower = 1,702; Upper = 2,740). Chi-Square Results (28,267); Probability (0.078); GFI (0.954); TLI (0.957); RMSEA (0.058) with a P-Value: 0.000 with an estimate of 0.720. It showed that the significant in building a social support model that affects the recovery of COVID-19 virus patients.

**Keywords:** COVID-19, Social Support, Recovery, SEM, Regression

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## INTRODUCTION

On December 31, 2019, WHO at China Country Office reported a pneumonia case of unknown etiology in the Wuhan City, Hubei Province, China. On January 7, 2020, China identified the case as a new type of coronavirus<sup>1,2</sup>. On January 30, 2020, WHO designated this incident as a Public Health Emergency of International Concern (PHEIC), and on March 11, 2020, WHO declared COVID-19 as a pandemic. The status increased from epidemic to the pandemic which was officially announced by the World Health Organization (WHO) that said it was one of the extraordinary events that had never been previously predicted<sup>3,4</sup>. Pandemic determination itself considers as disease that is contagious and spreads out into many regions or countries. By date, the global COVID-19 pandemic has spread to 213 countries/territories. Globally, there were 2,285,210 confirmed COVID-19 cases, including 155,124 deaths (6.79%), reported to WHO<sup>5,6</sup>. The Coronavirus or often referred as COVID-19 is an infectious disease caused by a type of coronavirus that was only discovered in 2019 which first appeared in Wuhan, China, which ended up becoming a pandemic that spread throughout the world. Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)<sup>7</sup>. SARS-CoV-2 is a new type of coronavirus that has never been previously identified in humans. There are at least two types of coronavirus that are known to cause diseases that can cause severe symptoms such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). Common signs and symptoms of COVID-19 infection included acute respiratory symptoms such as fever, cough, and shortness of breath. The average incubation period is 5-6 days with the longest incubation period of 14 days<sup>8</sup>.

Severe cases of COVID-19 can cause pneumonia, acute respiratory syndrome, kidney failure, and even death. According to WHO, what is meant by coronavirus is a large family of viruses that can cause animal or human disease. In humans, corona is known causes respiratory infections ranging from ordinary flu to more severe flu. For this reason, this virus cannot be underestimated because the rate of spread and death caused is also increasing in number<sup>9</sup>. In the current pandemic conditions, there were so many COVID-19 sufferers, even every day it continued to increase both nationally and internationally. At Kediri, on April 2020 there were 9 patients and on May it increased to 44 positive sufferers of Coronavirus. By the end of September 2020, there were 195 cases with a mortality rate of 5.6% and a recovery rate of 77%. More comprehensive effort is needed to increase the recovery rate. In addition to adequate medical services, social support from health workers, families and the surrounding community are also needed<sup>10</sup>. To handle COVID-19 patients, social support from family members of the patient is very important because there is a sharp stigma that the community gap to the patient and the patient's family which could disturb the patient's psychology and resulting to stress for the patient, then leading to mental disorders which is known as people with mental disorders (ODGJ). )<sup>11,12,13,14,15</sup>. Along with the emergence of the global COVID-19 pandemic, it is as thought adding a line of diseases that can cause negative stigma for sufferers and their families. If people with COVID-19 require longer medical care, this will result in lower self-esteem. Low self-esteem is a person's self-evaluation in assessing themselves<sup>16,17, 18</sup>. In this case for COVID-19 patients due to chronic and widespread negative stigma. COVID-19 is a disease that can spread very quickly and

# How Was Social Support To The Healing Of Covid-19 Patients In Kediri City? Structural Equation Model Analysis

can lead to death. Moreover, at this time there is no cure for COVID-19 yet<sup>19,20</sup>.

