Sick Role Condition: Correlation Of Knowledge Level On Covid-19 Transmission and Increasing Healthy Living Behaviors Practice in The Family

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Abstract
This study aims to examine the level of public knowledge regarding the spread of Covid-19, the level of change in the application of the Healthy Living Behaviors, whether there is a correlation between the two variables, and how the relationship with Talcott Parsons’ sick role theory on existing relationships and changes. There have been several studies related to the relationship between the level of knowledge related to covid and behavior but very limited study that also analyzed the efforts to maintain the changes that have been made. The research uses a quantitative method approach to test the existing hypotheses. The determination of the data sample was carried out by purposive sampling with the data population of Indonesian citizens resided in Jakarta-Bogor-Depok-Tangerang-Bekasi city (Jabodetabek), with an education level of one family member at least S-1. The results of the study shows that there was a significant positive relationship with the coefficient value in a sufficient range of relationships between the two variables. The level of public knowledge about the spread of Covid-19 is at a fairly high level, (4.03 out of 5). The level of change in the implementation of PHBS is low-medium (2.28 out of 5). The community is depicted as consciously choosing to keep their distance and withdraw from social interaction as an effort to prevent Covid-19, meaning they choose to be in a sick role condition even though they are physically fine.

Keywords
Covid-19; PHBS; sick role; knowledge level; correlation

INTRODUCTION
Corona viral disease (COVID-19) is an infectious disease caused by a noval corona virus. Most people who fall sick with COVID-19 will experience mild to moderate symptoms and recover without special treatment (J., 2021). The COVID-19 pandemic has created a global health emergency requiring an effective public health response including citizen’s roles in preventing spread and controlling the pandemic (Devkota et al., 2021). The virus spreads by respiratory droplets released when someone with the virus coughs, sneezes, breathes, sings or talks. These droplets can be inhaled or land in the mouth, nose or eyes of a person nearby. In some situations, the COVID-19 virus can spread by a person being exposed to small droplets or aerosols that stay in the air for several minutes or hours — called airborne
The socialization of Covid-19 prevention measures has been intensively carried out, preventive efforts in implementing the health protocols implemented by the community in breaking the chain of transmission of COVID-19 in the new normal period are by getting used to wearing masks, washing hands with soap (hand sanitizer), maintaining distance (social distancing) (Ramadhaniintyas et al., 2021; Alfarizi, 2021; Bintube, 2020; Maude, et.al; Prihantama, 2020; Sari, 2020). Other actions, which are socialized through various media sources, such as television, news from the government, and other social media platforms, include asking people to stay at home, refrain from using public transportation, always wear masks, maintain a safe distance from people when in crowds, and refrain from going to areas with a high number of COVID-19 infections (Sari et al., 2020). Currently, one of the most effective ways is to avoid transmission and also to treat this coronavirus through the application of Healthy Living Behaviors (Perilaku Hidup Bersih dan Sehat-PHBS). Some things in Healthy Living Behaviors that can be done to prevent transmission of Covid-19 are: eat nutritionally, exercise, wash hands frequently, avoid touching your face, use masks, get enough rest, keep the environment clean, avoid crowds and keep your distance (Prihantama, 2020). Providing knowledge about the environment and health as well as a clean and healthy lifestyle will help people to be aware of and avoid Covid-19 (Mulyadi et al., 2020). However, these have limited or no impact if not applied correctly through lack of knowledge, inappropriate attitude or incorrect practice (Maude et al., 2021). In either case, knowledge and attitudes are vital for human health when people take action for themselves. It is interesting that some people do not focus on the disease or symptoms that arise, but rather on how to prevent someone who has COVID-19 from transmitting it to others (Sari et al., 2020).

The increasing number of cases of coronavirus disease (COVID-19) infections in the general population in Indonesia raises questions concerning the public’s knowledge and attitudes regarding this pandemic (Sari et al., 2020). The effectiveness of actions and control measures depends on the extent to which people change their behavior (Devkota et al., 2021). The reality that exists in the community is that there are still many inappropriate community behaviors such as; going home on holidays or joint leave, tourist attractions are still visited by many tourists both inside and outside the city, places to visit and places to visit. In general, such as the market is still a gathering place for buyers and traders, people are still found without wearing a mask when they want to leave the house (Patimah et al., 2021).

Talcott Parsons states that disease is not only seen as a pathophysiological process or pathological symptom but also a social phenomenon. When someone is sick, someone will accept a social role called the sick role that a series of rights and obligations or role expectations: Sick people do not bear the meaning of responsibility for their illness, Sick people are relieved of some of their social obligations, Sick people want to get away from their sick role and want to get well soon, People sick people will be asked to seek help and follow the advice of competent officers in the medical field (Rachmawati, 2010). In addition, Parsons also explained that humans are creative, active, and evaluative creatures in choosing alternative actions to achieve goals. Likewise in determining the destination of the desired hospital or medical facility. COVID-19 is a new way of life and it is obvious that it has taken away group purposeful life engagement and members coming together are still yet to be decided (Bintube, 2020).

The current state of the Covid-19 pandemic, which is currently happening all over the world and particularly in Indonesia, with more than one million positive cases every day, is believed to have an impact on changes in daily behavior, especially those related to Clean and Healthy Living Behavior (PHBS) (Satuan Tugas Penanganan CO-
VID-19, 2021). Therefore, a research study is needed regarding the relationship between the level of understanding of community knowledge regarding the spread and prevention of Covid-19 with the variable changes in the implementation of PHBS in the community.

The purpose of this study was to determine the level of public knowledge related to preventing the spread of Covid-19, to explain how changes in the implementation of Healthy Living Behaviors in the community between before the pandemic and during the pandemic, to test the research hypothesis that there was a relationship between knowledge variables related to the prevention of Covid-19 with a change in the Healthy Living Behaviors application. Furthermore, this study will also describe community efforts to maintain the changes that have been made.

There have been several studies related to the relationship between the level of knowledge related to covid and behavior but very limited study that also analyzed the efforts to maintain the changes that have been made (Baker, J. O., Martí, G., Braunstein, R., Whitehead, A. L., & Yukich, G, 2020; Cavanagh, S. L., 2021; Patimah, I., W, S. Y., Alfiansyah, R., Taobah, H., Ratnasari, D., & Nugraha, A. 2021). This study argues that communities consciously choose to keep their distance and withdraw from social interaction as an effort to prevent Covid-19, meaning they choose to be in a sick role condition even though they are physically fine.

METHODS

The research was conducted with a quantitative research approach. The research steps begin with the formulation of the research instrument, the formulation of the sample frame, the preparation of the questionnaire, testing the validity and reliability of the questionnaire, the data collection process, the data processing process with statistical analysis, then ends with a descriptive analysis of the results and obtained as well as the relevance of the theory raised.

Primary data sources are obtained from the Indonesian citizens who are married, domiciled in Jabodetabek (Jakarta Bogor Depok Tangerang Bekasi), with a bachelor degree (S-1) education level from minimum one of their family members. Data sample determining strategy was carried out by purposive sampling method. Purposive sampling is a sampling technique by determining certain criteria (Mukhsin et al., 2017)

Before analyzing the data that has been obtained, validity and reliability tests were carried out on the data collection instrument (questionnaire). The Validity Test is assessed how the correlation of an item with the total score can be determined so that an item can be used or not. The reliability test is used to determine the consistency of the measuring instrument (Dewi, 2018). Validity Test has been carried out on a total of 209 data samples using the Pearson Validity Test method using the IBM-SPSS software. The validity test uses two criteria, namely based on the comparison of the calculated r-value with the r-table, and also based on its significance value with the following assessment basis:

Comparison of the calculated r-value and r-table:
- If the value of r-value > r-table, then the item is valid.
- If the value of r-value > r-table, then the item is invalid.

Based on the significance value (α = 0.05):
- If the significance value < α, then the item is valid.
- If the significance value > α, then the item is invalid.

From the Validity Test result on the independent variable (x), the level of knowledge about Covid-19 transmission, there is one variable that has a calculated r-value < r-table and a significance value > α, namely the X5 variable. X5 is a question related to knowledge about the minimum safe distance when interacting with strangers during the pandemic. From the Validity Test result on the dependent variable (y), the level of change in the implementation of Healthy
Life Behaviors, the entire value of r-value> r-table, and the value of significance < α, so it can be concluded that all question items related to changes in Healthy Life Behavior from all respondents have an influence valid for the total value of the variable y.