This can be a concern that the impact of COVID-19 can widen existing of inequalities. Qualitative investigations have recently reported that people affected by COVID-19 were in distress due to reduced availability of social services during the pandemic, with feelings of loss control, uncertainty, and higher level of nursing burden discussed<sup>20,21</sup>. However, nowadays still there is no quantitative data that is proving the impact of this closure on mental health. Preliminary findings suggested that social support in the population since the beginning of the pandemic and associated social changed. At that time when public health measures related to COVID-19 came into effect<sup>21</sup>; and (2) to explore, people who were receiving social support services before the pandemic, the relationship between any changes in service availability and symptoms of mental well-being, anxiety, and depression<sup>22,23</sup>. Social support is defined as community-based, non-residential care. One of the most important forms of social support is family support. Families play an important role in the rehabilitation process for COVID-19 as well as when returning to the family and social environment. The family functions is as a social system that can support the survival and well-being of each its members<sup>24</sup>. Family support can reinforce COVID-19 patients who undergo rehabilitation and post-rehabilitation processes and then increase the confidence of COVID-19 patients so that they can recover quickly and be ready to return to the community<sup>25</sup>. This is inversely proportional to the results of research conducted by Agustina (2019) which stated that social support does not have a significant relationship with self-confidence in COVID-19 patients undergoing rehabilitation<sup>26</sup>. Low self-confidence in COVID-19 patients can make that person difficult to change better while undergoing rehabilitation program. In addition, according to the results of other studies, social support does not have a significant relationship with self-esteem in COVID-19 patients because it increases stress in patients and families<sup>27</sup>, one aspect of self-esteem is the meaning or acceptance obtained through other individuals. In this case, meaning can be in the form of attention, care, and affection received by COVID-19 patients, so that social support is needed by COVID-19 patients while undergoing treatment for their recovery<sup>17,18,28,29,30,31</sup>.

## METHODOLOGY

This research was using a cross-sectional design. The population in this study was all families who have COVID-19 patients in Kediri. The population used in this study consisted of 170 patients and 150 patients according to t cluster sampling technique. The independent variable in this study was social support which consists of emotional support, instrumental support, information support, reward support, and the dependent variable for the recovery of COVID-19 patients. The data analysis used was univariate, bivariate, and multivariate analysis. Univariate analysis is data analysis to analyze single variables in population with the results of calculating the frequency distribution. Bivariate analysis is hypothesis testing between two variables, namely the independent variable and the dependent variable. Bivariate analysis was carried out on each variable to determine the dependent variable. The statistical test used was the chi-square test. The significance test used significance limit of  $\alpha = 0.05$  with a significant rate of 95%. The multivariate analysis used was the logistic regression test<sup>32</sup>. The multivariate analysis aims to know the effect of the independent variables simultaneously on the dependent variable on how many contributions are given. Logistic regression analysis is carried out by modeling to obtain a model that consisting of several independent variables that are considered in being the best for predicting the incidence of dependent variable. In modeling all variables that are considered important, several logistic regression coefficients can be estimated at once. Before modeling, first, a bivariate selection was carried out for each independent variable with the dependent variable. If the bivariate test results p-value <0.25, then the variable is included in the multivariate model but if more than p-value >0.25 can also still participate in multivariate model if the variable is substantially important. Then select the variables that are considered important to enter the model by keeping the variables that have p-value of 0.05 and issuing variables whose p-value is >0.05 in stages starting from the variable that has larger p-value first. If the excluded variable causes a change in the OR value >5%, then the variable will be put back into the model. Further analysis using the Structural Equation Model (SEM) with AMOS 18.0<sup>32</sup>,

## RESULT

### 1. Distribution of Socio-Demographic Covid-19 Patients:

Table 1. Characteristics of Participant (n = 150)

Family Characteristics	N =%
Gender-	
Male	71 (48)
Female	79 (52)
Work	
Full time / part-time	96 (64)
Unemployed / retired / student	54 (36)
Education	
Elementary school	36 (24)
Middle school	72 (48)
High school	42 (28)
Residences	
Urban	102 (68)

*How Was Social Support To The Healing Of Covid-19 Patients In Kediri City?  
Structural Equation Model Analysis*

Rural	48 (32)
Patient relationships	
Couples	72 (48)
Parents	32 (22)
Others	46 (30)

Based on Demographic data from the sample: Most of them are male (n = 71; 48%). Mostly their work statuses were full time work (n = 96; 64%). Majority of Education in Middle School (n = 72; 48%). The majority of

residences are Urban (n = 102; 68%). Mostly patient relationships were couples (n = 72; 48%) respectively and it was shown in

**2. Results of analysis in social support for COVID-19 patients**

No	Variable	B	95% CI for Exp (B)		P
			Lower	Upper	
1	Emotional Support	2,377	1,064	2,775	0,000
2	Instrumental Support	0560	0524	0830	0000
3	Information Support	2,301	1,647	2,680	0,000
4	Reward Support	2360	1702	2740	0013

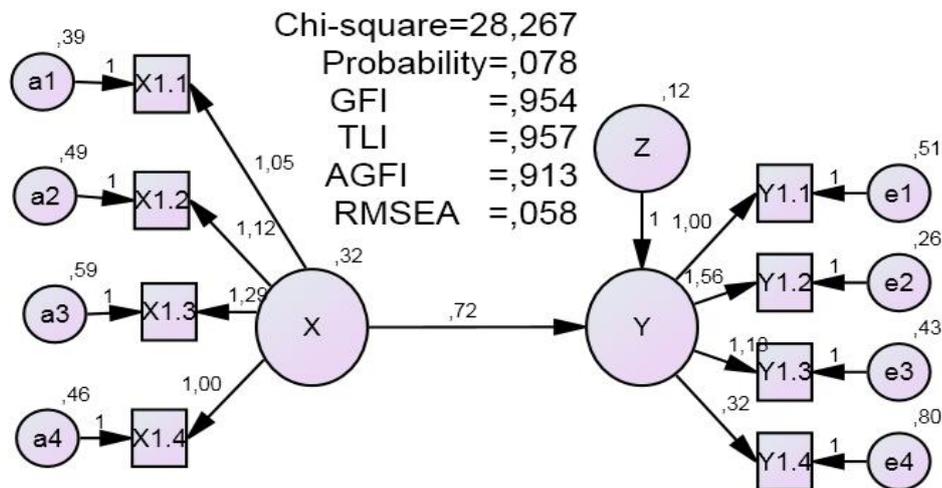
Source: primer

The table above is based on the results of statistical tests Multi logistic regression showed that Emotional support (B; 2.377; 95% Lower = 1.064; 95% Upper = 2,775), Instrumental Support (B; 0.560; 95% Lower = 0.524; 95% Upper = 0.830), Information Support (B; 2.301; 95% Lower = 1,647; 95% Upper = 2,680), Reward Support ( B;

2,360; 95% Lower = 1,702; 95% Upper = 2,740) of the four variables tested simultaneously and significantly supported COVID-19 patients, it appears that 4 kind of social support, especially emotional support, appreciation and significant information are the greatest in supporting COVID-19 patients.

**3. Results of Structural Equation Model Analysis**

Based on the literature, the research variables develop the following model structure:



e1 = unobserved endogenous variable of loading factor (latent variables endogenous) Y1  
a1 = unobserved endogenous variable of loading factor (latent variables endogenous) X  
Z = unobserved variables to the latent endogenous variable

**Table 1**  
Value of-fit Index and cut off value SEM Model

Criteria	Cut off value	Test Results Model	Specification
Chi-Square		28,267	Good
Probability	≥0.005	0078	Good
GFI	≥0.90	0954	Good
TLI	≥0.90	0.957	Good
RMSEA	≤0:08	0058	Good
P-Value: 0.000; Estimate: 0.720			

Source: primary data processed in 2020

## How Was Social Support To The Healing Of Covid-19 Patients In Kediri City? Structural Equation Model Analysis

Based on the table above, it can be seen that Chi-Square results were (28.267); Probability (0.078); GFI (0.954); TLI (0.957); RMSEA (0.058) with a P-Value: 0.000 with an estimate of 0.720. and it showed significant in building this model.