Then the reliability test was also carried out on the questionnaire used. According to Sugiyono, the instrument is declared reliable if the reliability coefficient is at least 0.6 (Sugiyono, 2012). In the independent variable (x) the Cronbach’s Alpha reliability test value obtained is 0.597 so it can be concluded that the reliability of the questionnaire items on the independent variables is in the middle range.

**Table 1. Reliability Test Result for Variable X**

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.597</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: Writer Analysis (2021)

While the Cronbach’s Alpha Reliability Test on the dependent variable (y) gives a value of 0.835 so it can be concluded that the reliability of the questionnaire items on the independent variable is in the high range.

**Table 2. Reliability Test Result for Variable Y**

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.835</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: Writer Analysis (2021)

Before analyzing the research hypothesis, the data normality test was carried out first. A normality test is a procedure used to determine whether the existing data is normally distributed or in a normal distribution or not (Nuryadi et al., 2017). This needs to be done to determine the relationship testing type between variables used, whether by parametric or non-parametric methods. Parametric testing is usually used on data with a normal distribution, whereas if the data is not normally distributed, non-parametric statistics can be used. Nonparametric statistical procedures can be performed on any data form, any data type, and any data size.

Data analysis was carried out statistically to find out the results of the hypothesis tests. The hypotheses used in this study are as follows:

- **H₀**: There is no relationship between the level of knowledge about Covid-19 transmission and changes in healthy living behaviors practice.
- **H₁**: There is a relationship between the level of knowledge about the transmission of Covid-19 and changes in healthy living behaviors practice.

Analysis of the relationship between the independent variable and the dependent variable was carried out using a 95% significance level correlation test. Variables can be said to be significantly related if the p-value <0.05.

**RESULT AND DISCUSSION**

**Sample Data General Description**

A total of 209 samples of respondent data has been obtained. Of all respondents, 100% live in the Jabodetabek area according to the target sample, with details for DKI Jakarta area as much as 36%, Bekasi 25%, Depok 15%, Bogor 12%, and Tangerang 12%. According to the age category, it is dominated by the age of 25-35 years by 82%, 35-45 years by 12%, over 45 years by 6%, and 0.5% in the age range <25 years. Then the sample was also categorized based on family members with a dominance of 2 family members by 33%, then family members with more than 4 people by 26%, then 21% with 3 family members, and the remaining 20% with 4 family members.

**Knowledge Level about the Spread and Prevention of Covid-19**

This section analyzes the respondent’s knowledge level regarding the spread of Covid-19 and the efforts that can be taken to prevent it. In general, the level of knowledge on preventing the spread of Covid-19 in the community described by all respondents is at a fairly high level, namely 4.03 of the total...
perfect score of 5.

In some aspects of knowledge, the public already has good knowledge about the mechanism of spread and measures to prevent the spread of Covid-19. Of all respondents, 91% have basic knowledge of Covid-19 prevention methods, namely the 5M (wearing masks, washing hands, maintaining distance, staying away from crowds, and reducing mobility) (Alfarizi, 2021). The public also knows the minimum safe distance when interacting with foreigners as a precaution against the spread of Covid-19, which is at least 1 meter. 100% of respondents were able to correctly answer questions related to this minimum distance. A person's management after traveling is also well known by the public. This can be seen in the following data description, 59% of respondents know all the steps that must be taken after traveling.

![Figure 1. Knowledge Level about After Traveling Procedure](image)

Source: Writer Analysis (2021)

**Figure 1. Knowledge Level about After Traveling Procedure**

However, there are still some aspects of this knowledge that are not fully understood by the community. As in the aspect of the duration of washing hands, both using running water and soap (only 15% answer correctly) or with alcohol-based hand sanitizer (only 35% answer correctly). Knowledge related to coughing and sneezing procedure is also still relatively low. This can be seen from the data that only 22% of respondents can have a maximum value related to this knowledge.