### DISCUSSION

Social support is formed from emotional support, instrumental support, information support, and reward support. Emotional support has the greatest contribution value, which is reflected in the actions of the family to accompany the patient in care and the family also have to pay attention to the patient's condition while they are sick. While reward support has the lowest contribution value which is reflected in family actions that give praise to patients when doing what health workers recommended and family try to support patients in treatment<sup>33</sup>. This means that social support will have a high contribution value when emotional support is given to patients. The patient recovered from COVID-19 virus which was formed from the cough subsiding, fever decreased, shortness of breath was lost and the result of the swab test was negative. Decreased fever has the greatest contribution value, which is reflected when the patient's fever has decreased to recover from the fever suffered, so the patient is said to be cured of the COVID-19 virus. Meanwhile, the negative swab test result on the patient has the smallest contribution value which means that the patient is said to be cured of the COVID-19 virus. Social support affects the recovery of COVID-19 patients. This means that social support reflected in emotional, instrumental, information and appreciation can heal patients suffers' from COVID-19 virus which was reflected by the cough subsided, fever decreased, shortness of breath disappeared and negative swab test result. This means that social support is needed by patients with COVID-19 virus, especially emotional support for patient<sup>34</sup>.

Emotional support has a big contribution in curing Covid-19, support from the families of COVID-19 patients showed that it can support the healing process of COVID-19 patients. Every family provides support for COVID-19 patients by paying attention and always tries to do their best so that their family members can recover quicker. In individuals with the COVID-19 virus, their immune system will experience decline and it will take several years for advanced symptoms to be found and declared as sufferers of the COVID-19 virus<sup>35</sup>. This depends on the physical and psychological conditions. Since being tested positive for the COVID-19 virus, they have experienced stress due to the high psychosocial pressure which they receive from both family and society. Therefore, emotional support, especially from family, is important and able to determine the development of the disease which affects all three aspects of the covid-19 virus in social (emotional) response. If this is not resolved immediately, it can reduce the patient's health condition; accelerate the progression of the disease until death occurred. The emotional support given by the family to the sufferer will encourage the sufferer to be able to undergo regular treatment; this is because the support provided is used as driving energy for sufferers in carrying out therapy program. Family emotional support is related to the implementation of the COVID-19 virus treatment program. So it is hoped that the companion of COVID-19 patients should carry out activities that involve

patients, health professionals as educators, motivators, and counselors in providing counseling to succeed in the treatment program for COVID-19 patients by other research. Emotional support was assessed based on expressions of empathy, concern, and family concern for the respondent's of self-care<sup>36</sup>

Family instrumental support was assessed based on financial assistance, equipment, and time provided by the family in conducting self-care for COVID-19 patients. Informative family support is assessed based on providing information, advice, and guidance from families regarding self-care for COVID-19 patients. In the instrumental support of some families of COVID-19 patients who have provided support to their family members of COVID-19 patients well and positively, families can carry out their role as a good family by providing support in the recovery of COVID-19 patients, ensuring COVID-19 patients to protect immunity by avoiding stress and monitoring in taking medication. There are some steps that a family can do in facing COVID-19 patients; A. Deliver COVID-19 patients to remain in quarantine and take medication to the hospital according to the COVID-19 patient protocol. B. Carry out and maintain quarantine for COVID-19 patients. C. Providing drugs to COVID-19 patients according to the recommendations given. D. Supervise COVID-19 patients and ensure the drug is taken<sup>37</sup>.

Forms of informational support are advice, suggestions, directions, and providing information. Most families always provided advice to their family members who were positive for COVID-19 and family gives advice to be patience and doing a lot of prayer to COVID-19 patients. COVID-19 Patient Assistants who participates in training and guidance from health workers can help accompanying self-care, to help in preparing self-care equipment, and to help in providing self-care equipment to Covid-19 Patient. This is influenced by the attitudes and knowledge of family members towards Covid-19 care. Reward support, most families give appreciation to COVID-19 patients by well caring, providing affection, providing supervision for adherence to treatment of COVID-19 patients according to protocol and treatment advice.<sup>37,38</sup>

### CONCLUSION

Emotional support has the greatest contribution value. This is reflected in the actions of the family accompanying the patient in care and the family paying attention to the patient's condition while they are still sick. The formation of a social support model for the recovery of COVID-19 patients, namely emotional, instrumental, information, and appreciation/reward support.

### RESEARCH RECOMMENDATIONS

Based on the results of the study, the researchers suggest that families suffering from the COVID-19 virus should increase emotional support further because that's appropriate way for the patient to make them healed faster. Further research is suggested to investigate by adding a moderating variable for the performance of health workers in measuring the recovery of patients with COVID-19.

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#### CONFLICT OF INTEREST

There is no conflict of interest in this research.

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