Responses related to interaction boundaries are also discussed in this study. The first is knowledge about the characteristics of people who are obligated to self-isolate. In this data, only 15% of respondents can have a maximum value answer. The next discussion is about the public knowledge level regarding a person with mild symptoms who can still interact with their family or relatives. As many as 90% of respondents were able to give a firm answer that someone with mild symptoms was not allowed to visit other people. Finally, it is about whether children are allowed to play with friends or relatives who live at a different home. In this aspect, only 18% of respondents gave a firm answer that children should not play outside the house. The majority of respondents still answered “should be avoided” or “allowed but with health protocols”. This illustrates that there is a deviation from the existing guidelines. People still choose the relatively socially safe answer because of the fear of social consequences due to not playing a role and mingling in society.

**Level of Change in the Healthy Living Behaviors Practice**

In this data analysis, what is taken into consideration is the level of change and not the level of healthy living behavior practice in the community. Thus, for respondents who have well-implemented healthy living behavior before the pandemic and continue to apply it well during the pandemic, the value of calculating changes in healthy living behavior will be low, because the changes are not large or drastic.

The first aspect is regarding the usage of masks. The level of change in the use of individual masks looks evenly distributed with the highest value at the low level of change (26%). Regarding how respondents suggest family members use masks, the dominant change rate is 29%. This means that the majority show changes in how they get used to and advise family members to always use masks.

In the habit of vitamins intake individually, there was no change-level in dominance at 34%. The same thing is also seen in the level of change in the pattern of vitamin consumption in the family, which is dominated by low and very low changes with the
same percentage of 30%. It can be said that the Covid-19 pandemic that occurred did not affect the pattern of vitamin consumption both individually and in a family setting.

The dominance of changes at the no change stage also occurred in changes in handwashing habits in individuals, although not as big as in vitamin consumption habits, which was 28%. The other levels of change are not much different and are fairly even, as illustrated in the following data:

![Figure 2. The Level of Change in Individuals Handwashing Habits](source)

Regarding healthy and balanced food consumption, 62% of respondents already have healthy and balanced food consumption habits before the pandemic which causes the dominance of the no change-level of change of 79%. Thus, it can be assumed that before the pandemic, people had high habits regarding the consumption of healthy and balanced foods.

The majority of respondents, as many as 76%, also stated their commitment and agreement to continue implementing the lifestyle changes that have been experienced during the pandemic even though the pandemic period has ended. In the family condition, the same data were also obtained. As many as 53% are committed to always maintaining the changes in family lifestyle that have been carried out and the second dominance of 40% is committed to frequently maintaining existing changes.

### Correlation of Knowledge Level on Covid-19 Transmission and Increasing Healthy Living Behaviors Practice

Before analyzing the correlation between the two variables, the data normality test is carried out first to determine whether the type of test is using parametric or non-parametric methods. The results of the Normality Test with the help of SPSS software.

<table>
<thead>
<tr>
<th>Source: Writer Analysis (2021)</th>
</tr>
</thead>
</table>

Table 3. Normality Test Result

<table>
<thead>
<tr>
<th>Normality Test Result</th>
<th>Unstandardized Residual</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>209</td>
</tr>
<tr>
<td>Normal Parameters*</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>Most Extreme</td>
<td>Absolute</td>
</tr>
<tr>
<td>Differences</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td>Test Statistic</td>
<td>0.07</td>
</tr>
<tr>
<td>Asymp. Sig (2-tailed)</td>
<td>0.000000000</td>
</tr>
</tbody>
</table>

Because from the results of the Normality Test, the value of Significance < \( \alpha \) (0.05), it is determined that the data is not normally distributed so that the nonparametric correlation test is used. Once it is known that the data is not normally distributed, it can be determined the method of testing the correlation between the independent variables and the existing dependent variables. The hypothesis used in this study is:

H0 : There is no relationship between the level of knowledge about Covid-19 transmission and changes in healthy living behavior practice.

H1 : There is a relationship between the level of knowledge about Covid-19 transmission and changes in healthy living behavior practice.

In this test, the Spearman Rank Correlation Test is used as a non-parametric statistical test method to test the relationship between variables that do not require the assumption of normality and linearity of
The decision-making basis in this test is:
- If the significance value is < 0.05 then there is a correlation
- If the significance value is > 0.05 then there is no correlation

In the results of this test, it can also be estimated that the level of strength of the existing correlation is as follows:
- Correlation coefficient 0.00 – 0.25 = very weak relationship
- Correlation coefficient 0.26 – 0.50 = enough relationship
- Correlation coefficient 0.51 – 0.75 = strong relationship
- Correlation coefficient 0.76 – 0.99 = very strong relationship.

The results of the correlation test using SPSS software.

From the test results, it can be seen that the significance value is 0.000, meaning that there is a relationship between the Knowledge Level of Covid-19 Transmission and the Change in Healthy Living Behavior Practice at the 95% and 99% confidence levels ($\alpha$ values 5% and 1%). Then the existing correlation coefficient is 0.263. Thus, the existing correlation level is at a sufficient level because it is within the range of 0.26 – 0.50. A positive number on the correlation coefficient indicates that the relationship between the two variables is positive or unidirectional. It can be concluded that there is a significant positive relationship, with a sufficient correlation strength coefficient, between the variable level of knowledge related to covid-19 transmission and the level of change in healthy living behavior practice in the community.

Table 4. Correlation Test Result

<table>
<thead>
<tr>
<th></th>
<th>Pengetahuan C-19</th>
<th>Perubahan PHBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spearman's rho</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pengetahuan C-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>1.000</td>
<td>0.263**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>209</td>
<td>209</td>
</tr>
<tr>
<td>Perubahan PHBS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>0.263**</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>209</td>
<td>209</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.000 level (2-tailed).

Source: Writer Analysis (2021)
Based on Parsons’s Sick Role, all participants voluntarily believed that pointed to the experience of stigma putting them under severe stress. Social stigma causes the worst form of social exclusion (Sadati & Mohammadi, 2021). This causes social interactions changes in the community which is drastically decreasing social interactions.

In addition, Parsons also explains how humans will choose alternative actions in achieving goals which are reflected in the changes in people’s habits. Human nature and character which are creative, active, and evaluative, as explained by Parsons, make them take steps according to the knowledge related to transmission and prevention of Covid-19 which causes changes in their habits and their ability to sustain the change that happened.

**Maintain Existing Healthy Behavior Changes**

‘The New Normal’ would come with significant change in structure. Social, economic and political life will change. The complexes of COVID-19 World; ‘The New Normal’ will make humanity to face social change of unimaginable magnitude and the post corona virus society redefine social life, events and the mode of doing things (BinTube, 2020). Frequent and periodic hand wash/use of alcohol based sanitizer is to discourage transmission of Corona virus hence infect those that are vulnerable and employing all of these mitigating measures seems a nightmare for significant number of population and safety dealing with COVID-19 around the world and major threat to distancing guidelines and principles.

From all the sample, 93% agreed to continue and maintain changes within their lifestyle that they made to suppress Covid-19 spreading before. This indicates that there has been a conscious change in the community behavior. Likewise, it is supported by subsequent data related to the daily priorities of the community. As many as 83% of the sample data make health a priority compared to the priority of worship, health, or related to finance.

**CONCLUSION**

In general, the level of public knowledge about Covid-19 transmission is at a fairly high level. At the level of changes in daily behavior, especially Healthy Life Behavior practice as an effort to prevent the transmission of covid -19 is in the low-medium value. From the correlation test result, it can be concluded that there is a significant positive relationship, with sufficient level relationships correlation between the variables of the level of knowledge related to Covid-19 transmission and the level of changes in the healthy living behavior practice. Change within healthy lifestyle also maintained consciously by community such as health is their priority.

The community is also consciously choosing to keep its distance and withdraw from social interactions as an effort to prevent the Covid-19 infection. Even so, they chose to be in a sick role condition according to Talcott Parsons. Although they are pathophysiological healthy, they choose to be socially unhealthy.

The writer also wants to give some suggestions for improvement and development of further research. Efforts need to be made to maintain the community’s social participation during the Covid-19 pandemic. It is necessary to conduct a further cross-study related to what factors cause changes in life behavior that happened and how big the role of factors in efforts to prevent the spread of Covid-19 is needed.

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